



Gal



library

Presented by

Date received



No. 34001

fc630.5
P1
7

EXTRACT

From an Act prescribing Rules for the Government of the State Library, passed March 8th, 1861.

SECTION 11. The Librarian shall cause to be kept a register of all books issued and returned; and all books taken by the members of the Legislature, or its officers, shall be returned at the close of the session. If any person injure or fail to return any book taken from the Library, he shall forfeit and pay to the Librarian, for the benefit of the Library, three times the value thereof; and before the Controller shall issue his warrant in favor of any member or officer of the Legislature, or of this State, for his per diem, allowance, or salary, he shall be satisfied that such member or officer has returned all books taken out of the Library by him, and has settled all accounts for injuring such books or otherwise.

Sec. 15. Books may be taken from the Library by the members of the Legislature and its officers during the session of the same, and at any time by the Governor and the officers of the Executive Department of this State who are required to keep their offices at the seat of government, the Justices of the Supreme Court, the Attorney-General and the Trustees of the Library.



Volume VII.]

SAN FRANCISCO, SATURDAY, JANUARY, 3, 1874.

[Number 1.]

Aveling & Porter's Road Locomotive.

The illustration accompanying this article is taken from a photograph of one of the Road and Farm Locomotives built by Messrs. Aveling & Porter, of Rochester, England.

The large cost of the English rope system of Steam Plowing Machinery seems almost to preclude its general adoption in America. Messrs. Aveling & Porter after repeated trials and experiments with other devices say:—That with an engine weighing not more than five

out of the woods; for threshing grain, and are now hauling pork in the streets of Cincinnati, over a boulder pavement.

"On the macadamized road we draw from Hamilton to Venice, including wagons, 25,000 lbs. of coal, at one load—a distance of eleven miles. For logs in the woods, she is unequalled; we detach the engine from the wagon, and roll the tree on to the wagon, an inch at a time if we choose, and hold it there—a feat that horse power will not perform. All who see her at this are amazed at the wonderful power we

natti, and we draw from 12 to 15 tons at a load."

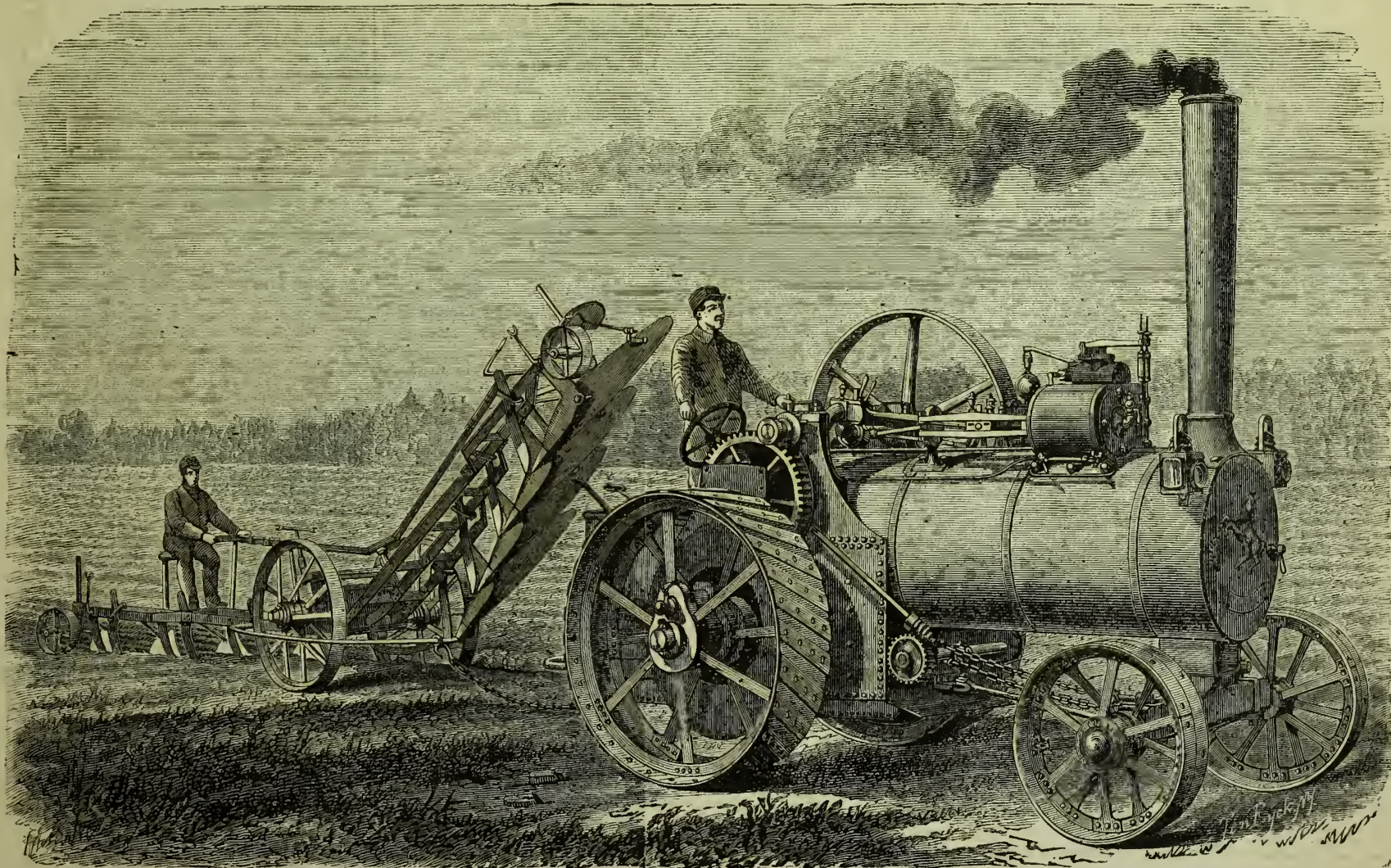
"Until June 1874, "Steam Plowing Machinery" is admitted to the United States free of import duty." To Mr. W. C. Oastler, of 43 Exchange Place, New York, the manufacturers agent, we refer our readers for further particulars if desired.

Cotton on King's River.

We have received samples of excellent cotton grown by Mr. Amos Childs, four miles from Centerville on King's River, Fresno county.

Our Jute Manufacturers.

A Bill is before Congress asking for a repeal of the duty on grain sacks, burlaps, etc., mostly the products of the jute factories of Great Britain. That it would be vastly to the interests of the grain growers of California, who are compelled to sack their wheat for shipment to foreign ports or even to our home points of demand, that the duty be removed from the foreign import there can be no question, and a general desire for this on the part



AVELING & PORTER'S ROAD LOCOMOTIVES, ADAPTED TO DIRECT TRACTION STEAM PLOWING.

tons, and this weight carried on broad wheels such as the engraving illustrates, from 6 to 10 acres per day, varying with the nature of the soil, can be plowed with a four-furrow plow. The same sized engine, they further say, is more than sufficiently powerful to drive the largest sized threshing machine, and 15 tons can be easily hauled by it along moderate roads and up steep inclines." "To this date Messrs. Aveling & Porter have built more than 900 of these engines and are at present making six a week." "The Telford Pavement Co., of Plainfield, N. J., have two of the Aveling engines which they have used during the year for hauling broken stone for road contracts, and their testimony is that the work has been performed by the engines at less than one-third the cost of horses and mules." Mr. Dick, of Ross, Ohio, writing of his Aveling engine says:—"We have used our engines for almost all possible purposes: On the gravel road; for drawing logs

possess, and say she seems a thing of life.

"We drew a tree of an average girth of over 7 ft. and 73½ feet in length from our timber, about four miles distant, and we calculate it weighed eight tons or more.

"We have threshed nearly 40,000 bushels of grain with her since harvest, and have found no place that we were unable to reach, no matter what the grade or how deep the mud. Her facility for taking herself and thresher away, makes her a great favorite with the farmers, who have been bored with hitching their horses to a heavy steam engine, and spoiling them with the over load. Our greatest gain is in time, moving from place to place. In five minutes after the last sheaf is through, we are on the road; and we once moved 600 feet, and were threshing again in 10 minutes from the time the last sheaf was through at the last place (by a watch held on us by a friend). We are now drawing pork in the streets of Cincinnati,

The growth this year was all that could be desired, but the crop light on account of its destruction in part by grasshoppers.

Mr. C. is the inventor of a new style of cotton press, which works admirably, and which he intends to patent. Is sanguine of the success and largely extended growth of cotton in that section of the State.

Another Cotton Grower.

Mr. Odom, four miles from Centerville, at what is known as Georgeville settlement, has also been a successful grower of cotton the past year; but diminished also in yield from the ravages of grasshoppers.

From 4,500 pounds of cotton—and seeds—as it came from the field, he obtained 1,500 pounds of excellent long staple cotton, white and clean. He gins by water power, obtaining his water from an irrigating ditch. He too is satisfied of the perfect adaptability of soil and climate to the growth of cotton in his vicinity.

of the farmers of our coast would seem to indicate that free trade would be just the thing for them.

But now looms another interest, antagonistic to this repeal of duty on sacks. There have recently been established in our vicinity one or more jute factories for the manufacture of grain sacks, and relying upon a continuance of the duty on the imported article to enable them to realize a fair profit upon their investment and industry.

Now what is to be done? Shall we urge the repeal of the duty on the imported article, to the great injury of our home manufacturers. Shall we say to the farmer—we are with you heart and soul in this matter of repeal of duty, thus wholly ignoring the claims of our citizens, who, depending on the stability of the law of Congress imposing the duty, have erected large and costly establishments for the home manufactured article? Who shall decide when interested parties disagree?

CORRESPONDENCE.

Irrigation and Summer Fallow.

EDITORS PRESS:—The vexed question of how to insure a crop of grain in the arid portions of the San Joaquin valley, has been freely discussed for some time past by the farmers most interested in the subject, which is being helped along by opinions from those who are not particularly interested in the people of this valley, but who wish to see this part of the State prosper and "develop," for the good of the country and humanity at large. And all these various opinions are being carefully weighed in hopes of arriving at the best method, which it is to be hoped has not yet been discovered, or practiced if discovered, for by the means employed for the past few years, farmers of this community have succeeded in raising but one crop in four seasons, which method has proved disastrous to the experimenters.

Irrigation has been looked forward to as the farmers' salvation in this part of the country, and the San Joaquin and King's River Canal and Irrigation Company appeared in the guise of public benefactors, and built a canal some forty miles long through a part of the driest portion of the San Joaquin valley. Here then, was an opportunity offered by which to test the merits of irrigation. Men flocked to the irrigated territory, where they were sure of raising a crop of grain every year and any year, no matter though not a drop of rain should fall outside the favored precincts.

One man, whose experience represents that of many others, went to this irrigated country, rented a few hundred acres of land, for which he paid a considerable sum of money, and depending upon the letter of the San Joaquin Irrigation Company's contract for subsidy, in which the company agree to water the land in the irrigated territory for the season, for the sum of \$1.50 per acre, sowed his grain, and when the time came that it needed water, he had it poured over his thirsty fields, paid his \$1.50 per acre, and was satisfied with the terms. But when in the course of time his grain again required water, and he had the flood gates of the canal opened and his fields deluged, much to his surprise he was again called upon to pay \$1.50 per acre for all his land irrigated, and he had to pay this sum every time his fields were watered. Finally, in the natural course of time, his wheat ripened, and yielded a crop of 30 or 40 bushels to the acre; but so expensive had been the operation of raising it, that he barely paid the expenses of his crop by receiving \$2.50 per bushel for his wheat.

This illustration is given simply to prove that irrigation, like powerful medicines, is a good thing when properly administered; but it does not pay as dosed out by the San Joaquin-King's River Irrigation Corporation.

In his speech delivered before the State Grange, recently held at San José, Governor Booth, who no doubt saw the expense that must necessarily attend irrigation, as proposed by the various water monopolies of California, recommended that before turning their attention to irrigation, farmers had better try summer fallowing, which he believed would prove a success. I would not have much confidence in his Excellency's judgment upon the subject of farming, for he cannot be supposed to know much about such matters, only that his views are sanctioned by most of the practical farmers of my acquaintance. A gentleman living in this community, whose judgment upon matters relating to farming is unquestioned, says there has never been but one year during the recent drouths but what a good crop of grain might have been raised in the driest portions of the San Joaquin valley by summer fallowing. The idea became quite popular in this part of the country before the rains set in, and every farmer in the valley decided to summer-fallow; but as soon as the first heavy storm of the season was over, which gave three inches of rain, and was followed by lesser storms, which added another inch, the amount of rain being more than had fallen the entire seasons of '70 and '71, a good year was looked for as a foregone conclusion; summer-fallow was forgotten; and the consequence is, there is not an acre of cultivated ground in the whole valley that is not sowed to grain, or being prepared for sowing.

Very hopeful are the farmers in this community of a good wet season. God grant they may not be disappointed! The first rain of the season, which commenced the first of December, brought the ready grass up over the plains, washed the dust from the hills and trees, and the country is looking beautifully.

Boats have commenced running up the San Joaquin, whose waters were at fording high before the storm, though none, I believe, have gone farther up than Grayson.

Owing to bad roads and stormy weather, there has not been a meeting of the Grange during the present month.

HAGAR.

Grayson, Dec. 23, 1873.

Good Crops or Poor.

EDITORS PRESS:—It is a real question, whether the amount of crops we get, in many sections of the State, depends more on the seasons, than in the proper system of farming.

The general clamor is for rain, at the planting season, but not too much of it. Now if the observant farmer would pass over his farm while it is saturated with water, and note the low streaks and dishing spots of land, he would be able to predict a lean crop and an unprofitable harvest from all such land, especially if it be heavy; and a closer study would impress him with the conviction that conditions govern crops. In this valley, sometimes called "The Garden of California," where there is no question about the depth, and strength and durability of the heavy, adobe soil, the crops are too frequently called lean, by those accustomed to enormous yields. Wherever this water-logged land has not sufficient drainage, the land packs from long-continued rains, till the roots of growing crops cannot penetrate it, and the stalk also fails to get its full growth. Almost all the heavy land here of this character needs only to be made and kept friable, to produce uniform heavy crops.

Every good cultivator knows that in tree or plant, in all perfect growths, there is as much below as above ground. The roots of a tree will amount in the aggregate of length in development, to as much as the top. The main and fibrous roots of the squash, for example, will extend in rich, mellow soil as far beneath, as the vines do on the surface.

To the husbandman, in whose mind these reflections have a dwelling place, it is easy to foresee the character of his coming harvest, to a certain extent, long before the grain has completed its growth.

But is it asked, how are these conditions secured? How is the soil to be kept friable—loose enough and moist enough, but not too heavy after a wet time? The answer is obvious; the surplus water must run off as well as on the land, where it is not needed; and this must be accomplished by drainage—surface or under-drainage, or both. First, the land must be graded, or leveled; and if surface drainage can then be effected, by ridging up, as well as opening ditches, it will be the cheapest way to do it. Then, if the soil is worked at the right time and in the right manner, good crops may ordinarily be realized. But to insure uniform full crops, something more is needed.

The chief trouble is that we work too many acres, as a general rule. Land in this valley is often plowed when so wet that water will settle in the furrow; then, when so dry and hard, for the want of drainage, that the lumps are as "hard as a bone" and "as large as your body." The wonder is, among those not posted, that we get a crop at all.

Here is where the properties of our alkaline soil come in play; they puff up the lumps like slacking lime, and they finally crumble to dust, needing only the roller to make the surface smooth. Fortunately, this system of injurious cultivation has one advantage, as it takes less seed for the land—50 lbs. to the acre being all that many sow of wheat, instead of 100 lbs. required by others; for, as the lumps slack and crumble, they serve as a mulch to the growing grain, and make it stool up thicker on the ground, one spear being increased to a dozen.

If the observer will note the more vigorous growths of crops on the highest land, along the roadside, wherever he travels, as well as along the banks of the streams and elsewhere, where the drainage is most perfect and the soil equally good, and practice from the lesson taught by nature, he will not only "add dignity to labor," but his gain will more than repay him for the trouble.

I. A. W.

Santa Clara, Dec. 18, 1873.

Laying Hens.

EDITORS PRESS:—Enclosed I send a letter received from Mr. Eyre, Jr., Napa, in response to my article in the PRESS of Dec. 6th. As it contains much information useful to many in the poultry business, you will no doubt consider it worthy of insertion. The want of a thorough knowledge of feeding the various breeds of poultry has more to do with the many failures than any other cause. I have tried full blooded Brahmas and White Leghorns, and found in the course of a year that the Brahmas, although much the larger, could not stand the same amount of stimulating food as the Leghorns. My first experience with a trio of Brahmas was similar to that of Mr. Eyre's customer; I fed them to such an extent that they soon became almost worthless, and I nearly ruined them.

I hardly agree with him that the steady feeding all summer prevented my fowls moulting earlier. I believe the climate is the one cause. In Napa the warm weather follows quickly after the spring rains, and the poultry with judicious management are forced into moulting early. With us the spring rains are followed by cold, damp fogs that continue till the middle of September so wet as to interfere greatly with our harvesting, and woe to the chicken

that undertakes to exchange old feathers for new during this period. After this date we have the warmest, sunniest part of the year, and the moulting goes on with eggs at 60 cents per dozen. Next year I shall adopt Mr. Eyre's idea in that I shall cease to feed when the fogs (not the rains) cease, and let them pick the stubble for a living till their moulting is over, believing that it will be just as well for them and more economical. GEO. W. T. CARTER. San Gregorio, Dec. 21, 1873.

Mr. Eyre's Letter.

Your article in the PACIFIC RURAL PRESS, of Dec. 6, excuses this letter. I have all my common stock to commence laying about the middle of October. Leghorns hatched before May should have moulted before the end of October. My common fowls are one-half, three-fourth, etc. Brahma. Good Brahmas are essentially winter layers. Allow me to suggest that you feed too much. After the rains cease, and eggs are going down to 25 cts., I cease to feed my poultry running at large. They hunt for their own living. On no account do I then feed meat or pepper or any stimulant. I give no food; of course those confined in corrals are fed, but the poultry running out make their own living. If you are situated so that you have nothing from which your poultry can pick a living, you must feed; but do it very sparingly, and no meat and stimulants; no bran and shorts, nor any egg producing food, after May. My hens cease to lay (or almost so) by July, and moult before October 1st. By October 10th or thereabouts, I commence to feed just as you describe, except the corn, which being too fattening, I never give to laying hens except on a wet day to engender warmth. I also give milk. Milk, bran and meat bring eggs. In two weeks they commence to lay, as they did this year, though in our town of Napa we received but 55 cts. per dozen. Leghorns are summer layers, and if stimulated will lay then. My impression from your article is, that you feed too much. I have sold Brahmas which averaged 225 eggs a year, and the purchaser made them absolutely stop laying by too much feeding. I give to fowls in my corrals, a large spoonful of soft food in morning, a small handful, taken palm down, of grain in evening; no more green food, etc., of course, and in winter meat.

MANUEL EYRE, JR.

Eggs and High Prices.

EDITORS PRESS:—The excellent article over the signature of G. W. Carter, in your issue of Dec. 6th, under caption of Eggs vs. Riches, is decidedly humorous as well as practical. The description of the care, attention, food-variety, crosses and results, is so full that little room is left for supposition or suggestion. There is one point, however, omitted, in neglecting to state whether he has determined by actual trial and test, that "in this State, that no matter what age the fowls were, all moulted at once." We opine that this declaration was made at random, more to harmonize or liquify the composition than as a square up and down fact. Observation proves with us, that in this mild climate poultry moult more or less throughout seven or eight months of the year; much depends upon their age and condition. There are seasons of suspension and recuperation not connected with or incident to moulting. The enormous draft upon the vitality of a bird that lays continuously for months must be restored or made good in some way. A total suspension of production for a time, appears to be the process in nature's ordering. Now as to meeting and overcoming the difficulty complained of by Mr. C., so that he may be enabled to realize his fondest hopes of wealth and independence, provided these anticipations simply rest upon the yielding of the coveted fruit by Miss or Madam Biddy at the "auspicious period of high prices." It is not, as has been suggested by theorists, rapidly pursuing up heavy gradients or investments in patent persuaders—simply regulating by timely hatching. The pullets or young hens will then be in full feather and laying at the time their matronly sisters are dozing around dumpy and eggless from moulting or exhaustion. Try this, Mr. C., and there will be no need of your emigrating; for with your present system and care in other essentials, success is guaranteed—all the reward we ask is to be placed on your visitor's list upon the completion of your *chateaux en Espagne* resulting from the proceeds. Jestings aside, we offer the foregoing in all soberness. Experience has shown it to be as stated, without an exception. I trust it may benefit not only the gentleman in question but many other of your readers.

G. C. PEARSON.

South Vallejo, Dec. 23, 1873.

Jute Experiment.

EDITORS PRESS:—I received from your office a package of jute seed, last spring, to test it on our highlands. I prepared a piece of rich, sandy loam, working it thoroughly and deep and making it very fine. I planted the seed on the 12th of March; it came up, but the spring being very dry, it soon began to show that it required more water than is found in our uplands. It was an entire failure; I raised fine corn on even drier land than that on which I planted the jute. I think low land is the place for it, especially in our dry climate. Vacaville, Dec. 24, 1872. O. BINGHAM.

California Raised Seeds.

EDITORS PRESS:—The raising of garden seeds in California has been for years, and still is, a much mooted question among seed growers and seed sellers, many of both parties still persisting that California raised seed are positively unfit to plant here. Now, while we admit the changing of seeds from one locality to another to be a good one, we are not willing to admit that our favored climate and soil will not produce as good seeds as any other portion of the cultivated land. In my opinion all that is lacking, is the care required to keep our seeds pure and save them in a proper manner; and I suppose the best proofs are practical ones. Five years ago I planted three acres to onions; the seed was Eastern seed, recommended to be Shaker seed. We prepared our ground well and planted in drill rows, 16 inches between rows and thinned out to suit our fancy. The crop matured about the 20th of October, with a yield of 85 sacks, or 9,000 lbs. per acre marketable onions, with at least 20 per cent. of the whole crop culls, or thick necks as we call them. Out of the lot we selected 300 pounds of the most perfect specimens for seed and kept them until the first of the next March, when we planted them in seed beds where they grew and matured nicely, some of the bulbs sending up one seed stalk, others two stalks, and others three and more. Our object was to get the seed from the perfect bulb with but a single bud. When the seed was matured, instead of clipping the heads off as is usually the case, we pulled up every stalk that we might examine well the roots, and all that had sent up but one perfect stalk we kept separate and marked No. 1; those with two stalks we marked No. 2, while all else we threw away. The next year we planted ten acres to onions, our No. 1, No. 2, some Eastern seed, also some seed from a California seed grower, all of the Denvers variety, planted April 1st, with the same kind of cultivation the previous year. Our No. 1 matured by the 15th of September, all the others about the first of October, there being no perceptible difference between the No. 2, the Eastern seed, and the seed we bought of our neighbor. Our No. 1 making at least 20 per cent. the best yield, while the other three lots had at least 20 per cent. more loss in culls, onions unfit for any use. And that was not the worst of the matter; when we came to send to market, sending some of all kinds each shipment, our No. 1 brought \$1 30, while the others brought from 75 cents to one dollar per 100 lbs. We have persistently kept the same mode of collecting our seed always from the most perfect specimens, the produce of our No. 1; and last spring we prepared the very same piece of ground we commenced on five years ago, and planted April 1st, as that is the time we prefer here. We planted in drill rows, 14 inches between rows, and thinned to suit our fancy. The whole crop seemed to mature about the same time, September 1st, with a light, delicate top, the bulbs uniform in size, with thin, clean skins. We harvested from three and one-sixteenth acres, actual measurement, 1,314 sacks, 109 lbs. per sack, making a total of 143,226 lbs. of marketable onions, and in the whole lot there were not 500 lbs. culls.

We had in an adjoining field 120 acres of barley, which we thought was a good crop, which yielded 2,000 centals barley; while the three one-sixteenth acres yielded 1,432 centals of onions, and both brought the same price per 100 lbs. in San Francisco market.

San Jose, Dec. 13th, 1873.

WM. BOOTS.

[We would like to hear from others further on the subject of California grown seeds. Our own view of the matter is, that they are as good as can be grown anywhere.]

REVIVAL OF MANUFACTURES.—The great business interests of the country, which were so much depressed a short time ago, are reviving. The manufacturing establishments which shut down could not remain long in that condition. Stocks of goods were exhausted; there was a demand for more. The operators were called back to their places and work was resumed. There were just as much money in the country as ever. But for a time everybody was afraid of everybody, and began to take in sail. A panic and a mob have many similar phases. The good and bad, the sound and unsound suffer indiscriminately.

The consumption of manufactured products is increasing rapidly in this country. The demand is often ahead of the capacity of the mills. Besides, there is a growing export trade, especially with South America. The result of the late partial suspension of operations has been to clear off old stocks, and to quicken the demand for fresh goods.

The manufacturers of the country have accumulated a great deal of wealth. They made vast sums during the late war, and are able to go through a long season of depression without adding much to their fortunes. They have already discovered that the business stagnation is to be a short duration.—*Bulletin*.

THE VIENNA *Monday Review* affirms that, according to trustworthy information, as many as eighty-two Austrian joint-stock companies will be unable to redeem their January coupons. The unpaid dividends will amount to something like 18,500,000 florins.

MISCELLANEOUS.

What I See on the Streets and Elsewhere.

[Written for the Press, By Mrs. ELISA E. ANTHONY.]

I was in a store the other day, waiting for a friend, when a rich, clear voice uttering the words "I cannot afford it, handsome as it is; show me something cheaper," met my ear; and turning, I saw a young, tastefully yet plainly dressed lady, who was turning away from a lovely sea-green silk, which was fit for Titania herself, and I wondered at her courage in resisting the temptation to purchase it.

"But, Miss, it would be so becoming to you, and it is very cheap at four dollars a yard, and you need not pay the cash down, as I will charge it to you, and you can give me the money at any time. See!" and the wily clerk held the delicate silk in shabby folds and threw a costly lace flounce over it, which mellowed the intensity of color, until it was really elegant, and I thought she could not resist it.

Her eyes sparkled, and she hesitated a moment, then resolutely turning away, she said: "No, I cannot afford it, and it is against my principles to go in debt for anything, much as I desire it." What noble words she uttered; and I admired her all the more, for the second time resisting that lovely silk; and such a girl will make a good wife for any man. "I cannot afford it—what simple words, and yet, how hard to utter, and how very seldom ever said. The young man of the world, the exquisite of the first water, spends double his income on wine, women, and balls, sports a diamond pin, a fast team, boards at a hotel, and has new clothes and gaudy neck-ties for nearly every week in the year; who is fond of making presents to his friends, to show that he is rich in this world's goods; who owes his tailor, his landlord, his washerwomen, and in fact, head over heels in debt; he is a specimen of the man, who lacked courage to say those simple words: "I cannot afford it."

The young lady who spends all her pocket-money, in order to dress in the latest style, no matter how ridiculous, buys "a duck of a forty dollar bonnet," and discards it in a month, because it is half an inch lower in the crown than the latest style; who pays five dollars a yard for a handsome silk, without a murmur, and then grumbles and pays the dress-maker about half what it is worth to make it; who puts a gold piece into the plate at church, and refuses a crust to a beggar; who goes in debt for anything and everything, leaving her father or expectant husband to pay the bills; how mean and dishonest; such a woman is, beside one who says boldly: "I cannot afford it."

San José, Dec. 23d, 1873.

Depth of Lake Tahoe.

The *Gold Hill News* says:—As many items have been published and exaggerated stories told relative to the depth of Lake Tahoe, we are pleased to be able to lay before our readers the following series of soundings made on the lake by John McKinney, so well known as an experienced navigator of those romantic waters, and resident of the western shore of the lake:

Locality.	Feet Deep.
Emerald Bay, five miles east, and—	
Yank's station, six miles northeast.....	900
Emerald Bay, one-fourth mile northeast.....	780
Rubicon Rocks, five miles east, and—	
Emerald Bay, five miles northeast.....	1,385
Rubicon Rocks, two hundred yards east.....	850
Rubicon Rocks, six miles northeast, and—	
Sugar Pine Point, five miles east by south.....	1,500
Sugar Pine Point, one mile south, near shore....	750
Sugar Pine Point, three miles east by north.....	1,506
Sugar Pine Point, five miles northeast.....	1,540
Blackwood, five miles east.....	1,504
Blackwood, one-fourth mile east.....	700
Tahoe City, four miles east by south.....	1,350
Saxons' Mill, one-half mile east.....	772
Tahoe City, six miles east.....	1,524
Tahoe City, seven miles east by north, and	
Observatory Point, five miles.....	1,600
Observatory Point, four miles east by north.....	1,640
Hot Springs Point, four miles due south.....	1,645

From this point southward ten miles along the east side of the lake, three miles from shore, the depth averages from 1,200 to 1,400 feet. Along the western side of the lake, half a mile from shore, is a precipitous offset, almost like a perpendicular wall, from 700 to 800 feet in depth. It will thus be seen that the deepest place McKinney found was 1,645 feet; and at the northerly part of the lake, toward the Hot Springs section, he obtained his deepest soundings. At the middle of the lake he finds the depth about 1,500 feet. The above sub-aqueous statistics will be of great interest to the thousands of visitors who yearly resort to the finest of all mountain lakes in this section of the world.

SMOKE CONSUMING.—Some interesting experiments were lately made in Ohio, with a view to ascertaining the best method of consuming the smoke of soft coal furnaces, and, after a careful examination and test of a number of mechanical appliances designed to effect this object, the conclusion was reached that nothing was so simple and effective in preventing the escape of smoke as the introduction of sufficient oxygen into the furnace to effect complete combustion of the fuel, and thus prevent the formation of any smoke at all.

WHEAT CLEANING MACHINERY.—The agriculturists of South Australia have resolved to offer a first prize of £1,200, a second of £600 and a third of £300, for the best wheat cleaning machinery.

HOME AND FARM.

Farmers' Grindstones.

Premising that the grit is of the right kind for an axe or a scythe, a good grindstone will be set to run smoothly and perfectly true; its face will be neither hollow nor round, and the water supply fresh, and not more than for the occasion. The water-trough, being often made a part of the frame or bed, should be provided with an outlet for water, that the stone may not be left standing to soak therein, by which one side becomes softer and heavier, from which cause it runs with irregular speed and wears unequally. Water is indispensable to protect the temper of the tools and to keep the grain of the sandstone clean from the small particles of sand and steel detached by friction.

In applying the tool to be ground, the pressure must be varied in proportion to the width of the tool; and the effect will be very much varied by the direction and speed of the stone, being more when moving toward than from the tool. In the latter case, however, the edge is more liable to catch, and thereby to damage both itself and the face of the stone; while in the former, a wire-edge is thrown up as soon as the bearing or convexity of the tool is ground off, and only an experienced hand may safely practice it. Stop short of this point, and finish by changing the angle of contact of tool with the stone. But in grinding chisels and plane-irons, when the edge is formed by one plane and one bevelled side, there is a kind of traverse motion to be kept up, which contact over the whole of both surface preserves them nearly straight and plane. The finishing edge, as of finer tools, seen on new knives, razors, &c., is brought out by a finer stone, where the tool is held at a more obtuse angle.

The difficulty of applying a rest to a portable grindstone (as to a lathe) exists in the uncertain wear and unequal use of its surface, by which the true cylindrical form is soon lost. To avoid this, a lateral motion must be given to the tool, utilizing the whole face of the stone, which is especially necessary in applying the face of a common or a broad-axe, as well as a plane-iron; and, as may be apparent to any one, in grinding carpenter's gouges, a cape-chisel, or, indeed, any metal-worker's tools. It was well said, "show me the grindstone, and I will tell you the character of the shop;" and it may be said the character of the workmen is thus shown elsewhere, even on a farm.

With one who has had but little practice in setting tools the common error is in not holding them flat enough to the stone (whether grindstone or oil-stone), and thereby producing a convex side, and at the same time being liable to "check" the stone and turn the tool—perhaps worse, wound himself. For this, practice is the only remedy. With a little ingenuity, a rest is always possible to be applied, but the efficiency is in most cases very doubtful. Better trust to the wrist and right hand as a movable chuck, while the fingers of the left hand placed on the upper face of the tool will control its pressure, and be the guide-rest. Don't forget to leave the stone out of water, as well as to dry the tool, if not even to oil it when laid aside.

The grinding or setting of a cutting-tool may be simple enough; yet there is but one way of doing it perfectly, that the cutting edge formed by a definite angle of two surfaces shall be exactly reproduced. There is a knack in perceiving when this edge has come, and in not over-doing, or producing the turned or wire-edge, which practice only can acquire. From a knife this can be removed by drawing across the thumb nail; from other tools, by rubbing across a piece of soft wood. But a greater difficulty from repeated sharpening, is to avoid in time the formation of two convex surfaces, which would be better if flat or even concave slightly, as when the tool is new. Even a new ax is never convex all the way to the edge, but within a sixteenth of an inch of the edge takes from each face a special bevel, which is the edge.

Straight-edged tools, like chisels, when being set on the oil-stone, are best held in such a manner that the motion of the hands is nearly at right angles to the line of the cutting edges. Concave faces are produced by stones shaped for the purpose, but they do not come within common use.—*Cor. Country Gentleman.*

Farmers as Mechanics.

While it is to the advantage of every farmer to be well skilled in the use of carpenter's tools, it is not always beneficial for a farmer to place full confidence in his ability to perform all mechanical jobs that come up about the premises to be done. There are many repairs that the husbandman may make if but little acquainted with the principles of mechanism and the use of tools, and save time and money thereby, but there are very many more jobs where he or those even better skilled will do more harm than good in attempting to perform.

In the first place there is nothing more unsightly than a botched piece of work on a good article. In the second place, plows, vehicles and almost every portable implement and machine on the farm, have particular adjustments to make them work to advantage, and the man who does not understand the different principles on which his several implements work, should not attempt to put in order any breakage of importance, but should take the same to the wheelwright or smith who gives the making and repairing of the certain article an especial and careful study.

The beam of a plow out of proper adjustment but a little, will tell in the draft and ease of management. And so the tongue-roll of the sled by being set too high or too low in the runners of a sled will cause unnatural pressure or friction upon the earth and consequently make it run hard. The effect of the bad setting of the tongue can very often be plainly seen in the way the shoes of the sled are worn. If the draft comes from a point too low there will be a lifting in front, and a wearing pressure at the rear. If the roller is set too high the draft is downward and the shoes are worn away in front. If the gain of an axle-tree is not correctly given or the box in the hub of the wheel is wedged out of tune the result is a hard running vehicle, and the application of lubricators will not correct the error. We have seen mistakes of the above nature hundreds of times, when the farmers who made them were losing ten times in wear of implements and horseflesh, what it would have cost to have had the work properly done.

Painting is another operation which is often very badly done. On some articles, such as field rollers, harrows, plows, hay-racks, heavy farm sleds, etc., where a coating is given for protection only, almost any one can make a profitable job of it, but where beauty and utility are desired the job had better be "let out."

No man who is not accustomed to mixing and spreading paints can so coat a wheeled vehicle which is used upon the highway that it is fit to be seen by his fellow men, and the more he tries to make it look "fancy" by adding stripes to the body coat, the more he advertises his inexperience and false economy. The allusions we have made to a few articles and methods of doing things, may as appropriately be applied to a thousand more, and while these things are said, we advocate with positive earnestness the establishment by every tiller of the soil, of a farm workshop, procuring of a good set of tools, for such an investment will be found one of the most profitable that can be made in enabling the farmer to do a thousand and one little jobs about the premises, and not only this, but in giving the boys a place to exercise and develop their mechanical gifts—to give them home entertainment and at the same time make them useful.—*Ohio Farmer.*

A WONDERFUL AGRICULTURAL MACHINE.—Here is what an English exchange—*Iron*—says about a reported invention: "Our enterprising American cousins are not content with machines designed to perform ordinary operations in agriculture, but they devise extraordinary operations, and then proceed to invent machines to carry them out. In this country we are satisfied to wait a while after reaping before we begin to plough for another crop. At St. Louis, a machine is being built which is designed to cut and take up grain, and at the same time to plough and seed the ground. Surely the ingenuity of agricultural machinists cannot transcend this."

We hear of the construction at Cronstadt of a submarine vessel of enormous dimensions, in which two thousand tons of iron and steel have been employed, which is propelled by two powerful air-engines, will be armed with a powerful ram, and will carry all the means for fixing to the hulls of vessels large cylinders of powder which it can afterwards explode by electricity. Two glass eyes will enable the crew to find their way about, and they may choose their course at what depth they please below water.

THE ORCHARD.

Gathering of Ripe Fruit.

Josiah Hoopes, who is good authority on every subject connected with fruit gathering, says:—

"In regard to the gathering of ripe fruits of different kinds, no fruit should be taken from the tree or plant during a damp time, and especially when the dew is plentiful in early morning. Never be so hurried as to find cause for the excuse, I had no time to handpick my fruit, and, consequently, was forced to shake them off; for such is very poor policy. Fruit so gathered will almost inevitably decay from the effects of bruises. Each specimen should be taken from the tree one by one, handled as if they were so many eggs. The slightest bruise or even abrasion of the skin is the sure fore-runner of a dark spot, which will eventually change into some form of rot. The spores or seed of fungi are always ready to assist in the work of dissolution, and the slightest scratch gives them a foot-hold for their destructive work. Scarcely any variety of the largest fruits color or ripen so well if left to perfect themselves on the tree, and especially is this true in respect to pears. Summer varieties, as they approach maturity, loosen their hold somewhat on the limb, and by gently raising the fruit they will easily detach themselves at the proper period. This is an excellent test, and may always be relied on. To color up fruit nicely, all that is necessary will be to spread a blanket on the floor in a cool room, and then thinly and evenly place the fruit on the floor. A second blanket must be spread over them, and in a short time the effect of the treat will be apparent in the most golden-colored Bartletts, and rich, ruddy-looking Seckels imaginable. Pears perfected in this manner rarely have the meanness of their naturally ripened companions; nor do they prematurely decay at the core as when left on the tree. Peaches are too frequently gathered before attaining full size, and when this is the case we must not expect full flavor. They must obtain this requisite before gathering; although it is not necessary to delay picking until very mellow. As a general rule, all fruits are gathered too early; and, as high color is not a sign of maturity, many experienced fruit growers are frequently misled. Never pick strawberries before they are red, nor blackberries solely on account of their dark appearance. Each should remain on the plant for some time thereafter. The Albany seedling strawberry changes to a deep crimson hue, and gains continually in size and coloring process. It is then soft and excellent eating. And so with blackberries, in like manner many complaining of their extreme tartness when the fault was in gathering imperfect fruit. The Lawton or New Rochelle variety, in particular, is delicious eating, if allowed to remain on the plant until soft, when the slightest touch will sever its hold. Strawberries picked with the calyx (or hull) adhering, will always carry better, and be less liable to decay than if carelessly pulled off without this appendage. The foregoing remarks in relation to the proper time for gathering fruits are equally applicable to the grape. These generally color long before they mature; and thus many a novice in fruit culture frequently forms an unjust opinion of his varieties simply from testing unripe specimens. Grapes should always be severed from the vine with strong scissors or trimming shears, and never twisted or broken off. The nice appearance of fruits of all kinds, in their boxes or baskets, in the markets, will always command a better price, than when slovenly 'done up.'"

HOW TO MAKE GRAFTING WAX.—Thomas Matteson, McKean county, Pennsylvania, writes: "Take two parts mutton tallow, three parts beeswax; melt the tallow first, and put the beeswax and resin into it. Then it is all melted, stir it all up and pour it into cold water and work it over. If there are lumps in it, mash them with your thumb and finger. The longer you work it the more sticky it grows. When it begins to stick to your hands, put some tallow on them. Work it till it is as sticky as you want it. Put in a tin pan with a cover to it, and it will keep for a number of years. I think it is as good as sticking salve to put on any kind of sores. Some people put in more tallow than they put in resin or beeswax, to make it softer to work in cold weather; but if there is too much tallow in it, it will melt and run out in warm weather. I have had about forty years' experience in grafting and used a number of sorts of grafting-wax. Some people put it in hot water, and make more trouble than there is need of. I wet my fingers with my tongue, and don't find any difficulty in putting the wax on. I put a little wax on the end of the graft."

APPLE BARRELS.—An act to regulate the size of apple, pear and potato barrels, passed April 12, 1862. The people of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. A barrel of apples, pears or potatoes shall represent a quantity equal to one hundred quarts of grain or dry measure, and all persons buying or selling those articles in this State, by the barrel, shall be understood as referring to the quantity specified in this act.

Sec. 2. This act shall take effect by the first day of June, eighteen hundred and sixty-two.

Patrons of Husbandry.

California Subordinate Granges.

ALAMEDA COUNTY.

CENTERVILLE GRANGE, Centerville, Alameda Co.: JAMES SHINN, Master; J. L. BEARD, Sec'y.
EDEN GRANGE, Hayward, Alameda Co.: THOS. HELLMAN, Master; JOHN OWEN, Sec'y.
LIVERMORE GRANGE, Livermore Valley, Alameda Co.: DANIEL INMAN, Master; F. R. FASSETT, Sec'y.
TEMESCAL GRANGE, Oakland, Alameda Co.: E. S. GARR, Master; JOHN COLLINS, Sec'y.

BUTTE COUNTY.

CHICO GRANGE, Chico, Butte Co.: W. M. THORP, Master; J. N. SCOTT, Sec'y. Agent, W. M. THORP.
NORD GRANGE, P. O. Nord, Butte Co.: G. W. COLBY, Master; L. L. COLE, Sec'y.

COLUSA COUNTY.

ANTELOPE VALLEY GRANGE, Colusa, Colusa Co.: H. A. LOGAN, Master; A. T. WELTON, Sec'y.
CENTER GRANGE, (Calistoga, P. O.) G. P. KIMBRELL, Master; W. G. SAUNDERS, Sec'y.
COLUSA GRANGE, Colusa, Colusa Co.: W. K. ESTELL, Master; R. JONES, Sec'y.
FRESHWATER GRANGE, P. O., Colusa, Colusa Co.: I. H. DURHAM, Master; R. A. WILKEY, Sec'y.
GRAND ISLAND GRANGE, Sycamore P. O., Colusa Co.: J. J. HICK, Master; J. C. WILKINS, Sec'y.
PLAZA GRANGE, Olinda, Colusa Co.: F. C. GRAVES, Master; W. F. GREEN, Sec'y.
PRINCETON GRANGE, Princeton, Colusa Co.: A. D. LOGAN, Master; R. R. RUSH, Sec'y.
PUNK SLOUGH GRANGE, Colusa, Colusa Co.: E. U. HUNTER, Master; GEO. B. HARDEE, Sec'y.
SPRING VALLEY GRANGE, Spring Valley, Colusa Co.: D. H. ARNOLD, Master; L. T. HAYMAN, Sec'y.
UNION GRANGE, P. O., Princeton, Colusa Co.: M. DAVIS, Master; ISAAC HARRIS, Sec'y.
WILLOWS GRANGE, P. O., Princeton, Colusa Co.: J. W. ZUMWALT, Master; GEO. T. HICKLIN, Sec'y.

CONTRA COSTA COUNTY.

DANVILLE GRANGE, Danville, Contra Costa Co.: CHAS. WOOD, Master; JOHN B. SYDNER, Sec'y.
POINT OF TIMBER GRANGE, Antioch, P. O., Contra Costa Co.: R. G. DEAN, Master; J. E. W. CAREY, Sec'y.
WALNUT CREEK GRANGE, Walnut Creek, Contra Costa Co.: NATHANIEL JONES, Master; WM. K. DALEY, Sec'y.

EL DORADO COUNTY.

PILOT HILL GRANGE, Pilot Hill, El Dorado Co.: P. D. BROWN, Master; A. J. BAYLEY, Sec'y.

FRESNO COUNTY.

FRANKLIN GRANGE, Kingston, N. MYRICK, Master; A. R. CROWELL, Sec'y.
FRESNO GRANGE, Fresno City: H. W. FASSETT, Master; J. DORR, Sec'y.
GARRETTSON GRANGE, King's River: W. J. HUTCHESSON, Master; W. W. PHILLIPS, Sec'y.
LAKE GRANGE, Kingston: M. S. BABCOCK, Master; E. J. BENEDICT, Sec'y.

HUMBOLDT COUNTY.

KIWELATTI GRANGE, Arcata, Humboldt Co.: LEWIS R. WOOD, Master; D. D. AVERILL, Sec'y.
TABLE BLUFF GRANGE, Table Bluff, Humboldt Co.: JACKSON SAWYER, Master; B. H. C. POLLARD, Sec'y.
FERNDALE GRANGE, Ferndale, Humboldt Co.: F. Z. BOYNTON, Master; CHAS. BARBER, Sec'y.
ELK RIVER GRANGE, Eureka, Humboldt Co.: THEODORE MEYER, Master; J. A. DEBARRITT, Sec'y.
ROHNERTVILLE GRANGE, Rohnertville, Humboldt Co.: B. T. JAMESON, Master; H. S. CASE, Secretary.

LAKE COUNTY.

GUENOC GRANGE, Guenoc, Lake Co.: J. M. HAMILTON, Master; A. A. RITCHIE, Sec'y.
KELSEYVILLE GRANGE, Kelseyville, Lake Co.: D. P. SHATTUCK, Master; T. OIMSTON, Sec'y.
LAKEPORT GRANGE, Lakeport, Lake Co.: C. CUTTER, Master; N. PHILLIPS, Sec'y.
LOWER LAKE GRANGE, Lower Lake, Lake Co.: A. E. NOEL, Master; HORACE STOW, Sec'y.
UPPER LAKE GRANGE, Upper Lake, Lake Co.: D. V. THOMPSON, Master; D. Q. MCCARTY, Sec'y.

LOS ANGELES COUNTY.

ALLIANCE GRANGE, El Monte, Los Angeles Co.: S. S. REEVES, Master; J. W. MARSHALL, Sec'y.
LOS ANGELES GRANGE, Los Angeles Co.: T. A. GAREY, Master; T. D. HANCOCK, Sec'y.
AZUSA GRANGE, El Monte, Los Angeles Co.: W. W. MAXEY, Master; J. C. PRUSTON, Sec'y.
COMPTON GRANGE, Compton, Los Angeles Co.: A. HIGGINS, Master; J. A. ANDERSON, Sec'y.
EL MONTE GRANGE, Los Angeles Co.: G. C. GRIBBS, Master; P. O. Los Angeles: J. H. GRAY, Sec'y; P. O., El Monte.
ENTERPRISE GRANGE, Los Angeles, Los Angeles Co.: A. M. SOUTHWORTH, Master; W. T. HENDERSON, Sec'y.
EUREKA GRANGE, Spadra, Los Angeles Co.: T. C. TANNER, Master; JOSEPH WRIGHT, Sec'y.
FAIRVIEW GRANGE, Anaheim, Los Angeles Co.: EDWARD EYER, Master; J. F. TAYLOR, Sec'y.
FLORENCE GRANGE, Los Angeles, Los Angeles Co.: H. GIBSON, Master; WILLIAM PORTER, Sec'y.
FRUIT LAND GRANGE, Tustin City, Los Angeles Co.: A. B. HAYWARD, Master; E. R. NICHOLES, Sec'y.
LOS NEITOS GRANGE, Los Angeles Co.: E. B. GRANDON, Master; P. O., Los Angeles: J. F. MARQUIS, Sec'y; P. O., Anaheim.
NEW RIVER GRANGE, Los Neitos P. O., Los Angeles Co.: R. B. GUTHRIE, Master; D. S. WARLOW, Sec'y.
ORANGE GRANGE, Richland, Los Angeles Co.: JOSEPH BISH, Master; J. W. ANDERSON, Sec'y.
SILVER GRANGE, Los Neitos, Los Angeles Co.: J. H. BURKE, Master; E. R. WYLLIE, Sec'y.
WESTMINSTER GRANGE, (Anaheim, P. O.) M. B. CRAIG, Master; HENRY STEPHENS, Sec'y.

MARIN COUNTY.

NICASIO GRANGE, Nicasio, Marin Co.: H. T. TAFT, Master; J. W. NOBLE, Sec'y.
POINT ARENAS GRANGE, Point Arenas, Marin Co.: A. H. STENSON, Master; JOHN A. UPTON, Sec'y.
TOMALES GRANGE, Tomales, Marin Co.: WM. VANDERBILT, Master; R. H. PRINCE, Sec'y.
TWO ROCK GRANGE, Marin Co.: JOHN R. DORR, Master; JOHN H. FREEMAN, Sec'y.

MENDOCINO COUNTY.

POTTER VALLEY GRANGE, Pomo, Mendocino Co.: J. MEWHINNEY, Master; T. MCCOWAN, Sec'y.
UKIAH GRANGE, Ukiah City, Mendocino Co.: W. D. WHITE, Master; A. O. CARPENTER, Sec'y.

MERCED COUNTY.

BADGER FLAT GRANGE, Kreyenburgh's P. O., Merced Co.: W. GILROY, Master; W. PARLIN, Master; ALFRED F. MERRITT, Sec'y.
CUTWOOD GRANGE, Hill's Ferry, Merced Co.: J. L. CRITTENDEN, Master; J. J. DOYLE, Sec'y.
HOPETON GRANGE, Hopeton, Merced Co.: JOHN RUDLE, Master; T. EAGLESON, Sec'y.
LOS BANOS GRANGE, Kreyenburgh's P. O., Merced Co.: W. GILROY, Master; W. M. VINLY, Master; H. C. WAINWRIGHT, Sec'y.
MERCED GRANGE, Merced, Merced Co.: W. E. ELLIOT, Master; F. TADLOCK, Sec'y. Agent, W. P. FOWLER.
SNEILING GRANGE, Snelling, Merced Co.: DANIEL YEIZER, Master; W. L. HAMILIN, Sec'y.

MONTREY COUNTY.

HOLLISTER GRANGE, Hollister, Monterey Co.: J. D. FOWLER, Master; S. F. COWAN, Sec'y. Agent, J. D. FOWLER.
SALINAS GRANGE, Salinas, Monterey Co.: N. L. ALLEN, Master; SAMUEL CASSIDY, Sec'y. Agent, W. L. CARPENTER.

NAPA COUNTY.

CAL-TOGA GRANGE, Calistoga, J. N. RENNETT, Master; L. HOPKINS, Sec'y.
NAPA GRANGE, Napa City, Napa Co.: W. H. BAXTER, Master; J. WALTER WARD, Sec'y. Agent, W. A. FISHER.
ST. HELENA GRANGE, St. Helena, Napa Co.: J. H. ALLISON, Master; J. L. EDWARDS, Sec'y.
YOUNTVILLE GRANGE, Yountville, Napa Co.: J. M. MAYFIELD, Master; FRANK GRIFFIN, Sec'y. Agent, J. M. MAYFIELD.

SACRAMENTO COUNTY.

ELK GROVE GRANGE, Elk Grove, Sacramento Co.: OBADIAH S. FREEMAN, Master; DELOS GAGE, Sec'y.
SACRAMENTO GRANGE, No. 12, Sacramento, Sacramento Co.: W. S. MANLOVE, Master; A. S. GREENLAW, Sec'y.

SAN BERNARDINO COUNTY.

SAN BERNARDINO GRANGE, P. O., Riverside, San Bernardino Co.: E. G. BROWN, Master; J. F. GOULD, Sec'y, San Bernardino.

SAN JOAQUIN COUNTY.

ATLANTA GRANGE, Morano, San Joaquin Co.: W. T. CAMPBELL, Master; PUTMAN VISHES, Sec'y. P. O., Morano, San Joaquin Co.
CASTORIA GRANGE, Lathrop, San Joaquin Co.: SEWELL GOWER, Master; J. STRAHAN, Sec'y.
LINDEN GRANGE, Linden, San Joaquin Co.: JOHN WARLEY, Master; JAMES WARLEY, Sec'y.
LIBERTY GRANGE, Acampo, San Joaquin Co.: JUSTUS SCHOMP, Master; J. H. COLE, Sec'y.
LODI GRANGE, Lodi, San Joaquin Co.: J. W. KEARNY, Master; MRS. NETTIE CROUCH, Sec'y.
RUSTIC GRANGE, Lathrop, San Joaquin Co.: J. A. SHEPHERD, Master; HENRY MOORE, Sec'y.
STOCKTON GRANGE, Stockton, San Joaquin Co.: WM. J. OVERHISER, Master; WM. G. PHILIPS, Sec'y.
WEST SAN JOAQUIN GRANGE, Ellis, San Joaquin Co.: M. LAMMERS, Master; GEO. E. MCSTAY, Sec'y.
WILLOW GRANGE, Willowd School House, San Joaquin Co.: JOS. LEIGHTON, Master; A. B. MUNSON, Sec'y.
WOODBRIDGE GRANGE, Woodbridge, San Joaquin Co.: J. L. HUTSON, Master; A. S. THOMAS, Sec'y.

SAN LUIS OBISPO COUNTY.

ARROYO GRANDE GRANGE, Arroyo Grande, San Luis Obispo Co.: W. H. NELSON, Master; D. F. NEWSON, Sec'y.
CAMBRIA GRANGE, Cambria, San Luis Obispo Co.: RUFUS RIGDON, Master; C. H. IVINS, Sec'y.
MORO CITY GRANGE, Moro, San Luis Obispo Co.: A. J. MOTHERSHEAD, Master; H. Y. STANLEY, Sec'y. Agent, A. J. MOTHERSHEAD.
OLD CREEK GRANGE, Old Creek, San Luis Obispo Co.: ISAAC FLOOD, Master; R. M. PRESTON, Sec'y.
SAN LUIS OBISPO GRANGE, San Luis Obispo, San Luis Obispo Co.: WM. JACKSON, Master; E. REED, Sec'y.

SAN MATEO COUNTY.

PESCADERO GRANGE, Pescadero, San Mateo Co.: B. V. WEEDS, Master; H. B. SPRAGUE, Sec'y.

SANTA BARBARA COUNTY.

CARPENTERIA GRANGE, Carpinteria, Santa Barbara Co.: O. N. CADWELL, Master; G. E. THURMANN, Sec'y.
CONFIDENCE GRANGE, Guadalupe, Santa Barbara Co.: A. A. COPELAND, Master; J. T. ALLEN, Sec'y.
SANTA BARBARA GRANGE, Santa Barbara, S. B. Co.: O. L. ABBOTT, Master; C. KENNEY, Sec'y.
SANTA MARIA GRANGE, Santa Maria Co.: P. O., Susey Station, San Luis Obispo Co.: JOEL MILLER, Master; M. D. MILLER, Sec'y.

SAN BERNARDINO COUNTY.

RIVERSIDE GRANGE, Riverside, P. O. E. G. BROWN, Master; W. V. KIMBALL, Sec'y.

SACRAMENTO COUNTY.

BRIGHTON GRANGE, Brighton, Sacramento Co.: J. M. BELL, Master; MAURICE TOOMEY, Sec'y.
FLORIN GRANGE, Florin, Sacramento Co.: CALLED ARNOLD, Master; WILLIAM SCHOFIELD, Sec'y.

SANTA CLARA COUNTY.

SAN JOSE GRANGE, No. 10, San Jose, Santa Clara Co.: G. W. HENNING, Master; MISS JETTORA WATKINS, Sec'y. San Jose. Agent, J. W. HERRON.
SANTA CLARA GRANGE, Santa Clara P. O., Santa Clara Co.: H. M. LEONARD, Master; J. A. WILSON, Sec'y.
SARATOGA GRANGE, Saratoga, Santa Clara Co.: FRANCIS DRESSER, Master; MISS JENNIE FARWELL, Sec'y.

SANTA CRUZ COUNTY.

GEORGIANA GRANGE, Georgiana, Solano Co.: F. M. KITTRELL, Master; GEO. A. KNOTT, Sec'y.
PAJARO GRANGE, P. O., Watsonville, Santa Cruz Co.: J. M. CLOUGH, Master; C. W. RADFORD, Sec'y.
SANTA CRUZ GRANGE, Santa Cruz: G. C. WARDWELL, Master; J. W. MORGAN, Sec'y.
WATSONVILLE GRANGE, Watsonville: J. MCCALLAM, Master; A. F. RICHARDSON, Sec'y.

SOLANO COUNTY.

DENVERTON GRANGE, Denerton, Solano Co.: J. B. C. RINGTON, Master; J. C. ARNOLD, Sec'y.
DIXON GRANGE, Dixon, Solano Co.: J. C. MERRYFIELD, Master; JAMES A. ELLIS, Sec'y.
ELMIRA GRANGE, Vacca Station, Solano Co.: J. A. CLARK, Master; M. D. COOPER, Sec'y.
ROCKVILLE GRANGE, Rockville, Solano Co.: W. A. LATTIN, Master; J. R. MORRIS, Sec'y.
SUIN VALLEY GRANGE, Suin, Solano Co.: R. C. HAILE, Master; A. T. HATCH, Sec'y.
VACAVILLE GRANGE, Vacaville, Solano Co.: E. R. THURBER, Master; W. M. DUNBAR, Sec'y.
VALLEJO GRANGE, Vallejo, Solano Co.: O. C. PIERSON, Master; CHAS. B. DEMING, Sec'y.

SONOMA COUNTY.

BENNETT VALLEY GRANGE, Santa Rosa, Sonoma Co.: NELSON CARR, Master; J. H. PLANK, Sec'y.
BLOOMFIELD GRANGE, Santa Rosa, Sonoma Co.: WM. H. WHITE, Master; D. DRUMER, Sec'y.
BODEGA GRANGE, Bodega, Sonoma Co.: J. H. HIGLER, Master; W. SMITH, Sec'y.
CLOVERDALE GRANGE, Cloverdale, Sonoma Co.: CHAS. H. COOLEY, Master; D. M. WAMBOLD, Sec'y.
GEYSERVILLE GRANGE, Geyserville, Sonoma Co.: CALVIN M. BOWMAN, Master; W. A. HENRY, Sec'y.
HEADSBURG GRANGE, Headsburg, Sonoma Co.: CHARLES ALEXANDER, Master; MRS. S. A. PECK, Sec'y. Agent, T. H. MERRY.
PETALUMA GRANGE, Petaluma, Sonoma Co.: L. W. WALKER, Master; D. G. HEALD, Sec'y. Agent, W. M. HILL.
SANTA ROSA GRANGE, Santa Rosa, Sonoma Co.: GEO. W. DAVIS, Master; J. A. O'BRIEN, Sec'y.
SONOMA GRANGE, Sonoma Co.: P. O., Sonoma, Sonoma Co.: WM. MCP. HILL, Master; W. A. HENRY, Sec'y.
SEBASTOPOL GRANGE, Sebastopol, Sonoma Co.: M. C. HICKS, Master; JOSEPH PURINGTON, Sec'y.
WINDSOR GRANGE, Windsor, Sonoma Co.: A. B. NALTEY, Master; J. B. MCCLELLAN, Sec'y.

STANISLAUS COUNTY.

BONITA GRANGE, Crow's Landing, Stanislaus Co.: J. W. TREADWELL, Master; A. B. GROOM, Sec'y.
CERES GRANGE, Westport, Stanislaus Co.: W. B. HART, Master; J. C. WHITMORE, Sec'y.
GRAYSON GRANGE, Grayson, Stanislaus Co.: I. G. OARDNER, Master; MISS H. J. PHILIPS, Sec'y.
ORISTIMBA GRANGE, Hill's Ferry, Stanislaus Co.: W. J. MILLER, Master; THOS. A. CHAPMAN, Sec'y.
SALIDA GRANGE, Salida, Stanislaus Co.: J. A. STANISLAUS, Master; N. C. DODD, Sec'y.
SOLERA GRANGE, Napa, Stanislaus Co.: LAFAYETTE DICKY, Sec'y.
STANISLAUS GRANGE, Modesto, Stanislaus Co.: J. D. SPENCER, Master; VITAL E. BANGS, Sec'y.
TURLOCK GRANGE, Turlock, Stanislaus Co.: A. S. FULKEITH, Master; JOHN A. HENDERSON, Sec'y.
WATERFORD GRANGE, Waterford, Stanislaus Co.: R. R. WARDER, Master; W. C. COLLINS, Sec'y.

SUTTER COUNTY.

SUTTER GRANGE, Sutter, Sutter Co.: W. C. SMITH, Master; M. C. HENDERSON, Sec'y.
YUBA CITY GRANGE, Yuba City, Sutter Co.: T. B. HULL, Master; S. R. CHANDLER, Sec'y.

TEHAMA COUNTY.

RED BLUFF GRANGE, Red Bluff, R. H. BLOSSOM, Master; JOHN COOK, Sec'y.

TULARE COUNTY.

DEEP CREEK GRANGE, Farmersville, W. G. PENNEBAKER, Master; F. G. JEFFERDS, Sec'y.
TULE RIVER GRANGE, Porterville, Tulare Co.: G. A. WILLIAMSON, Master; D. STEPHENS, Sec'y.

VENTURA COUNTY.

SATICOVY GRANGE, P. O., San Buenaventura, Ventura Co.: MILTON WASHON, Master; E. A. DUVAL, Sec'y.
YOLO COUNTY.
ANTELOPE GRANGE, W. J. CLARK, Master; C. L. N. VANDERBILT, Sec'y.
BUCKEYE GRANGE, Yolo Co.: P. O., Buckeye, Yolo Co.: WM. SIMS, Master; J. G. ALLEN, Sec'y.
CACHE CREEK GRANGE, Cache Creek, Yolo Co.: D. B. HERBERT, Master; D. STEPHENS, Sec'y.
CAPA VALLEY GRANGE, Capa, Yolo Co.: R. R. DARRY, Master; P. M. SAVAGE, Sec'y.
DAVISVILLE GRANGE, Davisville, Yolo Co.: CHAS. E. GREEN, Master; JOHN KIRKER, Sec'y.
HUNTERY HOLLOW GRANGE, P. O., Yolo Co.: G. L. PARKER, Master; C. O. PERKINS, Sec'y.
WEST GRAFTON GRANGE, Yolo Co.: A. W. MORRIS, Master; GEO. W. PARKS, Sec'y.
YOLO GRANGE, Woodland, Yolo Co.: W. M. JACKSON, Master; D. SCHINDLER, Sec'y. Agent, W. M. JACKSON.

Deputies who organize new Granges are requested to send the list of officers, and the names of all charter members, with other facts of interest, for publication in the RURAL PRESS, as early as possible.

DELAID.—The orders for jewels and some other articles for Granges have been more than we were prepared for. We now expect that all demands will be soon supplied.

ROLL BOOKS.—These books, which the State Secretary expected to supply to all Granges, have not yet arrived.

"Articles for Granges."

Bro. W. H. Baxter, Sec'y of the State Grange, has consented to supply Granges with such articles as we have heretofore furnished; we therefore notify Patrons to send their orders to him direct, in future. He will also furnish manuals, songbooks and other materials which we have not kept on hand. Being permanently located with the State Agent, in this city, it will be fully as convenient now for Patrons to obtain their supplies through Bro. Baxter as at our office. All orders which we shall continue to furnish and supply (except for By-laws) received by us after this date will be handed over to Secretary Baxter.

Election of Officers.

LODI GRANGE.—Bro. Dickerson, Secretary of Lodi Grange, writes as follows:—"Our election of officers, for the ensuing year, came off at the last regular meeting in October, as per Constitution; but, as was anticipated at the time, several parties who were elected, declined serving, and it was not till our last meeting that we succeeded in electing a full list of officers with a good degree of certainty, that all would serve. Following are the names of officers elect for the ensuing year:—J. W. Kearny, M.; A. T. Ayres, O.; Henry Witte, L.; C. P. Allison, S.; Saml. Ferdun, A. S.; O. O. Norton, C.; A. W. Gove, T.; Mrs. Nettie Cronch, Sec.; E. Lawrence, G. K.; Mrs. Eva. S. Morse, Ceres; Mrs. H. S. Gove, Pomona; Mrs. Maria J. Norton, Flora; Mrs. Julia Ayers, L. A. S.

TULE RIVER GRANGE.—N. T. Blair, Secretary of this Grange, the organization of which was briefly noticed last week, sends us the full list of officers, as follows:—G. A. Williamson, M.; L. M. Bond, O.; I. B. Rumford, L.; J. P. Ford, C.; C. W. McKelvey, S.; C. T. Brown, A. S.; J. B. Hoekett, T.; N. T. Blair, Sec'y; J. F. Griffin, G. K.; Mrs. Sarah Hadley, Ceres; Mrs. S. N. W. Rumford, Pomona; Miss Carrie Hilton, Flora; Miss L. A. Ford, L. A. S.

The places of meeting, until further advised, will be Plano and Porterville, as the Grange is composed of citizens in both places. Post-office and express office address, Porterville.
SAN LUIS OBISPO GRANGE.—Officers, William Jackson (re-elected), M.; W. P. Barnett, O.; C. H. Johnson, L.; D. M. Johnson, S.; D. Edwards, A. S.; Saml. Cook, C.; J. W. Stack, T.; E. L. Reed, Sec'y; Wm. Dunbar, G. K.; Mrs. D. M. Johnson, Ceres; Mrs. Wm. Jackson, Pomona; Miss N. E. Barnett, Flora; Miss Theresa Leff, L. A. S.

HEADSBURG GRANGE.—Bro. Merry writes us that the following officers have been elected to fill the respective positions for the ensuing year: Charles Alexander, M.; I. C. Laymance, O.; A. J. Gordon, L.; P. S. Peck, C.; J. G. Best, S.; B. B. Capell, A. S.; Ira Proctor, T.; Mrs. S. A. Peck, Sec'y; A. Bowton, G. K.; Mrs. R. A. Abbey, Ceres; Mrs. E. E. Merry, Pomona; Mrs. R. S. Spencer, Flora; Miss Alice Alexander, L. A. S. Board of Trustees: T. H. Merry, A. C. Bledsoe, W. N. Gladden.

CENTERVILLE GRANGE, ALAMEDA Co.—The following officers were elected Dec. 27: James Shinn, M.; L. E. Osgood, O.; S. I. Marston, L.; C. Healy, S.; N. L. Babb, A. S. Mrs. H. Overacker, C. H. Overacker, T., J. L. Beard, Sec'y; F. Peres, G. K.; Miss Maria Babb, Ceres; Mrs. J. R. Clough, Pomona; Mrs. A. R. Hall, Flora; Mrs. L. E. Osgood, L. A. S.

CAPA VALLEY GRANGE.—Officers elect: R. R. Darby, M. (re-elected); G. M. Rhodes, O. (re-elected); O. C. Butler, L.; G. P. Goodnow, S. (re-elected); E. E. Perkins, A. S.; G. R. Lone, C.; Wm. H. Duncan, T. (re-elected); P. M. Savage, Sec'y (re-elected); T. Powell, G. K.; S. E. Darby, Ceres (re-elected); Tillie Walters, Pomona (re-elected); Flora L. Savage, Flora (re-elected); Ellen Duncan, L. A. S. (re-elected).

COTTONWOOD GRANGE.—Officers elect: J. L. Crittenden, M.; W. F. Draper, O.; J. M. Daley, L.; R. M. C. Hale, C.; Jerry Sturgeon, S.; O. B. Babcock, A. S.; E. L. Sturgeon, T.; J. J. Doyle, Sec'y; G. E. Mills, G. K.; Mrs. C. Draper, Ceres; Mrs. A. Crittenden, Pomona; Miss K. Sanford, Flora; Miss H. Campbell, L. A. S. All the above officers were re-elected except the A. S. and T.

ANTELOPE GRANGE.—Officers elect: W. J. Clark, M. (re-elected); G. B. Lewis, O.; J. S. Rollins, L.; H. N. Garrett, S.; J. D. Snelling, A. S.; Dr. Z. J. Brown, C.; A. W. Dunigan, T.; C. L. N. Vaughan, Sec'y (re-elected); L. C. Lane, G. K. (re-elected); Mrs. Susan S. McCampbell, Ceres; Miss Jennie Burgoyne, Pomona; Mrs. S. A. Lewis, Flora; Miss Rosa Dunigan, L. A. S. (re-elected).

New Granges.

MARIN COUNTY.—We have reports from General Deputy, John H. Hegler, of the organization by him of four new Granges in Marin County, as follows:

TOMALES GRANGE.—Organized Dec. 17th, with full list of Charter members. This is the first Grange organized in the county. Its list of officers is as follows: Wm. Vanderbilt, M.; O. Hubbell, O.; F. W. Bemis, L.; Samnel C. Percival, S.; F. A. Plank, A. S.; S. Duncan, C.; D. B. Burbank, T.; R. H. Prince, Sec'y; John Buchanan, G. K.; Mrs. O. Hubbell, C.; Mrs. F. W. Bemis, P.; Miss Amelia Waters, F.; Mrs. F. A. Plank, L. A. S.

POINT ARENAS GRANGE.—Was organized Dec. 20th, with 29 Charter members, and the following list of officers: A. H. Stenson, M.; T. B. Crandell, O.; S. E. Perham, L.; Wm. P. Ruggles, C.; A. Huff, S.; C. H. Johnson, A. S.; Wm. Evans, T.; John A. Upton, Sec'y; C. Johnson, G. K.; Mrs. S. E. Perham, C.; Mrs. R. A. Upton, P.; Mrs. John A. Upton, F.; Mrs. A. Huff, L. A. S. Post office address, Point Reyes, via Olema.

NICASIO GRANGE.—Organized Dec. 22d, with the following list of officers: H. T. Taft, M.; Thos. H. Estey, O.; P. K. Austin, L.; Wm. J. Dickson, C.; C. J. Magee, S.; Thos. Campbell, A. S.; J. W. Noble, Sec'y; B. F. Partee, T.; Chas. L. Estey, G. K.; Mrs. H. F. Taft, C.; Mrs. C. J. Magee, P.; Mrs. J. W. Noble, F.; Mrs. M. McNamara, L. A. S.

TWO ROCK GRANGE.—Organized Dec. 16th, with full list of Charter members. The following is the list of officers: John R. Doss, M.; Wm. D. Freeman, O.; N. A. Clark, L.; W. H. Smith, S.; Walter Church, A. S.; Wm. H. Thompson, C.; A. A. Brown, T.; John H. Freeman, Sec'y; F. Hill, G. K.; Mrs. Mary Freeman, C.; Mrs. Mary M. Freeman, P.; Miss Hattie Ent, F.; Mrs. Annie Halstead, L. A. S.

Brother Hegler is doing a good work, and by the way the farmers thereabouts are taking hold of the cause, they bid fair to ontstrip the brethren in any other locality north of San Francisco. Our brother reports two more Granges ready for organization in Marin County as soon as he can visit them, and returns his thanks to the citizens of the several localities, already visited, for the courtesies and kindnesses shown him.

BROS. DEWEY AND EWER: I write to inform you of the organization of two Granges since my last to you:

PANAMA GRANGE, P. O. and Express office, Bakersfield, was organized Saturday, December 20th, with thirty charter members. Mr. Rapp, Master; Mr. Gordon, Secretary.

BAKERSFIELD GRANGE, in Bakersfield, was organized Monday, Dec. 22d, with thirty charter members. S. Jewett, Master; Jerome Troy, Secretary.

To-day I expect to organize New River Grange, thirteen miles from here.

J. W. A. WRIGHT.

Bakersfield, Kern Co., Dec. 23d.

PAJARO AND WATSONVILLE GRANGES.—Pajaro Grange is going ahead prosperously and harmoniously; all seem satisfied, all pull the same way, no discord or ill-feeling among the members. The only obstruction we have is the want of a hall in which to meet. I hope this deficiency will be supplied before another year, so that we may own a hall of our own.

The weather has moderated and the farmers are busily plowing and preparing for planting. A few of the farmers on the uplands have already seeded their lands. Yesterday, after we had conferred the 4th Degree on eight members, we partook of a Harvest Feast prepared by the Sisters, and all went merry as a marriage bell. Blessed are the Sisters, for without them the Grange would never prosper in the manner it does. Our neighboring Grange, at Watsonville, has received its charter—No. 124, and are now receiving applications for membership, and will soon have a large class to initiate. They have rented the Masonic Hall. Your subscribers have all received the PRESS.

SAN LUIS GRANGE.—E. L. Reed, Secretary of this Grange in sending the list of officers elect for 1874, adds as follows:—"We have had three weeks of just such a rain as you generally hear people wish for; early enough in the season and not too heavy—pleasant and warm all the time. The sun is shining beautiful this morning, and the rain appears to be over for the present. Our neighbors are just beginning to comprehend the fact that the members of this Grange mean business. Many of our best farmers were rather backward about joining us at first; but of late they are sending in their applications for membership.

HEADSBURG GRANGE.—From this Grange, Bro. T. H. Merry writes as follows:—"The installation of officers will take place at an open meeting to be holden at the Presbyterian Church, on Saturday, Jan. 3d, 1874. Windsor, Cloverdale and Geyserville Granges will assist in the ceremonies. Bro. A. B. Nally, of Windsor Grange, will officiate as installing officer. The whole will wind up with a grand Feast at the Grange Hall to which all members of our Order and their families are cordially invited.

IN ONE BOOK.—We have now in hand neatly printed pamphlet copies of the Constitution, By-Laws, and Rules of Order of the National, State and (in blank form) Subordinate Grange. Price \$4 per hundred. By mail 5 cents per copy, post paid. The permanent portion of the forms are now stereotyped, so that we can print by-laws of special character for subordinate Granges at short notice, and at reasonable rates.

TO SECRETARIES.—We have endeavored to make our Directory as complete as possible, giving P. O. Address and names of the Master and Secretary for the year 1874. Secretaries, or others, who will make any corrections or additions which may be necessary, will greatly assist and oblige us.

Castoria Grange.

EDITORS PRESS:—Since you so generously devote a part of your excellent paper to the uses of the Patrons of Husbandry, I take the liberty of giving for publication some items of history pertaining to Castoria Grange. Our annual elections were held in October, at which time the following list of officers were elected: Sewall Gower, M.; H. W. Cowell, O.; J. W. Hanscome, L.; Albert Seavy, C.; Walter Graves, S.; Asa Nicewonger, A. S.; J. Strahan, Sec.; J. Cowell, T.; J. Carter, G. K. Lady Officers: Mrs. H. W. Cowell, C.; Mrs. J. Carter, P.; Miss Helen Myers, Flora; Mrs. J. Cowell, L. A. S.

Castoria Grange was organized the latter part of last September, with a charter membership of twenty-seven. Now we number ninety-seven members, with more applications to be acted upon. We have a hall, 50x40, for which we have secured the exclusive use for five years, and have fitted it up with all the appointments of a Grange, at an expense of \$400. Our membership is composed of the very best material—farmers and their wives and daughters, intelligent and honest, true men and women. A cordial and fraternal feeling pervades among us, and our meetings have always had sufficient interest in them to attract a full attendance. In fine, we have all the conditions and elements necessary to a prosperous and efficient Grange.

On the night of December 4th, we celebrated the anniversary of our Order with appropriate festivities. An address was delivered by our worthy lecturer, B. F. Woodward, of great merit and excellence, after which dancing was commenced in the lower story of the building. At ten o'clock supper was announced, when one hundred and sixty persons, by count, principally members of our Order, sat down to tables loaded with everything that could please the eye and satisfy the taste. In fine, the whole affair was most successful and harmonious. Very fraternally, SEWALL GOWER.

Stockton, Dec. 6, 1873.

From Worthy Master Hamilton.

GUENOC, Dec. 26, 1863.

BROTHERS DRWEY & EWER:—For the information of Patrons will you please give notice in the columns of the PRESS—

That Dudley W. Adams, Worthy Master of the National Grange, has ruled — "That the conferring of more than one degree on the same day is a violation both of the spirit and the letter of the National Constitution, and must not be allowed, 'no matter whether the degrees be conferred on the same or different persons.'"

It will be my duty, whenever a violation of this provision of the Constitution is brought to my notice—and is persisted in—to request our Worthy Master to revoke the charter, or recall the dispensation of the Grange so offending. Yours fraternally,

J. M. HAMILTON,
W. M. California State Grange.

DAIRYMEN AND THE GRANGES. — The State Grange will open a store for the sale of dairy produce, on the 1st of January, at 414 and 416 Sansome, and 427, 429 and 431 Commercial streets, under the management of Mr. John H. Hegler, of Sonoma county, Master of Bodega Grange and general Deputy, who has been organizing Granges in the dairy country and with great success. Mr. Hegler assures us that from the observations in his travels he can fully warrant the success of the house. He has taken a wise course by identifying himself with a gentleman of this city, who has been in the business here, and who is largely acquainted and has a thorough knowledge of the business. We think from present appearances that the day is not far distant when our farmers will be able to do all their selling and much buying through their own houses, and that at a great saving to themselves.

A FARMERS' AID ASSOCIATION. — A movement is now on foot in San Diego for the organization of a "Farmers' Aid Association," the object being to assist farmers who may require such aid in procuring seed grain for planting.

The best "Farmers' Aid Association" is a Grange of the P. of H. If our farmer friends in San Diego county, where we believe no Granges have yet been formed, will call upon Bro. Thos. A. Garey, of Los Angeles, he will furnish them with all the information and assistance they need to join the great army of united farmers, which is doing so much good for the agricultural interest, generally, all over the country.

Progress of the Order—Extraordinary Growth.

Few people, even among the members of the Order, have any proper idea of the rapid progress which the Patrons of Husbandry have made towards influence and power, during the past year, or the increasing ratio with which the organization of Granges is now going on.

The Order was founded only six years ago; but ten Granges were organized during the first year, and that number had increased to only 338 at the end of the fourth year. During these four years farmers could not be made to understand or appreciate the benefits which might be derived from such an organization. The importance of the movement could not be impressed upon them until 1872, during which year 1,053 Granges were organized.

But nothing like the full benefit of the movement was realized until the present year, during which, up to Dec. 13th—lacking over two weeks of a full year—seven thousand eight hundred and seventy-six new Granges had been organized; making in all, as reported at the Central office in Washington, up to the 13th day of December, 9,267 Granges in the entire Union.

There are now 29 State Granges in operation, including the Dakota Territory Grange; and the Order has been planted in every State in the Union except the two smallest—Delaware and Rhode Island. The number of Granges is now increasing at the rate of about one thousand each month. It is safe to say that, there will be at least 20,000 organizations by the close of the coming year, with a membership of not less than two millions, and even then there will be much to do in the way of organization.

No wonder the people's party is gaining in influence and power all over the land—that it has already become national and holds complete control of several of the most important States in the Union; for the great mass of the Grangers are throwing their influence in that direction.

The Order, as we have often stated, is not political. It holds no caucuses or political conventions; makes no nominations, and takes no part, as an Order, in political matters; but its members are found voting almost uniformly with that party or political organization which is freest from partisan rule, and most devoted to the welfare of the people, without reference or care for party. It is astonishing—to the initiated—how completely the Grange breaks down all partisan feeling. The moment a voter becomes a member of a Grange, he is a brother, in the closest social relationship to every other member, and enters at once into the fullest sympathy with the general feeling and spirit of the Order.

The working men of America can never hope to accomplish the amelioration of labor without the use of the ballot. That fact is as plain to the mind of every observing man as the noon-day sun on a clear day. But experience is proving that the best way to use the ballot, is by standing aloof from all parties, and holding them closely upon their good behavior. Just now the "People's Party" appears the most promising of good results; but if that fails of its promises, the Patrons of Husbandry will be in no manner responsible for its acts, and will lose none of the prestige and power of their organization; for they can kill it in a day to make room for another on its ruins, or adopt some more promising one already in existence.

The farmers comprise very nearly a majority of all the voters in the Union. By throwing their influence in any particular direction, they are able to carry an overwhelming balance of power. They are now united and earnest from the Atlantic to the Pacific—from Maine to Texas. They mean business; they fully realize the magnitude and importance of the work they have undertaken, while the discussions and addresses in relation thereto, which have gone out to the world, afford sufficient evidence of their power and ability, and their terrible earnestness to right the wrongs that now encompass them and their calling. The train is moving, the track is clear, the flags are flying; and now, while the bell rings a friendly warning, let every politician who entertains the slightest hope for a future, beware of the approaching train.

TEMESCAL GRANGE.—At the meeting, Dec. 27th, the code of by-laws recommended by the State Grange, with a few amendments, was adopted. The first Saturday in each month, at 2 o'clock p. m., is designated for the regular meeting. Monthly dues for brothers is fixed at 50 cents; for sisters, 25 cents. The installation of officers will take place on Saturday next.

The Grange.

The social is one of the highest and most noble features connected with our Order. Wherever we find Patrons, in or out of the Grange, this wonderful influence is most marked and unmistakable. Farmers who have heretofore been comparatively isolated from their brother farmers, so soon as they join the Grange become different men from what they were before—they have broader sympathies, kindlier feelings and higher aspirations. They seem to realize that they have somebody besides themselves to live for. They meet each other, whether on the street, on the farm, at a neighbor's or in the Grange, with a warmer shake of the hand and a more cordial salutation than ever before. Though but lately strangers, they now are friends—confident, trusting friends.

Granges have been most happily compared to magnetic batteries. They are indeed such, and the power of their magnetism is really marvellous. They are throwing out electric currents of light and heat, which are destined to continue and extend until they shall warm and illumine every farmhouse in the land.

They are positive batteries too, and so fully charged, and with such power, that they will overcome every negative that may presume to stand before them.

Some people are beginning to think that they are earthquakes, also; perhaps they are—electrical earthquakes, according to the new theory of such phenomena—and their force too is as silent, as hidden, and as powerful in the moral world as is the real shake in the physical.

The earthquake is coming too. We see the evidence of its approach everywhere—all over this State, all over the Union. They have had a touch of it at Sacramento several times this winter; every time, indeed, that the monopolists have attempted to foist their men or measures upon the Legislature, there has been a shaking which, though not severe, has certainly been most ominous of what may happen, if the outside pressure is piled on too heavily. The enemies of the People's Movement, if they have any aspirations for the future, will do well to stand from under.

We see this moral earthquake in the upheaving of the elements of corruption all over the land. We see it in the linking of hands between the farmers and mechanics—for the latter have already started the ball for themselves in an organization known as the Patrons of Industry, which aims to do for all other producing classes just what the Patrons of Husbandry are doing for the farmers.

Workingmen everywhere and of every class are interested in the great principles and benefits which underlie and sustain the Farmers' Movement. Whatever benefits the farmer, benefits every other honest laborer. Crush the prosperity of the farmer, and you destroy the prosperity of every other productive industry. Build up agriculture, and you furnish a substantial basis for prosperity everywhere. Hence, the Farmers' Movement is the People's Movement, and the people are going to sustain it.

It is the Farmers' Movement, acting through the masses, which has so thoroughly aroused the people of this State to take the stand they have recently taken against monopoly and misrule on this coast. It is the Farmers' Movement which is breaking down the tyranny of political caucuses and partisan misrule, both here and at the East; and it is the Farmers' Movement which influenced President Grant in his Message to Congress to admit, in its very opening paragraph, that "Political partisanship has almost ceased to exist—especially in the agricultural regions."

Don't that sound as though the General meant, hereafter, to fight it out on that line?

Nothing of a mere human invention has ever been developed in the whole history of the world, so largely promising of good as the Grange. It brings into activity every latent power—both intellectual and moral. The farmer has heretofore been asleep. He is now, however, awake—wide awake—resolute and firm. The Grange has made him so. He has planted his foot upon the rack of Truth, and with God's help he will soon work a revolution such as the world has never yet seen.

STANISLAUS P. OF H. COUNCIL.—We give in another column a report of the late meeting of the Stanislaus Council, P. of H. as reported for the Stanislaus county News. We give the Constitution entire as a form for other counties desiring to form county Councils.

Stanislaus P. of H. Council.

Representatives of the various Granges of Stanislaus county, excepting that of Grayson, assembled at Modesto, December 23d.

On motion, J. D. Spencer was elected temporary Chairman, and V. E. Bangs, Secretary. Committee on Credentials appointed, and reported the following named delegates as entitled to seats:

SALIDA GRANGE.—C. H. Heining, B. F. Parks, H. Chance, A. J. Carver.

CERES GRANGE.—W. B. Harp, John Service, J. M. Henderson.

TURLOCK GRANGE.—A. C. Fulkerth, John A. Henderson, S. Crane, Jacob Hays.

STANISLAUS GRANGE.—John V. Davis, Theo. Turner, Vital E. Bangs, J. D. Spencer, Mrs. E. J. Turner, and Mrs. F. H. Ross.

BONITA GRANGE.—A. J. Lucas and Wm. A. Fisher.

WATERFORD GRANGE.—W. W. Baker, J. Booth, S. M. Gallup, and Walter Scott.

After a few exchanges of opinions among the members, a committee to report a form of organization, Constitution and By-Laws, was appointed, consisting of the following named brothers: W. A. Fisher, Theo. Turner, John Service, A. G. Carver, S. M. Gallup, A. C. Fulkerth. Council adjourned until half-past six p. m.

Council convened at the appointed time, J. D. Spencer in the Chair. Committee on Constitution reported, which was adopted, and committee discharged. The following is the Constitution:

ARTICLE 1ST. This Association shall be known as the "Stanislaus County Council of Patrons of Husbandry."

ART. 2D. The objects of this Council are for the purposes of facilitating the transactions of business in buying, selling and shipping, and for such other purposes as may seem for the good of the Order.

ART. 3D. The members of this Council shall be composed of delegates from the subordinate Granges as follows: One for each Grange at large, and one for every thirty members or fraction of thirty equal to fifteen, and shall be elected by subordinate Granges for one year.

ART. 4TH. The officers of this Council shall consist of a Master, Overseer, Chaplain, Secretary, Treasurer, Steward, Gate-keeper and a Board of Trustees, composed of one member from each Grange represented, neither of whom shall receive pay for services rendered, and of whom the Trustees shall be Master, Secretary or Treasurer.

ART. 5TH. Each subordinate Grange represented in this Council shall pay to the Treasurer an annual due of one dollar for each representative.

ART. 6TH. This Council shall hold at least one regular meeting in Modesto, every three months, and all intermediate meetings called as special meetings by the Master shall be deemed regular meetings of this Council.

ART. 7TH. Special meetings shall be called by the Worthy Master at his discretion or at the written request of seven members of this Council.

ART. 8TH. Nine members shall constitute a quorum for the transaction of business.

ART. 9TH. The officers of this Council shall be elected by ballot at the first meeting in each year.

ART. 10TH. It shall be the duty of the Master to preside at the meetings of this Council, sign all orders on the Treasury, and such other duties as usually devolve upon that officer.

ART. 11TH. It shall be the duty of the Overseer to preside in the absence of the Master.

ART. 12TH. It shall be the duty of the Secretary to keep an accurate record of the proceedings of this Council, and the account with the members, and draw and countersign all orders on the Treasury, and have his books ready at any time for inspection by the Trustees or any member of the Council.

ART. 13TH. It shall be the duty of the Treasurer to receive all moneys due this Council; giving duplicate receipts for the same, one of which shall be sent to the Secretary, by the person receiving them; pay all orders signed by the Secretary, and allow the Trustees or any member of the Council to examine his books at any time, and shall give bonds in such sums as the Trustees may require.

ART. 14TH. It shall be the duty of the Trustees to employ an agent when deemed necessary by the Council, and who shall be confirmed by the Council, and shall give bonds in such sums as deemed necessary by the Trustees; and whose duties shall be defined by the Trustees, and who shall be paid a certain per cent. as may be agreed upon by the Council; the Trustees shall also have a general supervision over the business of the Council.

ART. 15TH. This Constitution shall be in force from, and after its ratification by the respective Granges of the county.

ART. 16TH. All Granges in this county ratifying this Constitution, shall be entitled to representation.

ART. 17TH. This Constitution may be amended or revised at any regular meeting of the Council, by a vote of two-thirds of the members present; provided notice of such change be given at least two months prior to the contemplated change.

Resolutions.

Resolved, That the Granges be requested to ratify this Constitution and elect delegates to meet on the first Monday in February, 1874, at one o'clock p. m., to effect a permanent organization of this Council.

Resolved, That the delegation from the various Granges here assembled, consider such questions as may be of interest, and appoint committees to report at the next meeting of this Council.—News.

ADDENDA.—After our last issue had gone to press we received the following note from Bro. Wright:—"Since I wrote you, on the 17th inst., I have learned something more accurate with regard to railroad distances, which you will please substitute in place of the figures sent at that time.

"Distance from Delano to San Francisco, 270 instead of 280 miles. From Merced city to San Francisco, 140 miles, the charge for wheat is 21 cents per cental.

"The people here are much burdened in their trade; 100 per cent. is the usual advance on their prices, 50 per cent. on coarser articles. Our people pay for many things in Modesto. Our purchasing arrangements, properly managed here, would greatly assist our people. For the present, they have but little to ship except wool." J. W. A. WRIGHT.



Buggins' Pork Crop.

Farmer Buggins was a plain, staid, quiet man of the Old School, who lived on a little farm handed down to him by his father, and whose pride it was to cultivate his fields as generations before him had done. His naturally fertile soil had become impoverished by bad tillage, and lack of manures; long rows of thorns and briars marked the lines of his dilapidated fences; and the weatherbeaten, rickety buildings that domiciled himself, family and "stock," belonging to the past rather than to the present.

Of course, good Old Buggins was opposed to "book larnin'," and all improved and scientific modes of farming; and books, newspapers and agricultural journals were about as scarce in his house as apple blossoms are in the month of January! He had no use for them—hence he did not have them. His ancestors, he knew, got along somehow without them, and he could certainly do as much as they did. Some things he could not, however, fail to notice. His more enterprising neighbors tilled more productive fields, and their thrift and general comforts were immeasurably greater than his. He envied their fortunes, but from prejudice he stubbornly refused to employ the means that gave them the pre-eminence over him.

He clearly saw that their cornfields yielded the yellow crop in much greater quantities than did his; their orchards produced better fruit and in more abundance; and their stock was of the finest in the country. All this he knew, and the question would often force itself upon him—what is the reason for all this? Why should he eke out a beggarly living, and they be surrounded with comforts, and growing rich? That was the question that puzzled him; that was the problem that he smoked his clay pipe over for many a day, in trying to solve. But Buggins was blind—blind as a bat, and he would perish in his old boots, rather than see the light!

His farm grew less productive year by year, and his pocket book was empty, and there was the tax-collector, and that note in bank, and Buggins junior would want a hundred dollars on his twenty-first birth day—where was it to come from? That was just what he could not tell but what he would have given a slice off his farm to know! At last a happy thought struck him, and he imagined he saw his way entirely out of his financial troubles, and he could do it too, without sacrificing his principles or undermining his prejudices.

This is what he would do: *He would raise hogs!* Pork was money, and hogs were pork; and he could raise hogs without wasting his money on "stock journals." Book learning was not necessary in swine raising. Common—Buggins's—sense, was all the capital that business required—and didn't he have common sense? Who doubted that?

He would build a great rail pen, inclosing about five acres (he had plenty of waste land!) and he would stock it with hogs, feed them for a few months, slaughter them, take them to market, and carry the "greenbacks" home in his pocket book; and he was so elated at the idea, that he took out his old leather wallet, but quickly returned it to his pocket, being frightened perhaps, at its consumptive appearance, and collapsed condition. His brilliant conception was to be put into practical shape at the earliest possible period. The rail pen was built, and farmer Buggins searched the country over for cheap hogs wherewith to fill it. Twenty odd farmers disposed of their refuse swine, and held notes, as pay, against the Buggins farm, which notes would become due three months hence!

If Nosh's ark contained animals "clean and unclean," and in great numbers and variety, Buggins' rail-pen could be likened to it! They were all hogs in there, of course—that is, they were all "four-footed beasts," with bristles and cloven feet, long snouts and the peculiar "squeal" that betokened the swinish race. Buggins was happy! Buggins was elated! But neighbor Simpson—who was a kind of thorn in Buggins' flesh—came by one morning and threw a "wet blanket" on the philosophy of hog raising according to the Buggins' theory. Said Simpson:

"Good morning, neighbor Buggins."

"The same to you," said Buggins, removing his pipe from his mouth.

"A collection of wild animals in that pen?"

"Them—them's hogs, sir."

"If you call them hogs, then I would like to know of what breed they are?"

"Breed, do you say? Why, they are of the same breed that hogs generally are!"

"Well, are there any Berkshires among them, for instance?"

"I reckon not, Simpson; I hought 'em all in this section of count'y. I didn't go to Berkshires for 'em, at any rate!"

"Let us go down to the pen, neighbor Buggins, and look at your swine."

The two farmers walked over to the rail-pen, the proprietor wondering in his mind what would be the opinion of his companion relative to the collection of animals to pass in review

before him. On arriving there, Simpson broke the silence—

"Ah! Buggins, you have some rare specimens in there!"

"Yes, I would say they are rare! That rail fence, five feet high, as it is, hardly holds them! They *rare* right over it, whenever they get the least bit excited."

"And what a variety of breeds, I must say, Buggins," continued Simpson. "There's the real 'hazel splitter' over there, with his nose through the fence; the 'lean shank' is propped against the trough, and the 'lightning racer' is making a bee line there to the farthest corner of the pen."

"The 'lightning'—what did you say?"

"Why, Buggins," continued Simpson, without noticing this last remark, "you have the meanest lot of hogs in there I ever saw! I wouldn't give you \$3 per head and take them as they run—no, not by a great deal, I wouldn't!"

"You are always a findin' fault with my arrangements—always, Simpson."

"Well, I'll make amends by giving you some good advice."

"Go on, and I'll listen."

"Well, sir, steel-point hazel-splitter's nose, and get a patent out on him for a prairie plow, and you will make your fortune!"

Buggins opened his eyes, and mouth too.

"And 'lean shank'—just tie a knot in his tail, and save yourself a world of trouble."

"How's that?"

"The knot will keep him from slipping through the fence and you will not be pestered trying to catch him every day."

"Come, Simpson," said farmer Buggins, "you are disposed to make fun at my expense! When the time comes for me to kill those hogs for the market, you will then acknowledge that I can raise pork without the aid of your books, and your journals, and other humbug appliances—just wait till then!"

"I will," said Simpson, as he walked away; "and I'll be on hand with my hired men, hounds and fleetest horses, to help you catch those fat porkers of yours; they can not be caught and killed in the ordinary way!"

Buggins felt chagrined at the turn his neighbor's remarks had taken; and he began to feel uneasy, too, with regard to the amount of money his hog speculations would be likely to yield him. But he would wait, and stuff corn into them, and perhaps all would be well!

Before the usual slaughtering time had come, Buggins had exhausted his corn. Then he tried "swills" for a week, and came to the conclusion that he might as well try to turn the Mississippi river into a stream of lard, as to fatten his "hazel splitters" and other choice breeds (!) on a "swill basis!" What little his hogs had gained on the corn, they seemed to lose on the new diet; and, as Buggins expressed it—"Them lank hogs, when they begin to go down hill, there's no telling where they will stop!" It was, therefore, determined to prepare the hogs for market a little in advance of the usual time, and preparations were made for the "slaughter of the innocents!"

There was an unusual amount of hallooing and hurrahing, and of "running to and fro," in the vicinity of Buggins' rail-pen on that memorable day. Those hogs were fleet of foot, and "scary," and the smell of blood excited them fearfully. "Lean shank" jumped the highest fence on the farm, which was quite a feat for a fat hog to do. And "lightning racer"—did you ever see a frightened deer on an open prairie with a pack of hounds at his heels! Buggins, in despair, brought out his grandfather's rifle and opened fire on his porkers, and, by dint of powder and ball, succeeded, at last, in bringing them to terms. But it was a great day for the boys of the neighborhood, and even Simpson seemed to enjoy it! In the calendar of that people the event is known to this day as "BUGGINS' GREAT HUNT."

But the poor hog-raiser's troubles were not all over yet. When his pork reached the market, there seemed to be no special demand for it. A few buyers offered to take it, but at such a falling-off from the regular prices, that Buggins' heart and hopes both fell below zero; and then Simpson came up and made a suggestion—

"I tell you, Buggins, you don't seem to know how to sell your pork!"

"Well, I acknowledge I don't know how to dispose of this lot!"

"Have you any lard with you, Buggins?"

"Lard—no—why?"

"Well, sir, a little lard would help to sell that pork. There not being fat enough in your hogs to fry them, people don't want them unless they can get a little lard with them!"

"Simpson, you are too hard on a fellow—especially when he is in distress."

Simpson, though fond of a joke, was generous hearted, and turning in to the aid of Buggins, he assisted him to dispose of the pork to the best advantage under the circumstances—went home with Buggins and gave him some excellent advice. He kindly loaned him a sum of money to meet his liabilities, feeling certain that Buggins would turn a new leaf in farming.

Five years have passed since that hog speculation, and now Mr. Buggins' house is comfortable; there is a small, but well selected library in it; there are several good newspapers and agricultural works found on his table; his fields have improved, his stock is in fine condition, and he is out of debt. He and Simpson are warm friends. On each anniversary of "Bug-

gins' Great Hunt," there is a feast at Buggins' house, and Simpson has the seat of honor at the table; and the host persists in saying to his guest—"Simpson, them poor hogs was the making of me!"—*Illustrated Journal of Agriculture.*

Farm House Chat.

[Written for the Press, By MARY MOUNTAIN.]

Perhaps we are partly led to think that men are most eager for all sorts of improvement because they make so much noise about it.

Here goes Ed. Dugdale, of Griffin, Ga., to the Great National Panjsndrm and takes out a patent for new coffee made of roasted Persimmon seeds. There is no doubt in my mind that Ned's mother and grandmother knew all about the Persimmon coffee ages ago; but it takes the cnte Edwrd to rally under Government protection and exact tribute for his her-drink.

Women are constantly making discoveries in the Domestic Kingdom that are both useful and ornamental; but they gushingly tell their neighbors and friends "all about it" and go on contentedly eating and drinking, and wearing the fruits of their patentable inventions with no thought of exacting royalty from anybody, or the privilege of a "grinding monopoly."

In roasting and broiling and baking—in cutting and making and mending—to say nothing of devices in chicken-coops, and the vast field of fancy work, women are continually making nice little improvements and generally adding to the fund of homely and handy knowledge.

If they should rush for a patent every time they discovered a new and delicious combination of pepper and spice, or an original way of making old stockings over new, as Annt Rohhy did, or "a perfectly splendid way to spank the baby and not hurt him much," as a fond little mother truly did discover and triumphantly told it free gratis for nothing—but if she would not tell it until sacredly protected by a patent, there would be a howl of derision that might be heard, as grandmother used to say "from Dan to Bashaby." That is, we might howl or we might not; for we are a patient and long suffering people, capable of hearing any amount of nonsense.

When a man hits upon a new way of fixing his straps and huckles, and cart-wheels, and stable-door, actually when he ties an old iron ring in the whisk of the cow's tail and thuselevates that freakish member to a restful position during milking-time, he straightway sends his model and Bible oath or affidavit to Washington, and gets his rights protectet under the broad and beautiful seal of our great and glorious country. Once upon a time there was a woman quick with ideas and suggestions; also a man rapid in practical application; and the fortunate result is

The Patent Iron Gem-Pan,

But the new and improved mixtures of dough to bake therein are still free for all to imitate and improve upon in turn.

The first gems I knew anything about had no special pan, but the dough was dropped by the spoonful on a hot dripping-pan and rapidly baked. When we were all sick with malarious fever, nothing could so tempt the wayward appetite as those same tough little meal-and-water gems. Possibly the great original Dr. Graham must be credited with the first effort to make popular the simplest form of bran, meal and water. That such bread is really good and enjoyable when properly made of sweet, fresh wheat-meal, I can testify most heartily; but many people object that it is too tough.

Trnth is, we are in such a rush to fill our stomachs in the shortest possible time and get to work again, that we demand soft and tender bread rather than that which might, in strength and nourishment, become more truly

The Staff of Life.

Fortunately for toothless and hurried people, the good qualities may be combined; and Dr. Bellows declares that wheat-meal, stirred up with butter-milk, makes excellent bread, and especially good for children, as containing elements most needed for the growing bones and muscles.

Probably the cold water gems are best for the average dyspeptic, but healthy stomachs will find no fault with

The Buttermilk Gems.

Two cups graham, two cups buttermilk (or sour milk), teaspoonful of salt, same of soda dissolved in a spoonful of warm water—but large or small teaspoonful of soda according to the sourness of the milk. A spoonful of brown sugar is sometimes added, and they should bake in a well heated oven about twenty minutes, or until nicely brown.

The latter must not be thin—hardly soft enough to level itself in the cups—yet not decidedly stiff. The happy medium that results in gems moist, tender and light, yet not sticky, will soon be discovered by that gem-of-a-woman, who never accepts a failure, but goes onward and upward with brave flourish of the dough-dish and the divine right to shont with other aspiring souls—"Excelsior!"

The amount given above will fill my gem-pans, containing eleven large sized cups.

For cold water gems some prefer pans with smaller and shallower cups, as better adapted to rapid baking; and cast iron pans are better than galvanized or tin. For the last named gems it is not necessary to grease the pan, but it must be very hot when they are put in—the oven also extremely hot.

Those made of buttermilk need no such fierce heat, but the pan should be greased with a little swab of cloth tied upon a stick and dipped in lard or drippings. A nice mixture of corn meal and flour, or of oatmeal and flour, occasionally baked in the gem-pans, will have a delightful relish and all the charm of novelty. We must study to give such

Variety at Tab's

As will help to impart cheerfulness and zest to this terribly frequent business of eating.

Many people who are inclined to add graham to the usual household supplies are disappointed and finally discouraged by the inferior quality of meal, which is often held at higher price than fine flour.

As far as our own experience goes, we have found the very meanest quality of meal put up in small sacks and sold at high prices; but as that was an exceptional experience it must not be allowed to discredit the whole "small sack" business. There is a growing intelligence among California millers upon this subject, and although it causes them some extra trouble to put up a good article they will generally be found ready to respond to any persistent demand; and I think nearly all our large mills put it up regularly in 50 lb sacks.

In making first-class graham meal the conditions are: first, a superior quality of wheat thoroughly dry and clean; second, a sharp stone that will cut the hulls finely and evenly so that there are no coarse, offensive flakes of bran.

This last condition would not suit the thorough-going Grahamite who likes his bran big and rough and plentiful that it may properly scourge and punish the rebellious stomach. I have seen it stated in Eastern publications that graham cannot be kept sweet for any length of time and that the best way is to purchase clean bran and mix with fine flour as required.

Here is a chance for a little "California brag;" for we have more than once laid in yearly and half-yearly supplies of graham from the great Golden Gate Mill, San Francisco, and the last sack was as good as the first, and the whole most excellent.

We never have trouble with corn-meal hestings as it used to "at home;" and I have some buckwheat flour two years old that seems as sweet and good as when first brought from the mill.

Oatmeal also keeps well if really fresh when first obtained, and the same is true of cracked wheat and hominy.

But hold! The benefit of this "brag" cannot be given to the whole State.

Up and down the great interior there is a little bug or weevil that troubleth the keeper of grain, ground or underground; but as yet no such pest appears in this region.

Ah, blessed and beautiful Santa Cruz! No bed-bugs, no mosquitos, no grasshoppers, no fleas "to speak of," and the old-fashioned fireplace in nearly every house!

We plead guilty to but few destructive agencies; just a gopher now and then, an occasional squirrel, plenty of mortgages, and a modicum of starvation for cattle.

Possibly there is another trouble or two—but since that lovely snow-storm and plentiful rain upon the just and unjust, we look hopefully forward while we

"Count our blessings o'er and o'er
And thank the Lord for such a store!"

A LOST POPULATION.—About a thousand years ago, a colony of Icelanders was planted on the western coast of Greenland. They were hardy people, inured to cold and meager living, and there seemed to be no reason why they should not take root in the frozen soil of their new home. They built a stone church there and stone houses to live in, of which the ruins are still to be seen. But what became of the builders is a question that has never been solved, and never will be. They vanished from the face of the earth, and that is all that is known. Whether cold or pestilence or starvation took them off, or whether wandering savages killed them, no man can tell. Their settlement is known in history as Lost Greenland.—*Ind. Age.*

SPOILS OF WAR.—It will give some notion of the vastness of the spoil of war that has fallen into German hands, irrespective of the pecuniary indemnity, when it is stated that the share of gun metal from captured cannon allotted to Bavaria alone, as the due of her two army corps, amounts to no less than 460 tons. Of this King Louis has ordered fifty tons to be distributed to certain parishes, to be turned into church bells they are in need of. The rest is handed over to the Bavarian Government arms foundry, for future conversion into German guns.

CIRCULAR LITHOGRAPHIC STONE.—Mr. C. Maurie, of New York, has invented a form of lithographic stone for direct printing, which promises to effect a complete revolution in the art. He boldly discards the ordinary flat stone, and by the use of diamond stone-working machinery produces a solid cylinder, from which, of course, impressions may be taken with greater facility and rapidity.

USEFUL INFORMATION.

Preservation of Wood from Decay.

Mr. Herman Haupt, C. E., has made the subject of the preservation of wood a special study, with results which cannot fail to be of great practical benefit to all wood consuming interests. The immense quantities of timber employed in the construction and equipment of railroads, and for various other purposes where it is exposed to conditions peculiarly favorable to decay, has long made some cheap and effective process for preserving it a much needed preliminary to its use. To meet this want numerous processes have been devised, all of which are more or less defective either in efficiency or economy, or both. These attempts have taken various shapes, but in most of them the aim has been to introduce some sort of preservative material into all parts of the woody mass. The first requisite of any successful process in the material, which must not only possess the necessary antiseptic properties, but also be capable of taking a fluid or vaporous form, in order that it may readily enter the pores of the wood; and while solution of corrosive sublimate, sulphate of copper, or chloride of zinc seem to answer the purpose very well, Mr. Haupt considers that dead oil, a product of the distillation of coal tar, is, all things considered, best adapted to meet the requirements of the case.

The next and most difficult point to be attained is the introduction of the preservative liquid into the interior of the wood; but an absolute essential preliminary to this is the removal of the air and the moisture which the wood already contains, as neither fluids nor vapors can enter its interstices in anything like the required quantity when they are already occupied. In practice it is found necessary to extract the air and water, and replace them with the antiseptic materials by a single operation, as dividing the two involves exposure of the timber to the air, which would again rush in and fill the place of that before withdrawn. In the Bethel process dead oil is used, and the operation is conducted in a single tank made of boiler iron. At the bottom and sides of this tank are numerous pipes for heating by steam. "The timber is placed on an iron car and run into the tank. The tank is filled with dead oil, which is then heated by the steam coils. A pressure of one hundred pounds per square inch is applied by means of a hand-pump. A thermometer is used to note the temperature. The duration of the process is twelve hours. Timber twelve inches square is fully impregnated, as is proved by boring holes. An air-pump is also used in connection with the operation, no doubt to remove the escaping air and steam, and relieve the pressure while the wood is being heated in the oil."

This is the most effective process for preserving timber from decay that is now known; but it is liable to strong objections, which have thus far prevented its coming into general use in this country. The wood takes up about its own weight of oil, or somewhere between three and four gallons per cubic foot, which is believed by Mr. Haupt to be about one hundred times as much as is needed to prevent decay, and which, of course, involves enormous cost as well as enormous waste. Then wood thus saturated is exceedingly inflammable, a condition which makes it highly unfit for railroad or ship-building purposes. Regarding the theory of the process as correct, the dead oil as far superior to anything else as a preservative, the author proposes to get rid of these objections by introducing a smaller quantity of oil. To accomplish this he suggests the use of an apparatus consisting of two tanks, instead of one; "one a receiver corresponding to a retort, in which the material can be placed and subjected to the action of heat, the other a condenser, in which all escaping vapors can be condensed and a vacuum maintained during the process in both vessels." Suitable means for establishing and maintaining a vacuum being provided, the next step is the application of heat in the receiver by means of steam pipes.

The water in the pores of the wood is thus vaporized, and together with the air that is present, escapes, the water being got rid of by means of the condenser; and should the vacuum become vitiated by the escape of air from the cells, it may be improved by the use of an air-pump. "When sufficient time has been allowed for the wood to dry thoroughly, cocks must be opened connecting the bottom of the receiver with a tank of dead oil at a lower level. As a vacuum exists in the receiver, the atmospheric pressure will force up the oil, and the timber will be immersed in the fluid. When the immersion has continued a sufficient length of time, which also must be determined by careful experiment, cocks may be opened at the top of the receiver to admit air. The oil not absorbed will immediately flow back to the tank from which it was taken; the air, pressing upon the exterior of the cells which are partially filled with oil, while a vacuum exists in the interior, will force the oil before it, and thus coat in its progress the interior of the cells. It is probable that in this way a sufficient amount of dead oil may be introduced into the cells to prevent fermentation and decomposition while still far below the point of saturation, and the process may prove rapid and economical."—*Paint and Oil Trade.*

WATERPROOF PASTEBOARD.—One of the cheapest and most effectual coverings to render wood perfectly water-proof, and increase its durability, and which will impart to pasteboard the appearance and strength of wood, is that employed in many ways by the Chinese, according to tests made with a sample sent from Peking by Dr. Scherzer. It may be prepared as a slightly viscous fluid, fit for immediate use, by stirring into three parts of fresh serum of blood (or defibrinated blood) four parts of dry slacked lime and some alum. It should be laid on twice, or at most three times, in order to render articles perfectly water-proof.

The following is given as a soap soluble in sea water: Oil or fat, 40 parts; resin, 10; fish glue, 40; soda or potassa, 1; oxalate of potassa, 1. The oil and resin are saponified as usual, but with an excess of alkali; the glue previously rendered gelatinous by solution in oxalate of potassa, is then added, and the whole heated with constant stirring to 50 degrees or sixty degrees C.

BLACK BRONZE FOR BRASS.—Dip the article bright in aquafortis; rinse the acid off with clean water, and place in following mixture till it burns black: Hydrochloric acid, 12 lbs.; sulphate of iron, 1 lb.; pure white arsenic, 1 lb. Take out, rinse in clean water, dry in sawdust, polish with black lead, and then lacquer with green lacquer.

SOLDER.—A correspondent of the *English Mechanic* writes: "Solder of excellent quality is to be obtained from the joints of old sardine tins or meat tins. I believe it is almost pure tin. I have not analyzed any of it, but from the way it preserves its luster, it must be very much richer in tin than ordinary solder."

DETECTION OF WATER IN ETHERIAL OILS.—Oils distilled with water from plants contain water, although they may appear perfectly clear. On mixing such oils with an excess of so-called benzine, a cloudy effect is produced by the precipitated drops of water.—*American Chemist.*

TO ASSIST THE SIGHT.—Persons of defective sight, when threading a needle, should hold it over something white, by which the sight will be assisted.

GOOD HEALTH.

Health and Comfort in House Building

Dr. John Hayward, Vice-President of the Liverpool Architectural and Archaeological Society, lately read a paper on Health and Comfort in House Building, before the Royal Institute of British Architects, which merits attention. It will be noticed that Dr. Hayward refers throughout to the climate of England. Though we do not have the same degree of cold here in California, we make up for it in dampness, and hence the conditions are similar.

Dr. Hayward lays down eighteen conditions in house building as absolutely necessary in a sanitary and medical point of view, some of the more important of which are due exposure to fresh air and sunlight, positive freedom from damp, a large cubic space for air, and abundant means for the escape of the foul and the admission of fresh air. He also shows that it is essential that the air should be warmed previous to admission. Indeed, he maintains that ventilation is the great and main necessity of house building; that whatever be left undone that should be especially attended to; and as in this country, owing to the nature of the climate, doors and windows can rarely be left open in the day and never by night with safety to health, it is necessary to provide specially for ventilation. And first as to the temperature of the admitted air. No contrivance that communicates directly with out-of-doors air, he considers, can possibly answer in a country like ours. This is especially the case as respects bedrooms, which are often very improperly constructed and arranged, so that the sick occupant has to be in winter in a current of air passing between the doorway and the fireplace, from 28° to 35° in temperature, while the temperature of his body is 98° or 99°. To this, in ninety-nine cases out of a hundred, patients in this country are exposed, and the evils intensified when the bed has to stand between the fire and window, and the beating draught is with the out-door air.

To these unpropitious bedrooms Dr. Hayward holds may be traced very many cases of consumption, bronchitis and asthma. In fever cases much fresh air is required, and sometimes endeavor is made to obtain it even by opening the doors and windows, so that many typhus fever patients die of pneumonia, and many rheumatic fever cases are prolonged and complicated; and with all their knowledge and care medical men cannot prevent these evils, because of the defective construction of bed-

rooms and ever of hospital wards. And it is not only patients in acute diseases who suffer from these imperfect architectural arrangements. Most persons occasionally take cold, and in the majority of instances the cold falls on the respiratory organs, as influenza, sore throat, or bronchitis, when the temperature of the air respired affects very materially the progress of the case, whether it shall be mild or severe, whether it shall be curable or fatal. In acute bronchitis the temperature of the air respired should never be lower than 65°; but how is it possible to obtain this temperature in ordinary bedrooms in winter, when bronchitis is most prevalent? And even when it is obtained by well-fitting windows and doors and large fires, matters are not much better, for the very means taken to obtain warmth exclude fresh air, and subject the patient and his attendants to the evils of foul air. And draughts are equally pernicious in sitting rooms, where persons may be roasted on one side and frozen on the other, resulting in neuralgia, rheumatism, colds, coughs, asthma, consumption, and a long train of cognate human ills, and the chilly lobby contributes materially to these evil results.

The dangers of the water-closet system are forcibly expounded, the author showing that in many cases the supply of fresh air to a house is obtained principally through the water-closet. "This is one of the evils that our improved architecture and building have increased, if not absolutely provided for us. The water-closet opens into the lobby; the front door is made to fit as tightly as possible to prevent cold draughts, and this prevents fresh air coming in from the front; whilst, with well-fitting intermediate doors to shut off kitchen smells, the admission of fresh air from the back of the house is prevented. These arrangements make the lobby into a chamber, with the termination of the main drain opening into it through the water-closet." In winter time the fires in the living rooms suck in the poisonous gases and disease germs through the closet-pen out of the drains.

After a passing reference to a partial remedy for such an untoward state of matters, Dr. Hayward proceeds to unfold his general and complete remedy for the evils enumerated, which is concisely defined as "Ventilation with warm air by self-acting suction power." His first requirement, which he holds to be an absolutely fundamental condition of a healthy and comfortable house, is an ample supply of fresh and agreeably warm air in the lobbies, corridors, or other central spaces out of which the rooms of the house open or draw their supply; this is provided for by a tubular pipe at the entrance opening, or somewhere in the lobby. The next thing is the admission of this air into the rooms, for which special outlets are provided, controlled by valves to accommodate the supply to the partial occupation of the room. The abstraction of the vitiated air is managed by a separate flue from the ceiling of every room and water-closet, and from every gaselier in the house, terminating in a common chamber permanently heated, and communicating with a shaft, which may be let into the kitchen flue, and must be so proportioned to the size of the house as to empty it of air three times every hour, and as often will the whole house be replenished with fresh air. This plan has been tried, proved completely successful, and very cheap. A few details superadded, Dr. Hayward concludes: "Finally, I am sure it is the warmest house in winter and the coolest in summer; the most airy and fresh, and at the same time the house that is freest from cold draughts in this country, if not in the world; and from personal experience of the comfort and advantage of living in a house built to live in, and of the discomfort of living in houses built for gain, I do not hesitate, in reference to ordinary houses, to vary the well-known epigram, and say that 'Knave build houses, and fools live in them.'"

Floriculture and Hygiene.

A writer in the *Rural Carolinian* gives the following facts in confirmation of the sanitary value of flowers: "In August, 1866, I bought a small house in the upper part of Charleston, in a locality where fevers were of frequent occurrence; I at once set to work, drained as much as possible the lands around the house, and laid out the grounds for a flower garden. My friends warned me, and predicted that before the end of the year I would leave the locality on account of the prevailing fever. I did not mind them, but kept steadily improving my property. During the winter I had planted a great many rose bushes, oleanders, shrubs, etc., as also a few fig and peach trees. In the spring I planted a great many summer flowers, as well as lavender, mint, etc., and wherever a small space was left I planted sunflowers. The consequence was, that although several of my neighbors were down with fever, I escaped with my family entirely, and have not had a fever to this day. Several of my neighbors have followed my plan, and the locality is now almost entirely healthy."

It is not improbable in this instance that the draining of the ground should be credited with a part of the good results; but there is no doubt that the odorous emanations of plants and flowers, or the ozone generated thereby, will do much to neutralize or destroy the miasmata of malarious districts. The cultivation of flowers in such localities, will therefore be found a valuable auxiliary to other hygienic measures.

DOMESTIC ECONOMY.

Improved Buckwheat Pancake.

Buckwheat paucake is an article largely used; but as generally prepared, it is not fit to serve up at any table. It is heavy and distressing to the stomach. Though the batter may be light, yet when it gets on the griddle it is apt to fall and become the heavy and indigestible thing we find it. Not unfrequently it is sour.

Now, all this may be obviated, and a light, palatable cake made, with a little care, by the addition of Graham flour mixed with the buckwheat, the proportion of Graham being a little over a quarter. Mix the flour to keep on hand ready for baking. When wanted to be used, bring to a batter with buttermilk. Other sour milk will not do; it must be milk from the churn, and it wants to be quite sour. Raise with soda and bake at once. The first baking will in general not be satisfactory; it will lack lightness. Still it will be better than the usual pancake. Now, leave what batter remains in a warm room. This will somewhat raise it; and the cake the next morning will be improved. Another twenty-four hours' exposure to the warmth, say of seventy or eighty degrees, and there is still further improvement. After that there will be little difficulty.

It is best to have the batter, when it reaches the stove, as cold as possible without freezing. The soda will then have little or no effect till the heat of the griddle sets it in motion, baking the paste as it rises. It wants a hot fire, so as to bake rapidly. The cake then will be brown, and as light as a sponge, and very tender, almost melting in the mouth. It causes no distress whatever, but digests readily and is healthful—medicinal somewhat, which results from the coarse Graham flour mixed with it. It is highly relished, and may be eaten two or three times a day, and the year through, though it will be less light in summer than in winter, yet palatable and agreeing well. It is our own mode, invented by us after long tedious experiment. The object was to get a light palatable cake, and at the same time combine the medicinal virtue of the bran. Care must be exercised at first. Dissolve the soda in water, mix with the paste and bake at once. We have used this cake for many years, and use no other. Try it; but be patient at first.—*Country Gentleman.*

ARTICLE OF FOOD FROM CIDER.—Among the notices of recent patents we find the following, granted to Mr. Mahan, of Vermont: In making the said composition this inventor takes five gallons, for instance, of cider, as it comes from the press, and put the same into a suitable boiler, after which he mixes it with two table-spoonfuls of flour and the whites and yolks of two to four eggs, first thoroughly compounding the flour and the yolks and whites of the eggs. Next, the temperature of the mixture of cider, flour, and the fluid matters of the eggs should be raised to a boiling heat, or about such, after which ten to twenty-five pounds of sugar are to be added, and the whole agitated or stirred up until thorough dissolution of the sugar may have taken place. Next, the solution is to be raised to a boiling temperature and skimmed, the boiling and skimming being continued until a sufficient evaporation may have taken place to reduce the liquid to the requisite density. After this the liquid should be strained and put into bottles or suitable vessels for preservation, use or sale. If desirable, the product thus obtained may be flavored with any proper essence, essential oil, or matter, the whole when completed, answering for various purposes in cookery, as well as being eaten on bread, or of being used as a sauce for puddings.

PEPPERS.—Seed the peppers from the top; make a brine strong enough to bear an egg, pour it boiling hot on the peppers, and let them stand until they are yellow. Take them out and put them in cold water for 24 hours. Then boil your vinegar, adding to each gallon one ounce of alum; throw your peppers into the boiling vinegar, and take it immediately off, and let them stand ten or fifteen minutes, and put into jars; when cold tie them up. No spices necessary.

CHEESE TOAST.—Take a slice of good, rich, old cheese, cut it up into small pieces, put it in a tin or iron stew-pan, and to one cup of milk add three eggs; beat eggs and milk together and pour on the cheese; set it on the stove, and when it begins to simmer, stir briskly until it forms a thick curdle, then pour over the toast and carry to table.

TO REMOVE GREASE STAINS FROM WOOD.—Spread some starch powder over the grease spots, and then go over it with a hot flat-iron till you draw the grease; then scrape with glass or a proper scraper, and repeat the starch powder and hot iron. Ammonia liquid may be used as a finish, if the starch does not take all the grease out.

GOOD CORN MEAL PUDDING.—Stir the meal into scalding skim milk, till it is thick as gruel, and, when cool, add ginger, cinnamon, nutmeg, salt, and sweetener to suit the taste, and a little fine cut suet, and some raisins or dried peaches, and a fine cut apple. It should bake an hour or more according to size.



PUBLISHED BY

DEWEY & CO.

T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

KINGPIL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.50; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line..... .25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, Jan. 3, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Aveling & Porter's Road Locomotive; Our Juice Manufacture, Page 1. Fourth Year of the Pacific Rural Press; Wool Growing in Fresno County; Beet Sugar at Anaheim; To Our Patrons; Hen-houses on Runners; Wheat in the Southern Counties; 8. Hop Culture; Charles Hopper; The New Motor; Notices of Recent Patents, 9. Patents and Inventions, 16.

ILLUSTRATIONS.—Aveling & Porter's Road Locomotive, Adapted to Direct Traction Steam Plowing, 1. Horizontal Hop Yard; Charles Hopper, 9.

CORRESPONDENCE.—Irrigation and Summer Fallow; Good Crops or Poor; Laying Hens: Eggs and High Prices; Jute Experiment; California Raised Seeds, 2.

HOME AND FARM.—Farmers' Grindstones; Farmers as Mechanics, 3.

THE ORCHARD.—Gathering of Ripe Fruit: How to Make Grafting Wax; Apple Barrels, 3.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 4-5.

AGRICULTURAL NOTES from various counties in California and Nevada, 12.

HOME CIRCLE.—Buggins' Pork Crop; Farm House Chat: A Lost Population; Spoils of War; Circular Lithographic Stone, 6.

USEFUL INFORMATION.—Preservation of Wood from Decay; Waterproof Pasteboard; Black Bronze for Brass; Solder; Detection of Water in Etherial Oils; To Assist the Sight, 7.

GOOD HEALTH.—Health and Comfort in House Building; Floriculture and Hygiene, 7.

DOMESTIC ECONOMY.—Improved Buckwheat Pancake; Article of Food from Cider; Peppers; Cheese Toast; To Remove Grease Stains from Wood; Good Corn Meal Pudding, 7.

GOATS.—Mohair and its Uses, 10.

THE VEGETABLE GARDEN.—Onion Raising; Depth of Covering Seed; Asparagus and its Culture; Potato Raising in the United States; Are all Potatoes Alike Liable to Attack? 10.

WHEAT, ETC.—Changing Seed; Qualities of Wheat; Fultz Wheat, 10.

THE DAIRY.—Butter; Large, Medium, or Small Sized Cows; Bran and Corn Meal for Cows, 11.

MISCELLANEOUS.—Revival of Manufactures, 2. What I See on the Streets and Elsewhere; Depth of Lake Tahoe; Smoke Consuming; A Wonderful Agricultural Machine, 3. San Jose Farmers' Club, 12.

ON FILE.—Silk Culture in California; Sherman Island; Two Little Poems; Letter from St. Inez; Note from Riverside; and, A Slight Mistake.

WE ACKNOWLEDGE receipt of a hanging basket of flowers on Christmas Day, from A. D. Pryal's nursery, Oakland.

Fourth Year of the Pacific Rural Press.

The publishers of this journal design making its weekly issues during its fourth year (1874) still more acceptable and valuable than those of the past. To accomplish this, we propose to furnish

- More Editorial Labor;
- Better Prepared and Condensed Reading;
- A Greater Variety of Contents;
- Contributions from our now More Experienced Writers;
- Uniformly Better Ink and Paper;
- Uniformly Better Press Work;
- A Choice Selection of Engravings;
- A Complete, First-Class Journal;
- A Journal Worthy of Its Field;
- A Paper Worthy of Its Patrons.

We shall strive to make it an ever welcome visitor to those who desire to constantly

Improve the Heart and Mind,

And shall give a larger space to our HOME CIRCLE department, which from the first has been a popular feature of the RURAL.

Our aim is to gather information from all reliable sources, in the varied forms in which it is to be obtained. Our work is to divest our gleanings of all superfluous; condense such information as is of most importance to our special class of readers—give it to these in the plainest and fewest words possible,—saying

their time by our labor. Thus we will render well prepared and

Seasonable Intelligence,

Devoid of useless verbiage. Our

Leading Departments

Will be continued under the following heads:

- | | |
|----------------------|-----------------------|
| The Home Circle, | The Horse, |
| Young Folk's Column, | The Swine Yard, |
| Short Stories, | Scriculture, |
| Home and Farm, | The Vegetable Garden, |
| Useful Information, | The Flower Garden, |
| Domestic Economy, | The Vineyard, |
| Good Health, | The Orchard, |
| The Dairy, | Tropical Fruits, |
| The Apiary, | Small Fruits, |
| Poultry Notes, | The Cereals, |
| Horned Stock, | Pasturage, etc., |
| Sheep and Wool, | Fertilizers, |
| Goats, | Miscellaneous. |

Practical Farmers

Know how important it is that the above subjects should be treated from a local standpoint—that generally the farming tactics of the East will not do for this coast, that agriculture, in its infancy here, can derive greater benefits from an exchange of experience through the columns of the press than in older fields. Constantly observing and studying developments in the special field we represent, we can be expected to give truer information on agricultural subjects, than more general writers at home or abroad.

Our Traveling Correspondents

Will do much service by gathering a large amount of interesting information from various parts of the Coast, which, but for their research and practiced observation might never be placed on record or reach the eye of the reading public. Of our many

Local Correspondents

We have particular reason to be proud. No paper on this Coast—old or new—has ever been so highly favored with volunteer contributions. They are talented, reliable, independent and generous representatives of an intelligent and enterprising people, noble types of good humor, unselfishness and true progress.

Short Stories,

Original and selected, will hereafter appear in each number. Their selection, we trust, will be such as to render them popular and unobjectionable to all. In addition to a large number of

Fine Engravings,

Representing Choice Stock, Farm Products, Scenery, Remarkable Productions, Improvements in Farming Implements and Machinery, Works of Art and the Beautiful in Nature, we shall from time to time present the modest

Facies of Prominent Farmers

Who, as pioneers in the development of agriculture on this Coast, or as active laborers in the "Farmers' Cause," are worthy of the distinction they enjoy, and the favor with which they are looked upon by our many readers at home and abroad.

Patrons of Husbandry.

We shall continue to give our weekly summary of matters connected with the interest and progress of this growing and important movement. We shall aim to give information as fresh as possible in this department. Its readers are aware that the RURAL has been in the lead in calling farmers to organize. We shall continue to work zealously with the Granges for the noble objects of the Order.

The present is an

Important Period

In the history of our Coast. The coming 12 months promise greater developments in its agricultural progress than has been experienced in any previous year. Agriculturists are alive to improvements in every direction, and those who would keep up with the spirit of the times should certainly read the RURAL PRESS.

The S. F. Market Reports

Will receive greater attention in the department of DOMESTIC PRODUCE than that of any other weekly journal. We shall spare no pains to render the reports as reliable and complete as possible. By the employment of our special reporter we hope to make this very important part of our paper one of its best and most satisfactory features.

Kind Words and Acts

Have done much to build up in this isolated and sparsely settled coast so large and complete an agricultural journal as the PACIFIC RURAL PRESS. We commence the new year with a regular circulation of

Over 5,000 Copies,

A far greater issue than that of any weekly on this Coast, independent of a daily publication. If our friends will continue to "help us help ourselves," we hope to reach a circulation of 8,000 this year, and do a correspondingly greater service of good. While we have the greatest advantages and can make by far the best weekly for

Agriculturists on This Side of the Continent. We cannot expect one-half so large a circulation as journals in older and more populous districts. Consequently readers cannot rightly expect such a paper here at Eastern rates.

No Premiums But a Good Paper

Do we offer. A flashy chrome (or cheap map), with an ill suited paper, will hardly satisfy the farmers of this Coast, whose time is too precious for trifling. To many of you the benefit of a reliable and valuable paper should reach a hundred fold its cost, while to all a poor journal would be dear at any price.

Sample Copies Furnished Free

On receipt of stamp for postage.

Agents are Wanted

Who will do more or less active canvassing. To such we will furnish free samples and pay liberally for their services.

Terms of Subscription:

One year (payable in advance).....\$4.00
Six months.....2.25
To Granges and Farmers' Clubs, furnishing liberal club lists, \$3 per annum.

DEWEY & CO., Publishers.

Office, No. 338 Montgomery street, San Francisco.

Wool Growing in Fresno County.

Among the foot-hills of the Sierras, between the San Joaquin and Chowchilla rivers, is located one of California's wool-growers, Mr. E. J. Hildreth, and, of course, a patron of the RURAL. Mr. H. is the possessor of about 13,000 acres of land, and owns 12,000 sheep. He sold a band of 5,000 a few days ago. Has just built a fine wool-house, which is believed to be the best in the State; a description of it may interest other wool-growers. The dimensions are as follows: 72 feet square on the ground. The wool division is 72 by 25 feet, 12 stalls each 6 by 18 feet; each stall will hold about 60 sheep; there is one small door in wool-barn end of stall; one large door in the other end of stall opening full width of stall (6 feet) and closing the passage of same width, to allow more sheep being driven in to the shearers; each stall is numbered; the space for the unsheared sheep is 72 by 12 feet; two doors (6 feet each) opening inwards, allow ample room for driving in more of the unsheared from the corral, which is 50 yards square, at south end of the barn; the barn is 16 feet high; shearing portion of roof sloping down to 12 feet from the ground. Cost of wool-house about \$2,000.

Mr. H. has built a water-tank large enough to hold 24,000 gallons, built on a raised foundation; a Davis wind-mill supplies the tank with water, which is used for irrigating garden and supplying stables, one of them 150 yards, the other 350 yards from tank; it also supplies the wool-house with water to use in doctoring sheep. Mr. H. complains of the extortions of the railroad company and their unjust discrimination against wool-growers. He says that it costs more to get his wool to San Francisco by railroad than it did by teams before the railroad was built, and is now thinking of fitting out teams to haul his wool to Stockton.

Beet Sugar at Anaheim.

A few weeks since we were in receipt of a communication from Wm. R. Olden, of Anaheim, in which he made the suggestion that probably lands in that vicinity would be found well adapted to the growth of sugar beets for sugar making. We have been carefully examining his reasons as set forth, and as we claim to be well posted in beet sugar making in California, having personally inaugurated the Sacramento Valley Beet Sugar Company, and now largely interested therein, we have arrived at these conclusions:

That the quality of the soil is all that can be desired. It simply wants the artesian wells mentioned by our correspondent, to secure a certain amount of irrigation in unfavorable or very dry seasons. The advantage that would pertain to the undertaking, in being able to plant and gather beets every month of the year, can hardly be estimated.

It would enable the company to keep a steady force of hands and the necessary teams in constant use, and therefore to much better advantage than is now done where the entire planting is done in only one or two months. The sugarcane could also be run the year round, at an immense advantage over that of a four or five months' campaign, as at present at Alviso or Sacramento.

We have our doubts whether beets ripening in December and January, even at Anaheim, would contain that high percentage of sugar which those would, ripening under a more vertical sun; but we could spare these two months and dry beets enough in August to be worked for sugar in that state, to carry the sugarcane in constant operation the whole year. There should be a beet sugarcane at Anaheim.

FISH HATCHING IN CHINA.—A curious mode of fish hatching is said to be followed in China. Having collected the necessary spawn from the water's edge, the fishermen place a certain quantity in an empty hen's egg, which is sealed up with wax and put under a sitting hen. After some days they break the egg and empty the fry into water well warmed by the sun, and there nurse them until they are sufficiently strong to be turned into a lake or river.

ERROR CORRECTED.—In a communication appearing in our Nov. 1st issue, regarding the preparation of strychnia for poisoning squirrels—instead of three, eight ounce bottles, it should have read—we think—three eighths of an ounce bottle.

To Our Patrons.

It seems hardly necessary, and yet we feel rather inclined to remind a portion of our old subscribers whose term of subscription expired with our last number, that the beginning of the New Year and New Volume is most opportune for a renewal of subscription.

From this number of the RURAL and that which is next to follow, our readers can form something of an opinion of the future merit of our enterprise. In aid to our own endeavors and to add to the interest of the RURAL's columns, we invite our old and new correspondents to send forward their usual valued and interesting contributions for our next number, as we shall issue a large number of extra copies with extra reading matter, to be circulated broadcast over the world.

Hen-houses on Runners.

A call on Mr. Baxter, on the Merced plains, about ten miles southeast from Plainsburg, will disclose the following novelty in the method of growing hens for the production of eggs and chickens.

He has ten hen-houses built of wood, of light material, 8 feet by 12 feet and 9 feet high. They are placed upon runners of sufficient strength, so that the buildings can be drawn from place to place upon them with horses or oxen. They are set at various distances apart, and as often as the ground under the house becomes unclean, instead of the usual cleaning and renovating process, he hitches on his team and in three minutes, house and hens, nests, eggs and roosts are on new, clean ground.

The hens are allowed free range over all the outside grounds, and yet each knows its own home as well as bees do, where numerous hives are kept in close proximity. One hundred hens are kept in each house, or a thousand in all, and to the present time he has not lost by disease a dozen in all, during the year.

Mr. B. is evidently a model chicken grower. Moving his houses is equivalent to spreading the manure evenly over the field. He secures the perfect health of his hens and gets more eggs from the same number of hens than any other known egg producer. And lastly, as a bit of advice to all chicken keepers, he says: Have all your roosting poles in the houses on the same level, that is, have no one higher than the rest, for hens will fight till they tear all their feathers out to get the highest roost.

Wheat in the Southern Counties.

From the southern counties we learn of the almost unexampled prospect of the wheat crop for the coming season. Summer fallows, that were early sown, awaiting the hoped for rains, are already green with the new blade, and the thousands of acres dry sown upon fallows and dry plowed lands, are everywhere full of promise.

If the broad area this season sown upon lands fitted for seed in the manner mentioned, should make a favorable crop at the coming harvest, no one can hardly place a limit to the quantity of land that hereafter will be sown under like conditions.

If we can go on fitting our land for wheat, through all the months of summer, when to stir the ground is death to all weeds, and have it ready for sowing just before or during the first autumn rains, it will be adding just so much to our capacity for supplying the world's wheat market.

This waiting for rain to soften the ground so that we can plow, with from ten to a hundred horses waiting in the stables upon costly feed, and hands enough to guide them the moment the ground is wet to the depth of four inches, is at best an expensive idleness of animal and manual power, which makes a wide difference in the margin of the year's profit account.

And here is just where steam labor should come in; we want a motor to drag our plows that won't constantly be eating us up when not at work, and Californians are not going to rest satisfied till they find one that will answer their purpose.

THE PACIFIC MONTHLY.—We have received a late copy of this San Francisco Monthly, which appears quite creditable to its amateur publishers, Masters Harry E. Dore and Paul E. Vandro. Its columns are mostly filled with original matter. Young men who show a zeal to accomplish such a work should be encouraged.

Hop Culture.

We have been hoping to hear something from one or more of our California growers on the subject of hop culture in our peculiar climate—peculiar as regards its effect on the quality of the hop and method of culture—but our most successful growers seem altogether chary of communicating their views on the subject.

Soil and Situation.

Any good corn land, if properly located and climate favorable, ought to produce good hops. As a general rule, alluvia of rivers are good hop grounds, but they can be successfully grown on uplands, if not subject to gales of wind. The hop-yard should have a free exposure to the sunshine, and in a climate as free as possible from fogs.

Planting Time.

The ground should be well manured in autumn, if an old, impoverished land, but river bottoms seldom require this. A deep and thorough plowing should be given in the fall, and in early spring, depending upon the season, again made completely fine and in perfect tilth by plowing and harrowing.

It should now be marked off with the plow into squares, the corners being eight, nine or ten feet apart, depending upon the strength of the soil.

Sets for Planting.

These are taken from the hills of old vines, and are called runners. Three or more of these sets are then put into the ground at each corner, their bottoms inclining outwardly, and covered to a depth to secure them from drying, and with moisture sufficient to secure their growth.

The hop being a dioecious plant, or one having the staminate or male flowers and the pistillate or female flowers on separate plants, there should be about one male plant to every eight hills each way, or one to every sixty-four hills throughout the yard. These hills should be marked when set, that they may always be easily distinguished whether in bloom or not.

Cultivation.

The cultivation the first year consists mainly in keeping down all weeds and the ground soft and mellow. Some devote the space between the rows to crops of potatoes, beans, or other hard crop, whilst others prefer to leave it fallow; but kept free from weeds with plow or cultivator. If the sets are strong and an early growth is secured, it will generally pay to raise a crop the first year, and the plants will be all the better for it.

Set one stake to each hill as soon as the sets show signs of starting, or when the ground is first laid off, as most convenient. The poles need not be more than 7 or 8 feet above ground for the first year, as they will "hop" better than on longer ones.

Some use no stakes the first year, but the produce will pay for all the trouble, and serve to keep the vines up out of the way of the culture of the intervening spaces.

Horizontal Poling.

We give an illustration of a mode of hop training, adopted in many places where the cost of the ordinary poles, from their scarcity, is very considerable. Instead of poles 16 or 18 feet in length, to be taken up and reset every year, short and stout poles 8 feet long in each hill, and from the top of these, strong twine or small hempen cord is fastened, making a complete net work over the whole field, as represented in the cut.

The hills having the male plants, should have a long pole 18 or 20 feet above ground, but disconnected from the general system, because they are liable to be swayed by violent winds. By allowing the male plants the taller poles, their pollen is more evenly and certainly distributed over the whole yard.

Training.

When the vines are up two or three feet, all such as have not taken kindly to the poles should now be brought to the poles, twisted around them the way the sun goes—as they will not run the opposite way—and tie lightly with any kind of soft string, and the vines will immediately take care of themselves. But, as often as they incline to straggle at a less height than near the top of the poles, they should be retied.

Cultivate the ground often and well, keeping down all weeds, and with a fair season, a largely remunerative crop may be expected or not, depending more on the condition of the crop in Europe than any amount, more or less, that may be produced in all North America.

The gathering of the hop and fitting for market, may well form the subject of a future writing.

Charles Hopper.

As we enter upon the first week of a new year, in which the future now seems full of hope and promise, it occurs to us as a fitting time, to go back into the past and review for a moment one of the reminiscences of early days in California; and in no better manner can we do this, than in presenting the likeness and a brief biographical sketch of one of our early pioneers.

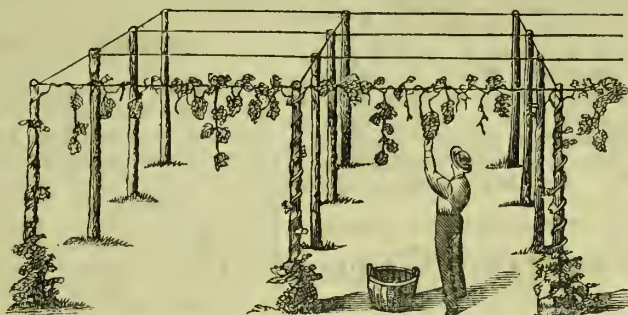
Mr. Charles Hopper was born in North Carolina, A. D. 1800. He set out in May, 1841, for California, with a party of thirty men, one woman and one child, from Jackson county, Missouri. John Bartleson was Captain of the company, which was increased to seventy-five

or more as a man of twenty, and his eye-sight is as keen as ever. No one stands higher as a conscientious, true-hearted and generous man, whose word is inviolable. He is universally respected, and is affectionately called "Uncle Charley" by all who know this brave old pioneer.

The New Motor.

On our first page we give a very fine engraving of a new motor about being introduced to California for public favor. That we want something to take the place of the horse in the culture of our immense and every year increasing wheat area, no one can for a moment question.

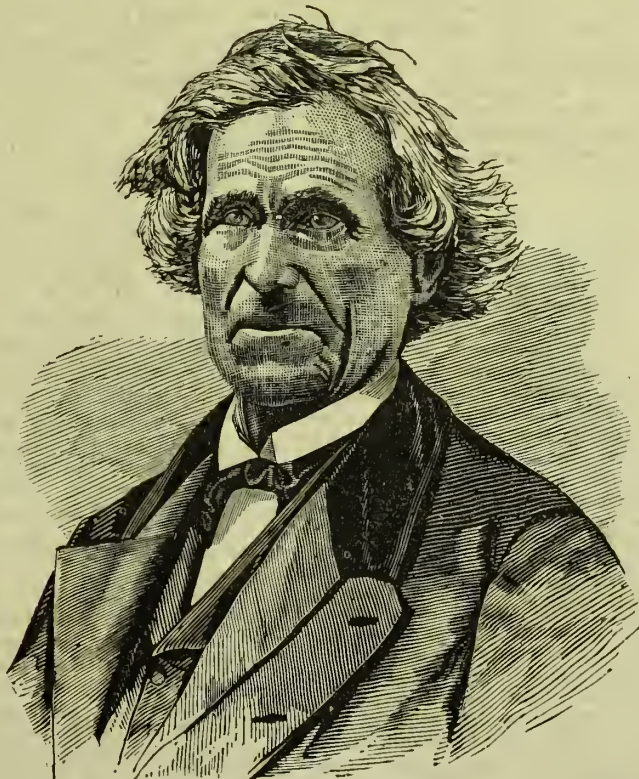
If the one we here illustrate, will take hold

**HORIZONTAL HOP YARD.**

before starting, by another party commanded by Captain Fitzpatrick, bound to Oregon, and which separated from Captain Bartleson's company at Soda Springs, near Fort Hall. Mr. Hopper reached California the same year and describes San Francisco, then called Yerba Buena, as follows:

"It was a miserable place—nothing but a lot of sand-hills, a little trading port of the Hud-

son Bay Company. There was one hut, said to be a sort of tavern, and Col. Chiles and I went in and called for something to eat. The landlord said, 'Gentlemen, I have nothing in God's world to give you, but will look around and try to get you some beef.' Well, he did get some after a while, and broiled it for us. That was the kind of accommodations you got in San Francisco in those days. It's a little different now!"

**CHARLES HOPPER.**

son Bay Company. There was one hut, said to be a sort of tavern, and Col. Chiles and I went in and called for something to eat. The landlord said, 'Gentlemen, I have nothing in God's world to give you, but will look around and try to get you some beef.' Well, he did get some after a while, and broiled it for us. That was the kind of accommodations you got in San Francisco in those days. It's a little different now!"

Mr. Hopper returned to Missouri in 1812 by way of New Mexico, and in 1847 returned to California with his family. He then purchased a large farm on the Caymus Grant from Mr. Yount, upon which he still resides. His early life was spent as a trapper and hunter in the great wilderness between the Mississippi and the Pacific, and many are the hair-breadth escapes which he has experienced, from the savages and the fury of the elements. He corroborates Mr. Yount as to the great number of grizzly bears in this region, having killed no less than nine within a mile of his house in the summer of 1848, and seen great numbers of them. Bear hunting seems to be his favorite sport, and he still sometimes takes the field against them, when tired of the monotony of in-door life. He is apparently as hale and vig-

orous as a man of twenty, and his eye-sight is as keen as ever. No one stands higher as a conscientious, true-hearted and generous man, whose word is inviolable. He is universally respected, and is affectionately called "Uncle Charley" by all who know this brave old pioneer.

draw our produce to market cheaper than horse teams or railroad can do it, why then we don't want to be troubled with it. The proprietors of the Aveling & Porter motor should bring one of the machines here, come themselves with it, as Parvin did with the Parvin motor, call upon the best mechanics, and the most scientific farmers, and editors of the first papers of the State, to witness what it can do, and then the public will know something of its merits; until then we can express no opinion.

PLOWING DOWN GRASS.—Notwithstanding the utmost pains and care in plowing, the grasses, especially if long, will bristle up beards and tufts here, there and everywhere, injuring alike the appearance of the growth. Do you wish to remedy this great difficulty? If so, use the chain and ball to your plow. No matter what kind of a plow you have, try them. A piece of ordinary trace chain will do very well. Fasten one end of it to your coulter and to the other end attach a round iron ball of two to three pounds' weight—leaving the chain long enough to permit the ball to reach back to about the middle or the mould-board, and there let it drag along, on the off side, of course.—*Canada Farmer.*

Notices of Recent Patents.

Among the Patents recently obtained through Dewey & Co's. MINING AND SCIENTIFIC PRESS American and Foreign Patent Agency, the following are worthy of mention:

WIRE ROPE TRAMWAYS.—C. W. E. Bunster, Valparaiso, Chili. This invention relates to an improved pulley for supporting the endless wire rope which is used for transporting substances from one place to another, and it consists of two pulleys, each of which is provided with inclined flangers forming an inverted conical series of fingers. The two pulleys are so arranged that their fingers interlock and serve as teeth to drive each other, and also to support the wire rope in the angle formed by their covering each other. By this means the load can be depended in a direct line below the wire rope, and the hanger or connecting rod will pass between the fingers of the pulleys readily.

HYDRAULIC ELEVATOR.—Philip Hinkle, San Francisco, Cal. This patent covers a novel application of hydraulic power for raising and lowering a cage or platform for hoisting purposes, and is especially useful for operating a passenger hoist. One or more cylinders are mounted on wheels, and the wheels move on a track similar to an ordinary railway track. Each cylinder is provided with a stationary piston and hollow piston rod. Water is admitted between the stationary piston and end of the cylinder through the hollow piston rod, so that the pressure causes the cylinder to travel on its track and raise the cage or platform. By releasing the water from the cylinder the weight of the descending cage will draw the cylinder back to its first position.

SHEEP SHEARS.—Andrew S. McWilliams, Colusa, Cal. Mr. McWilliams provides ordinary sheep shears with an elastic thumb plate and rest upon one branch of the shears and finger saddles upon the opposite branch, so that the operator will have a better grasp upon the shears, while his fingers and thumb, being provided with convenient and neatly fitting seats, will not become fatigued by the operation of shearing, while they also form guards and prevent accident to the fingers and thumb.

STEAM PLOW.—P. J. McDonald, San Francisco, Cal. In this invention Mr. McDonald combines the English Fowler system of operating steam plows with the American system of dragging a series of plows after a traction engine over the field. Mr. McDonald provides an ordinary traction engine with ways or guiding beams extending twenty or thirty feet upon each side of the engine. The plows to any desired number are mounted upon these ways and are drawn by a rope towards each other and towards the engine. After making each cut of forty or sixty feet, the plows are hauled back along the ways by another rope to the outer end of the ways, ready to make another cut. While the two gangs of plows are in the ground and moving towards each other, the engine remains stationary, but when the plows are being hauled to the outer ends of the ways, empty, the engine moves forward to the proper position to give the plows a new land. The main driving shaft is driven uniformly in one direction by the engine, and the changes of motion necessary to move the plows back and forth along the ways, are accomplished by ingeniously arranged mechanism, which is very simple and effective. Thus the engine alternately moves forward into position and remains stationary, while the plows are working, cutting a land of forty or sixty feet in width as it proceeds according to the length of the ways employed.

SADDLE FOR WIRE ROPEWAYS.—Thomas M. Martin, San Francisco, Cal. This invention relates to a saddle for supporting the load upon wire ropeways, which is provided with an inside lining of india-rubber, for the purpose of giving great adhesion to the rope, as well as a perfect seat of the saddle upon the rope.

TYPE.—William Shaw, Hollister, Monterey Co., Cal. This invention is intended for the benefit of printers, and it consists in making types with a small shoulder at some point of their length, so that in correcting a "proof" any letter can be readily removed by inserting a thin bodkin having a hook formed on its end, so that the hook will catch upon the shoulder and allow the type to be raised vertically without disturbing any of the adjoining type.

SCRUBBING BRUSH AND MOP COMBINED.—J. D. Smith, Sacramento, Cal. This invention is intended to benefit housekeepers, and it consists of a very neat long handled scrubbing brush, which is combined with a mop cloth so that the entire operation of scrubbing, mopping and wringing the mop cloth can be done without knee work, as is usually necessary in order to do good work.

DEVICE FOR UNLOADING HEADER WAGONS.—Richard Threlfall, Centerville, Cal. Heretofore header wagons have been unloaded by means of forks operated from a swinging derrick or crane, but this method is too slow to keep the threshers supplied with a uniform feed. Mr. Threlfall proposes to spread a netting or other fabric over the bottom of the wagon bed and fill the grain into the wagon bed upon the netting, and when it is desired to unload the grain the corners of the netting or fabric are gathered together, and the crane employed for lifting the entire load out at one operation.

GOATS.

Mohair and its Uses.

As growing mohair promises very shortly to become an important industry on the Pacific coast, a few facts and figures concerning that industry may prove interesting to some of our readers. Until within the last few years the production of this clothing material has been confined chiefly to small districts of Europe and Asia—Angora, in Central Asia Minor, being the principal one. The world's production of Angora fleece amounts to only about 7,000 000 pounds annually, as shown by statistics, and it is asserted on good authority that the mohair manufacturers number but eleven in the entire world. A comparative monopoly on the part of the producers has been the consequence, and a corresponding monopoly on the part of the manufacturers the result. Hence the fabulous prices of mohair goods. Of these eleven manufactories of mohair goods, not more than two or three are in the United States. The proprietors of one mill in Providence, Rhode Island, imported in 1868 seventy thousand dollars' worth of machinery for the exclusive purpose of working up Angora fleece. Within a year after starting they had consumed all the fleece that could be obtained in the country, being the accumulation of ten years among wool dealers, besides importing 20,000 pounds from Asia Minor, and still they are short of the needful supply to keep their machinery in motion. Within the last three years more than fifty different new varieties of mohair goods have been produced by American manufacturers and introduced into the commerce of the world. These include watered camlets, possessing a beauty and brilliancy of surface unapproached by fabrics made of Indian wools, and barely rivaled by silks, decorative laces, buttons, braidings, coat trimmings, light and durable cloths of elegant texture and repellent of water, light, lustrous, rich articles of dress for the wealthiest ladies of fashion, and possessing an unequalled gloss, softness, strength and durability. In France a kind of lace is now made which is substituted for the very costly fabrics of Valenciennes and Chantilly, said to be cheaper, more durable, and equally beautiful. Utrecht velvets have been for some years made in the same country, and more recently in England, for hangings, furniture trimmings, linings of carriages, fringes, tassels, etc. Ten pounds of this hair thus manufactured have been known to bring at retail five hundred dollars, while the best shawls made in France and the East from mohair warp, using the fur for the weft or filling (the hair giving strength and durability, and the fur warmth and softness) sell at retail at enormous prices, from \$500 to \$2,500. The skins of the young goats are frequently dressed for furs, colored or not, and used for trimmings, for the costliest ladies' dresses, cloaks, etc., and for muffs and tippets. A single skin thus dressed has been known to sell for from \$25 to \$100. Besides the fabrics made exclusively from mohair, it is used in Irish poplins, brocades, and in the famous cashmere shawls. In America the insufficiency of home production, the existence of a monopoly on the part of foreign manufacturers, and the exorbitant price of the raw material, have all conspired to discourage the manufacturers. Special machinery with expert workmen, commanding high wages, are required, and these cannot be set up, and employed with profit, when the price of the raw material is three dollars a pound—a price the proprietors of a mill in Lawrence, Massachusetts, refused to pay only a short time ago, stopping their machinery rather than submit to the extortionate demands of the foreign producers and dealers, and being unable to procure in this country an adequate supply. By a calculation the natural increase of 5,000 ewes reaches in ten years the enormous number of 386,713. The sales of wethers and ewes (old) from time to time during this period amount to \$943,000, allowance being made for selling all the wethers, and 10,000 old ewes the seventh year; 37,714 the eighth year, and 39,028 the ninth year. The fleece, counting from the second year, (the first year's being valueless) amounts in nine years to 951,162 pounds. Its value, estimated low, at 60 cents per pound for the second, third, and fourth years; at 80 cents for the fifth, sixth and seventh years; and at \$1 for the

eighth, ninth and tenth years, amounts to a total of \$877,959.40. Sum up these results and we have the following:

Value of wethers and ewes sold.....	\$643,000 00
Value of wool sold.....	\$77,959 40
Value of stock on hand tenth year (75,000 ewes at \$10 each).....	750,000 00

Grand total.....\$2,270,959 40

Liberal margin has here been allowed for expenses, losses, and all reasonable contingencies, first, by throwing off 25 per cent. of the natural increase; second, by deducting from the count the 5,000 common goats to start with; and the third, by making low estimates of sales of fleece and stock. The increase of the Angora is never less than 100 per cent., often reaching to 150 per cent. The ewes bear when one year of age; and when the practice of "breeding to points" is carefully pursued, each succeeding generation improves in quality and increases in value in proportion to its grade. Hence, by retaining all the females as long as they continue good breeders, and marketing only the males, the ranchero gets the benefit of an increase which, in a few years, attains an apparently fabulous figure.—*Colorado Agriculturist*.

THE VEGETABLE GARDEN.

Onion Raising.

Does it pay to raise onions? I have heard a great deal about the profits of the business, and have been told that on suitable land they could be grown for seventy-five cents a bushel while they were almost sure to sell for a dollar, and sometimes bring twice that sum—these and similar things I have heard in favor of growing this particular crop. The past season I have been giving it a practical test. Owing to the drought I did not get more than two-thirds as many onions as I should if the season had been favorable. The best spots on my piece yielded at the rate of about two hundred and forty bushels per acre. Allowing this to be two-thirds of a crop it would give three hundred and sixty bushels. Some claim to obtain a great many more, even as high as nine hundred bushels an acre, but many good growers admit that an average yield, on good land, with good cultivation, will not exceed four hundred bushels. Of this, if a man does not own land, one-half is to be given for its use. The one who hires the ground furnishes the seed and does all the work even to preparing for the market the half which pays for the use of the land. In the four hundred bushels which he obtains he will probably find from twenty-five to thirty bushels of small ones, which are worth not more than seventy-five cents per bushel. But suppose we allow full price for all, place the crop at four hundred bushels, and call them worth a dollar a bushel when ready for market, and sold at the barn without expense for moving. This is allowing more than the average grower, in an average season, will be likely to obtain, and makes no estimate for losses in any way. At the price which the best seed commanded last spring it would cost him sixteen dollars for seed. To take good care of an acre of onions would require the work of one man for five months, and he would need a sower and a wheel hoe. A man who would take good care of an acre of onions would be worth for common farm work, twenty-six dollars per month, or forty dollars per month if he boarded himself. At the close of the season he would find himself with two hundred dollars' worth of onions on which he had done two hundred dollars' worth of work, and paid sixteen dollars for seed, besides furnishing tools with which to work. For the last two months of the fall he would be out of work and that at a time when labor does not command a high price.

Now allowing nothing for the risk, which is very great, and taking it for granted that he obtains a good crop and a fair price, we see that a man will not be likely to hire land and make onion raising pay. If he cannot, can the owner of the land profitably engage in the business? My own experience with this crop has been a great deal of work for little money.—*Practical Farmer*.

DEPTH OF COVERING SEED.—As a general rule, the smaller the seed the lighter should be the covering. We are very apt to cover too deeply. Nature here is safe to follow. She covers lightly. The seed fall from the ripened stalk upon the surface of the ground, to be covered only with leaves, or to be washed into the soil by the rains. Onions, parsnips, squash-

es and lima beans, such plants especially as push up the shells of the seed itself, find it difficult to force their way up through much depth of earth, after it is packed down by rains. A quarter, or half an inch at most, is quite sufficient for these seeds. Care should be taken that no lumps of earth be left over them. We like long rows of beets, carrots, parsnips, etc., and don't believe in wasting half the land in useless paths and walks, with short rows running crosswise. Long rows are more easily worked and kept clean than short ones. We should study economy both on the farm and in the garden. On the field the too frequent turnings consume much time in plowing, and to some extent this is so in the garden.—*Mass. Ploughman*.

Asparagus and its Culture.

To raise asparagus from seed, sow in rows, one foot apart in a finely pulverized soil, well enriched with old manure. Keep the bed perfectly clean and mellow, and the young plants will be large enough to set out after one season's growth, and will be much better than plants two, or even three, years old that have grown feebly from a want of proper care.

To obtain plants enough for an acre, five or six pounds of seed will be required, which will give 15,000 or 16,000 plants for this purpose. For setting out finally, the ground should be well plowed and subsoiled, so as to give a deep bed of mellow earth, and well enriched with manure, worked in by plowing and harrowing. In setting out the plants allow plenty of room; a common error is in planting too closely, especially if the beds are deeply dug. It is better to give more horizontal space, and the shoots will be large and fine. For extensive plantations, the rows should be about three feet apart, and plants not nearer than nine inches in the row. Stretch a line, cut a trench beside it seven or eight inches deep, or deep enough to receive the plants, and set them nine inches apart, spreading out the roots evenly, and covering the crown about two inches below the surface. This work should be done as early in the spring as the ground can be got ready, and the plants will make a better and stronger growth than when planted later. Then, to save labor, and have a clean plantation, go over the whole surface with a rake every few days, and stir the whole surface well, which will break and destroy the young weeds as they are just peeping at the surface. If the rows are marked, this work may be done more rapidly with a horse and a light and fine-tooth harrow (a smoothing harrow would be best), the teeth of which will not go down more than one inch. A common harrow will not answer at all. As the young sprouts approach the surface, which will be in two or three weeks, the cultivation must be confined between the rows, and any weeds in the rows pulled out by hand.—*Cultivator*.

POTATO RAISING IN THE UNITED STATES.—According to the last decennial census, New York is the "Banner State" in the amount of Irish potatoes produced, returning the enormous yield of twenty-eight million bushels; Pennsylvania follows with nearly thirteen million, Ohio with eleven million, Illinois and Michigan each with ten million, Maine with nearly eight million, Wisconsin with six million, Iowa, Indiana, and Vermont each with upward of five million, and New Jersey and New Hampshire with more than four and one half million bushels. The particular parts of the country which yield the most according to the area cultivated are Maine, New Hampshire, Vermont, and Northern New York. The best potatoes, also, come from these States, as the millions of bushels shipped to the Southern States each year will attest.

ARE ALL POTATOES ALIKE LIABLE TO ATTACK?—During the course of our inspection, we frequently met with gardens and fields containing two or more kinds of potatoes, and observed in many instances one sort was very much more affected by the insect than others. The *Meshannock* is particularly liable to attack, while the Early Rose and Peach Blow are less so; but where the latter are the only varieties planted, those insects do not hesitate to devour them. The only practical suggestion we can make in reference to this point is, that it might be well to plant a few of such sorts as are most liable to be injured, so as to attract the larger proportion of the insects to one spot, and thus enable the cultivator to destroy them with less labor and expense.—*Colonial Farmer*.

WHEAT, ETC.

Changing Seed.

If farmers were always careful to sow none but plump grains, of pure seed; that is, seed of one variety, unmixed, we see no reason why they should change their seed. Where seed of a good variety is mixed with seed of a variety inferior in quality, but of greater vigor, the more vigorous kind will gain upon the better kind, and the quality will deteriorate. Also, when inferior, shrunken grains are sown the wheat must deteriorate; but where pure, plump grains are always sown upon soil in good condition, we do not believe that there is anything in the seedbed that should affect the quality, or constitution of the wheat. We have known instances where farmers have carefully saved the most perfect ears of seed corn for a succession of years, and the quality of the variety has improved. We believe, that if equal care were exercised in saving seed wheat, the result would be similar. We do not doubt that benefits have resulted from changing seed, but we suspect that it was where a careless farmer bought his seed of a more careful one.

We would advise, where a change is made, procuring seed from a better and cleaner soil, and we should consider this of greater importance than a soil of different texture or composition.

We should prefer seed already adapted to the climate, and we should change just as often as our seed became poor.—*Rural Home*.

QUALITIES OF WHEAT.—A subscriber, in New Haven, wishes to know whether England or America raises the best wheat.

Reply.—If price is to be taken as a guide to quality, we may say that California wheat is better than England wheat. We find the following latest quotations in the English papers, viz.: "English wheat, fifty-two to sixty-three shillings per quarter of eight bushels; the best English white wheat, (Essex and Kent,) sixty-seven shillings; California wheat, sixty-six shillings." California wheat may, therefore, be considered better than the general run of English and equal to the best of it, at least so far as price goes. But millers in England often pay a high price for a very dry, hard foreign wheat, such as California, because it helps their soft wheat to grind better and yield more flour. So, after all, this may be an extreme case. The price of ordinary American wheat in England is now fifty-five to fifty-nine shillings per quarter. This is mainly No. 2 Chicago or No. 2 Milwaukee—really inferior grain. Ordinary English wheat is quoted fifty-three to sixty shillings. It may be concluded that there is no appreciable difference between these wheats.—*Times*.

FULTZ WHEAT.—In Yates county, New York, a careful experiment was made by a correspondent of the department with Fultz and Treadwell wheats, with reference to testing their respective merits. During the summer of 1872, an eight acre field of gravelly loam, which had been cultivated the previous year in fodder-corn, was summer fallowed. The field was manured in 1871 and 1872, in the latter year the manure plowed under at first ploughing. Under a plot of one-eighth of an acre of this ground, five quarts of Fultz were sown broadcast, September 10, 1872. Treadwell was drilled upon the remaining part of the field September 18th, at the rate of two bushels per acre. The former was harvested July 7th, and yielded four and a quarter bushels, or thirty-fold upon its seed; the latter was harvested July 25th, and yielded twenty bushels per acre, or ten-fold upon its seed.

ALL who are perfectly acquainted with the subject must have seen that the best crops of wheat are produced by being preceded by crops of clover grown from seed. I have come to the conclusion that the very best preparation, the best manure, is a good crop of clover. A vast amount of mineral manure is brought within reach of the corn crop which, otherwise would remain in a locked up condition in all the soil. The clover plants take nitrogen from the atmosphere, and manufacture it into their own substance which on decomposition of the clover roots and leaves, produces abundance of ammonia. In reality, the growing of clover is equivalent, to a great extent, to manuring with Peruvian guano.—*Prof. Vockler*.

THE DAIRY.

Butter.

The milk of a cow or other female mammal is seen under the microscope to consist of a clear fluid, containing a number of minute oil globules. If a drop of acetic acid (purified vinegar) be added, many of the globules will be seen to coalesce and form little granular masses of fat. The globules are enclosed in a delicate membrane which the acid seems to break down. This result is accelerated by agitation. The operation of churning consists in agitating the milk till the globules adhere together, or, as it is technically called, till "the butter comes." It was formerly thought that the cohesion of the butter-globules was brought about by the formation of an acid in the milk, as shown by the sourness of the buttermilk, even when the cream used is perfectly sweet. But it has been found that if this acid is neutralized by bi-carbonate of soda, the butter will come quite as readily. The best temperature for churning has been found by experience to be between 50° and 55° Fahrenheit.

Butter, chemically, is a mixture of fats, being composed of glycerine, in combination with palmitic, stearic, oleic, and small quantities of capric, caprylic, caproic and butyric acids. It is the glycerides of the last four acids that butter owes its peculiar odor and flavor. In practice, butter always contains more or less buttermilk which has not been separated from it. This buttermilk consists of water holding in solution a kind of sugar called milk sugar and casein, or the substance which forms curds, and from which cheese is made. This casein differs from the other constituents of milk by containing nitrogen, and like all nitrogenous organic bodies, is very liable to putrefaction. If the casein contained in the butter becomes putrid, it will communicate its decomposing condition to the other constituents of the butter, and hence the latter will become rancid. Rancidity consists in the separation of the fatty acids mentioned above from the glycerine with which they are united in the fresh state, which separation brings out the peculiarly unpleasant taste, smell and other properties of these acids. Intimately connected as this process is with the presence of readily putrescent casein in the buttermilk retained in the butter after churning, it becomes a most important object to get rid of this most injurious impurity—an impurity far worse in its influence on the preservation of the butter than many an adulteration, the detection of which would be fatal to the sale of this important product. Too much stress cannot be laid upon the care which should be taken to free the butter from the buttermilk by the ordinary methods of washing with water, kneading, etc. In addition to these methods, the admixture of a proper proportion of salt. One quarter of a pound of salt to six pounds of butter has been recommended for this purpose. Another method of preserving butter is as follows: The butter is melted in a vessel immersed in hot water, and the heat continued until all the curdy matter has subsided to the bottom and the butter is transparent. The clear melted butter is then poured off, or strained through a cloth, and cooled by cold spring water or ice. Butter cured in this way is said, if kept in a cool place, or in a close vessel, to keep for six months or more, as sweet and good as when first prepared. There has been much discussion recently in England on the subject of the adulteration of butter, the detection of some of the ingredients fraudulently added being very difficult. The usual adulterations comprise water, salt, and various kinds of fat, such as lard, suet and dripping. The water and salt are added by melting the butter and pouring them in while it is in the fluid state. By stirring round until all is cold, the salt and water are thoroughly incorporated with the butter. The presence of the water may be ascertained by placing the butter in a common four-ounce phial, and putting this into hot water until the butter melts. On standing, the water sinks to the bottom, while the butter floats at the top. To determine the presence of a fraudulent quantity of salt the butter is calcined, when the salt is left as an ash. Of course butter always contains a certain proportion of water and salt; but there should not be more than 1 per cent. of the former, and 5 per cent. of the latter.—*Canada Farmer.*

Large, Medium, or Small Sized Cows.

The larger a cow may be, the better she is—provided she has the necessary organization to constitute her a first-class milker, but large sized cows are not very likely, as a general rule, to possess the requisite qualities which go to make up the best milch cow, but the reverse is generally the case, that in the organization of a large sized cow she is better adapted for beef, and therefore less profitable for cheese or butter. The difference between a large or small sized cow, in case neither are very good cows, would be in favor of the small cow, if kept for a series of years as milkers, on account of the less amount of food consumed by her; and observation will justify the positive conclusion in case a large sized cow is only a tolerable milker, that the cheese and butter made from her milk do not pay for her feed, and consequently instead of being a profit is worthless to her owner. There has been a desire for many years among dairymen, either in the raising of cows or in the purchasing of them, to obtain a small or undersized cow; it being the general opinion, all things considered, that she is the most profitable, and, consequently, dairymen, when they could do so, obtained the small sized cow, and in this way quite a contrast in the size of cows now kept as compared with those that were formerly kept, can easily be seen.

In this selection, for quite a number of years, of small cows, much loss has occurred to dairymen, and that too, without they, as a general thing, being aware of the fact; but nevertheless it is so, that a dairy of cows is much inferior in milking qualities to the dairies formerly kept, nor is this the least bad effect in making the small cow less profitable, for in this continued selection of stock, in size has not only dwindled down to an inferior kind in the formation of a cow, but she is so degenerated from various causes, that she does not last over two-thirds the time she ought to as a milker.

If medium sized cows were raised or purchased by farmers which possessed the right points for a good multiplier, these cows would not only last longer but there would be other advantages gained over the small sized cow, for in her superior constitution less care would be required in keeping her; and she would also possess less tendencies to disease.

There is a law in physical science of universal application in the whole animal creation, and it cannot be violated with impunity without serious results, and this law has an exact application where the effort is made to so breed stock that when all the natural elements are not developed the physical equilibrium is lost; and as an inevitable consequence degeneracy and premature decay are the natural result. Nature has no law save the one that governs it, and this law involves certain causes and consequences.—*Pomeroy's Democrat.*

Bran and Corn Meal for Cows.

The *Practical Farmer* says: It is well settled in the opinion of all our best dairymen that bran greatly promotes the milk secretions in cows, and it is fed almost universally. About equally mixed with corn meal is the usual proportion. This mixture seems to promote both quantity and quality of milk. From several sources we hear that buckwheat bran is a great producer of milk, and it is being used considerably among our Chester county dairymen, in about the same proportion as the other. Thomas Gawthrop, near West Grove, Chester county, also by repeated trials with his own cows, has fully satisfied himself that they do as well with corn and cob meal and bran as with pure corn meal and bran. The amount of nutriment in corn cobs is so very small that this result will have to be explained on the supposition of the ground cob acting to promote digestion by distending the stomach. The presence of bulky material being necessary to promote distension and fill up the stomach of ruminating animals, before digestion can be accomplished, is frequently lost sight of. Hungarian grass is also found for milch cows to be rather superior to the ordinary run of hay. The last year or two Hungarian grass has loomed up wonderfully in the estimation of our dairy farmers: and a very large scope of land will be sowed with it the coming season. It matures for cutting in about sixty days, and produces two to four tons per acre—the latter of course on good soils. Three pecks to the acre is the usual allowance of seed.

Laws Concerning Corporations.

[Under the New Code—January 1, 1873.]

GENERAL PROVISIONS APPLICABLE TO ALL CORPORATIONS.
WAGON ROAD CORPORATIONS.
WATER AND CANAL CORPORATIONS.
HOMESTEAD CORPORATIONS.
MINING CORPORATIONS.
LAND AND BUILDING CORPORATIONS.
ALSO, MINING PARTNERSHIP LAW.

A pamphlet containing the above provisions concerning Corporations has been printed from the Statutes of California. It furnishes those who wish these special laws an opportunity of obtaining them for the small sum of 25 cents (post paid). Address, DEWEY & Co., Publishers, and Patent Agents, S. F.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street, (Rue House Block) San Francisco. Wholesale and retail dealer in Men's, Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods; also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission St., S. F. C. H. Gruenhagen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

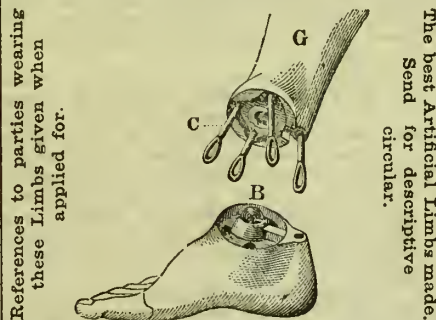
Warner & Silsby Manufacture all kinds of Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

THE DR. BLY ARTIFICIAL LIMBS.

166 Tehama Street,

COR. OF THIRD, BETWEEN HOWARD & FOLSOM.



THE "ANATOMICAL LEG," WITH A UNIVERSAL ankle motion; the above cut is its illustration. This artificial leg approaches so much nearer an imitation of the functions of nature than any other, that it stands without a rival among all the inventions in artificial legs, old or new. (The very latest announced new inventions duly considered.)

Address: **MENZO SPRING,**
166 Tehama St., San Francisco, Cal.
26v27-1am-bp-3m

THE SOUTHERN CALIFORNIA SANITARY HOTEL AND INDUSTRIAL College Association.

INCORPORATED UNDER THE LAWS OF THE STATE OF CALIFORNIA.

CAPITAL STOCK.....\$250,000.00
Divided into 2,500 shares, of \$100 each.

The subscription books of this Association will be open on the 24th of this month (May, 1873), at the present office of the Association, No. 10, Temple Block, Los Angeles, California, where copies of the By-Laws and Articles of Incorporation can be had.

PRESIDENT.....J. R. TOBERMAN.
TREASURER.....F. P. F. TEMPLE.
SECRETARY.....GEO. C. GIBBS.
Directors—George Stoneman, Thos. A. Garey, and Wm. Moore.
General Superintendent, F. M. Shaw. 19v6-1am3m

Patrons of Husbandry.

NOTICE IS HEREBY GIVEN that the office of Secretary of the State Grange has been removed to San Francisco in connection with that of the State Agency 320 California street, Room 9, third floor. By order of the Executive Committee.

W. H. BAXTER,
Secretary State Grange.

Horse Clipping—Price, \$6 per Horse.

Our friends and patrons are hereby notified that we are prepared with the BEST HORSE CLIPPING MACHINE in the country to do and guarantee first-class work.
20v6-3m
Norfolk Stables, Cor. Ellis and Mason, S. F.

\$5 to \$20 per day Agents wanted. All those not working for a full time, or otherwise, young or old, make more money at work for us in their spare moments or all the time than anything else. Particulars free. Address G. Stinson & Co., Portland, Maine.

More Subscribers Wanted for the Pacific Rural Press.

That many more than now may find in it a source of improvement to mind and body, as well as in the conduct of their respective avocations.

That more farmers' wives and children in their isolated homes, may be cheered by its weekly visits, laden with its pleasing, yet moral reading and sound instruction.

That a more extended interchange of views and opinions may be had among farmers, upon all the great questions touching their mutual interests and progress.

That the agricultural resources of the Pacific States may be more wisely, speedily and thoroughly developed, by an open and free discussion in our columns.

That all the other great industries of our State may be advanced in connection with that of agriculture, our columns being ever open to the discussion of the merits of all progressive improvements.

That the RURAL, after having been read and pondered over by the home circle, can be filed away for future useful reference, or forwarded to the old Eastern fireside of the Atlantic border, in aid of an increasing immigration to our sunny clime.

LANDS & HOMES FOR SALE

MOUNTAIN RANCH FOR SALE.

A valuable and productive ranch is offered for sale, located on the public road, between Grass Valley and Colfax. The ranch contains 560 acres of land—320 paid for, and patent received for 160—containing all the best meadow land, and 400 apple trees 16 and 18 years old. There are six lots of 40 acres each, railroad land, which will make the title good to any buyer. The dwelling house is not furnished yet; it contains ten rooms, lathed and plastered; 6 on the upper floor and 4 on the lower, with hall; a good stone cellar and one good barn. Last year 1,000 boxes of winter apples were shipped. There are 200 pear trees, and plums and peaches enough for family use. The owner cuts from 30 to 40 tons of meadow hay per year. There are from 5,000 to 7,000 cords of wood, worth \$1 per cord, now standing upon the ranch. Terms liberal. Apply to

P. H. SUMNER,
No. 311 Montgomery st., San Francisco.
September, 15, 1873.

Valuable Farm for Sale or Exchange.

1,000 ACRES OF THE BEST FARM LAND IN THE STATE OF MICHIGAN, a portion of which is well timbered. Rapidly increasing in value. Title perfect. Will be sold or exchanged, in lots to suit, for REAL ESTATE IN CALIFORNIA.

Apply to **G. D. CROCKER,** Room 16, No. 315 California street, San Francisco. 15v6-3m

Valuable Dairy and Grain Ranch FOR SALE.

In San Mateo County, comprising 900 acres, 400 acres under cultivation, and all well watered and substantially improved. Inquire of

JOS. W. JORDAN,
N. E. cor. Clay and Front sts., San Francisco.

**BIBBINS & CO.,
LAND EXCHANGE,**
402 Kearny street.....San Francisco.
(SUCCESSORS TO BRANDON & BIBBINS.)

Deal extensively in Country Property.
WANTED—FARMS TO SELL AND LEASE.
FOR SALE:
Farms, Grazing Lands and Tule Lands
5v5-1y Throughout the Coast.

TO RENT.

An Improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,
311 Montgomery street, San Francisco,
Or Pacific Rural Press Office.

P. H. SUMNER,

Real Estate Broker,
311 Montgomery street.....SAN FRANCISCO.

The Improving, Purchasing and Selling of Real Estate, and Negotiations of Loans, in San Francisco and Oakland.

Also, Farms and Country Property sold and exchanged. 9v6ft

Buy Real Estate while at Low Rates.

ELEVEN W. TER-FRONT LOTS, CHEAP.

Gift Map 4.

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

CALIFORNIA LAND AGENCY.

Will attend to the Location, Purchase and Sale of Lands and Farms, the Examination of Titles, and the Payment of Taxes.

1,000,000 Acres of well selected Lands in California, Oregon, and Washington Territory for sale. Also, buy and sell property in the city and vicinity.

W. M. BRANDON,
20v6-1y-16p 535 California street, San Francisco.

AGRICULTURAL NOTES.

CALIFORNIA.

ALAMEDA.

Transcript, Dec. 27: The ribbon factory at Oakland is kept in full operation. It now turns out the best of silk ribbons and sashes of all colors, from four to seven inches in width.

AMADOR.

[Not altogether an agricultural note, but as we can get no other, we take a Christmas one.—*Editors Press*.]

CHRISTMAS IN JACKSON.—*Dispatch*, Dec. 27: The natal day of the Christmas era was observed in this place, in the usual manner, last Thursday, by both Jew and Gentile. There were no great bombastic displays of rejoicing over the occasion, but each individual unobtrusively celebrated after his own manner—some by holding divine service, and others by drinking egg-nog and other glee-giving fluids, and demolishing sacrificed turkeys, chickens and other pleasant eatables, while the less aged amused themselves with their various Christmas presents, spinning tops, etc., etc. Good feeling and brotherly love seemed to be prevalent throughout the day. On Christmas eve there was a beautiful tree erected in Armory Hall and loaded down by that philanthropic old individual of the polar regions, Santa Claus, with magnificent presents for the old and young. After the presents were distributed the seats were cleared away and those who felt so disposed engaged in one of the most enjoyable social dances that we ever attended.

ALPINE.

Miner, Dec. 27: The weather has been fine, and stages arrive and depart with usual regularity. Both lines seem to be doing a good business, as they come and go well loaded with passengers and freight.

Old Santa Claus has been supplying the little folks with goodies. The stage-sleighs present a queer mixture of candies, curios, and other necessary supplies.

Mr. Emery brings the mail on time, and during the week we have had a daily mail several times. Altogether Monitor is looking quite lively. Snow-shoes by the half cord may be seen about McBeth's, Larson's and Stevenson's at all times of the day.

CONTRA COSTA.

THE WEATHER.—*Gazette*, Dec. 27: Within the past four weeks full seven and a half inches of rain have fallen, and most of it has been absorbed by the earth, which is now well charged, and with the absence of rain for the past five or six days, though the weather has been cloudy most of the time, it is getting in tolerable condition for plowing, of which comparatively little has yet been done through the central section of the county. The grass has got an inch or two above ground, and has done well considering the cold weather that has prevailed. With a week or two of mild sunshine it would get a good growth and afford some pasture for stock; and the farmers could improve such a turn of weather in getting a tolerable breadth of land ready for seed.

THE MARTINEZ CHRISTMAS TREE FESTIVAL.—The girls and boys and the older people of Martinez, to as large a number as could crowd into the room, were at the Court House on Wednesday evening, to witness or take part in the glad festivities of the crowning hour of the season when it is the object to make everybody, and especially the little ones, as happy as is possible for mortals. The festival was an enterprise of the united efforts of the Congregational and Episcopal Sunday Schools; and the exercises were directed by Messrs. Clark and Monges, the Pastors of the respective societies. The stage was prettily arranged and set off with evergreens and scenic drapery, behind a portion of which the "Tree" with its showy attractions was concealed until the moment for disclosing it came. The exercises opened with a welcome song and chorus by the children, followed by recitative pieces, and two dramatic charades in which several leading parts were well rendered by the young people who assumed them. The advent of Santa Claus, who was represented in typical furs and back load of multifarious toys by our full bearded Deputy County Clerk, Mr. M. H. Bailhache, was welcomed by most boisterous and jolly clamor of shouts, and a chorus of laughter, invoked by the good saint himself. Then came the unveiling of the "Tree," with its brilliant hangings, in the midst of tables piled with showy treasures to juvenile eyes, and which were speedily distributed to the hands held ready for them amidst the pleasant shouts and merry laughter of glad young voices.

COLUSA.

THE WEATHER.—*Sun*, Dec. 27: The weather has been splendid so far—plenty of rain and no very cold weather. The grass and grain are growing finely. We have at Colusa, up to date 9.08 inches of water, and yet, strange to say, the river has not been within five or six feet of high-water mark. At Eddy's landing, twelve miles below Colusa, the river was within six inches of bank full, and the water was all the while running out at Battle Slough—the pond caused by the Parks-Robert dam not having been filled up. There is an immense deal of snow in the mountains. Joe Evans tried to cross the mountains from Susanville, but had to turn back after three or four days unsuccessful effort. He got as far as Humbug Valley, and then had great difficulty in getting back to Susanville. From there he went down to the

Central Pacific Railroad, and came home that way. He says the "oldest inhabitant" has not seen so much snow at this season of the year.

CO-OPERATIVE STORE.—A number of the Grand Island farmers have agreed to form a joint stock company to carry on merchandising, blacksmithing, storing grain, etc., etc., and have purchased the stock of goods of Jas. H. Goodhue, at Grimes' Landing, and five acres of land of Mr. Grimes. The articles of incorporation have been drawn up and signed by some of them, but not filed yet. The names to the agreement, and who took the initiatory step and purchased the property above mentioned, are: J. J. Hickok, Wm. Ogden, Thos. Eddy, L. D. Gleason, Isaac Howell, C. Grimes. The capital stock of the company is one hundred thousand dollars. Some twenty of the most prosperous farmers of the island have promised to take stock.

EL DORADO.

Republican, Dec. 25: The weather in these parts is beautiful overhead, but terrible muddy under foot. The stages arrive about an hour late every day, in consequence of the bad condition of the roads.

MARIN.

County Journal, Dec. 25: We have had fifteen inches of rain this season, yet so gentle and gradual has been the fall that the streams are comparatively dry. The earth has drank deeply, and will give back in due time rich and generous harvests. The grass is already started, so that cattle incline to the fields more than the corral, and if the present weather holds a few days more, feed will be good.

We should be ashamed to complain of the weather, for the rain that falls, is all valuable, and its effects will gladden the whole year. But it has now been raining or cloudy three full weeks, and it is only human nature to long for the bright sun to come out in his beauty and dry and warm things. The rain fall this week has been 1.35-1.00 inches, and for the season until yesterday morning, 14.93-1.00.

MONTREY.

WEATHER.—*Democrat*, Dec. 27: The weather record this week hears no note of rain, though, in respect to active farming operations, it has been exceedingly formidable. The wind has been southerly, and the temperature very mild, stimulating the growth of the grass, which, since its birth at the first rains, has received no check. The rain-fall this season up to Friday has been 4 and 1-5 inches, being less than at the corresponding period last year. On the other hand, the water which has fallen has been absorbed by the earth which has been wetted down far below the course of the plows. Stock is considered now to be out of the woods and, altogether, as the new year opens, confidence and hope prevail among the workers in our county.

RATHER DANGEROUS.—An Irishman, named Morau, whilst shingling the roof of Arques' new dwelling house on Sixth street, slipped his foot and fell to the bottom of the building, a distance of nearly forty feet. Fortunately he alighted on a heap of shavings, and escaped serious injury. Some of the other hands engaged hastened to the scene of disaster, when Moran stood up and offered to bet his bottom dollar none of them could do the same feat.

NAPA.

IMPORTED FOWLS.—*Register*, Dec. 27: Col. M. Eyre received this morning 30 white Leghorn fowls, from Mantua, Ohio. They are pure white, and said to be very superior as layers.

BRIGHT PROSPECTS.—A letter from Paris Kilburn, Esq., says that 40,000 acres of new land are being sown in wheat in the neighborhood of Salinas. He has 28 plows running, and 18 more on the San Joaquin. There is every prospect of good crops. Every body is lively and in fine spirits.

WHEAT IN STORE.—Messrs. Ellis & Keys have stored in their warehouse 3,800 tons of wheat. They will ship a considerable amount to-morrow. Mr. Sheehy's warehouse has about 2,500 tons—making 6,300 tons in all. At present prices, this will bring a goodly sum of money.

PICKING GRAPES IN DECEMBER.—Mr. R. S. Thompson informs us that he is still picking and shipping grapes from his "Hope Vineyard" in Brown's Valley. He has picked and shipped over 100 boxes within two weeks past. He has about 40 boxes yet to ship. They are picked right off the vines, with stems as fresh as in summer. The latest varieties picked are the Muscat, Black Morocco, Flame Tokay, Cornechen Violet and Miller's Tokay. What do you think of this, Eastern people?

NEVADA.

COLD.—*Republican*, Dec. 23: It was intensely cold here this morning, the thermometer at six o'clock marking four degrees below zero.

Our Eastern readers will bear in mind that the *Republican* is printed at Truckee, near the summit of the Sierra Nevada.

SWEARING MAD.—The cold weather this morning was rather disagreeable. We noticed one individual just in from a logging camp, who had imbibed a liberal quantity of Bourbon juice, on the street, swearing mad because of the cold. He said he'd tried to get warm by sampling all the liquor in town, but still he was cold, and then he swore that he would get heated up if he had to whip every man in Truckee to do it. He succeeded in getting a "head" built on him during the forenoon, and we presume he is comfortable now.

Grass Valley Union, Dec. 23: The rainfall for the 34 hours ending at 4 o'clock P. M., was 0.12-inch. The barometer at that hour showed that a small shower may occur to-morrow.

This is the time of year for planting trees.

The ground is soft so that the holes can be easily made and the dirt will settle around the roots. Both sides of Mill and Main streets should be planted with trees. They will not only be beautiful in summer, but they will protect against fire. Plant trees.

PLACER.

PLOWING.—*Herald*, Dec. 27: Since the ground became wet enough to plow at all, many of our foothill farmers have been restless from their desire to get to work. Some have from day to day attempted it, only to be driven in by another rain storm. It is decidedly better, we think, to go slow, and not try to plow until the soil is in proper order, for it has been positively tested, a fact which, perhaps, all our farmers are not aware of, that plowing ground when it is muddy is the most effectual way to kill it, or in other words, to destroy its productive qualities known. We have seen evidence of this assertion where the plow has been run through low, wet places, to obviate the necessity of short rounds and frequent turning, such places for years afterwards being comparatively barren. Wait until the soil is in proper condition, and then go to work with a will and an assurance that you are not destroying the fertility of your land, nor your prospects of being remunerated for your labor.

PLUMAS.

SLEIGHING.—*National*, Dec. 20: The storm left about three feet of snow in our valley, and the sleighing is excellent, in fact better than it has been for years. Everybody enjoys it, and all sorts of "rigs" can be seen on the road. Horseflesh suffers, however, and they can't see where "the laugh comes in."

SUGGESTIVE.—We are informed that a large number of teams have recently been engaged in hauling lumber from Fletcher's saw mill, on this side of Sierra Valley, to Virginia. This saw mill is only seven miles from McLeans, in Mohawk Valley. As many as eleven teams loaded with lumber, have put up at the Summit House in one night, which shows that the traffic must have been considerable. This argues well for the chances of Plumas county timber soon being in such demand as to make a railroad a necessity. If teamsters can take lumber to the Virginia market and make a profit, it looks as though the supply on the line of the C. P. R. must be giving out. The grand old forests between this valley and Sierra valley will not stand for many years longer.

SACRAMENTO.

ORANGES.—*Telegraph*, Dec. 27: Three oranges, fully ripe, were plucked from an orange tree growing in the garden of Dr. Bates.

The quarry is in full blast. A great many men of families in the neighborhood, have found useful employment in getting out blocks to pave the streets of San Francisco. Why don't Sacramento take a hint and put down a pavement that will never wear out, and always be an ornament to the city?

COTTON.—Time and again we have shown that cotton can be made a profitable crop in the foothills. It has been raised in many gardens in this town, and many have pronounced it to be equal to Southern cotton. But some how or other, no one can be induced to go out of the old rut. Many complain that though they have good farms, they cannot make a living. The reason is evident. The most of our farmers have been raised in the North and the consequence is, that although living in a semi-tropical climate, they year by year insist upon raising productions such as they have been used to upon the old farm at home in an extreme northern climate. Cotton can be made to pay here, but no one has the pluck to plant it. So it is with various other southern productions that could be made to pay here. Try cotton for once, some of you enterprising men, who can get out of the old rut.

SANTA CRUZ.

Pajaronian.—One of the most beautiful sights in the State of California, at present, is a view of the Pajaro Valley, and the surrounding mountains, hills, and ocean. The landscape presents a beautiful dark green appearance, and the dark clouds passing over the sun make a beautiful effect of lights and shadows, that would delight the soul of a painter. One can almost see the green grass growing, and the question is often asked, "can there be a more beautiful, prolific spot, where all things are so favorable to healthy life and permanent prosperity?"

A FINE FIELD.—*Enterprise*, Dec. 27: Mr. T. Maloney, one of our most substantial and enterprising ranchers, has leased of Flint, Bixby & Co., five hundred acres of their choicest land, between here and Gilroy, all of which he has sown in wheat. The grain is above the ground three or four inches, and the field presents a magnificent appearance.

SAN LUIS OBISPO.

WEATHER. *Tribune*, Dec. 27: We have had no rain this week, no drying winds or scorching heats to evaporate the moisture, and our lands are still in the best condition for plowing. Only in low places, where the ground is still too wet, will there be found any difficulty in putting in seed for the next harvest. We shall have a splendid year this time without peradventure.

SUTTER.

WHAT IS IT.—*Banner*, Dec. 27: Monday last Allie Hubert brought in for our inspection a little animal about the size of a large mouse, but whose anatomy resembled that of a kangaroo, having hind feet about three times as long as its fore ones, and a tail about six inches long. It has a very long nose, and by the side

of its mouth are two pouches, which were full of wheat when the animal was caught. Its back is of a reddish brown color, while its belly is entirely white. We have consulted all the animal sharps who have been in our office this week, and don't know any more about it than we did before, for while one school of experts pronounce it a kangaroo rat, the others as positively assert it is not. Who will help us to classify this anomaly?

SIERRA.

Messenger Dec. 20: DEER.—About thirty deer have been captured near here since the first fall of snow this year.

SNOW.—We are informed from a reliable source, that at least twelve feet of snow fell in the Northern part of the county, during the late storm, and the outlook is fair for thirty or forty feet more before spring. As we go to press, there is every indication of a severe storm being at hand.

TUOLUMNE.

Democrat Dec. 27: Captain Eakin last week introduced in the Senate, An Act granting the right of way to the Yosemite Turupike Road Company, to construct a toll road over the Yosemite grant. It was referred to the Committee on Roads and Highways. We have not seen the bill, but presume it asks from the Legislature what the Commissioners refused—the privilege of constructing a wagon road from Gentry's into the valley.

YOLO.

Mail Dec. 22: The rains have fallen extensively and liberally. There is no portion of the State that has not been sufficiently wetted for all present purposes. Up till Friday last there had fallen at Grass Valley 14 1/4 inches; at Healdsburg, 14 1/4; at the town of Alameda, 7 1/4; at Santa Rosa, 12 1/4; at San Francisco, 8 1/4, and at Sacramento, about 8 1/4.

San Jose Farmers' Club.

Club met Sat. 27th, and was called to order by the President.

The following question was selected as the subject for discussion at the next meeting: "Resolved, That the proposed squirrel law now before the Legislature should be made applicable to Santa Clara county."

On the question of irrigation, Mr. Hobson thought that all means convenient and proper for irrigation purposes should be made use of. We need all the water we can get in this valley, and that which is most convenient and handy should be saved. The water that runs to waste from the many artesian wells in the valley should be saved and utilized. The bay gets the water which we should have, and some system, compulsory, if necessary, should be adopted for checking the waste. The farmers on the hills should save their rain water, build reservoirs and dams, irrigate and thereby have fine gardens and make money. We are living too extravagantly. Every drop of water that goes to waste can and should be saved.

Mr. Erskson said that this county depended very much on irrigation. Frequently there is a lack of rain, and the farmers should try and equalize the condition of affairs so that the land may be made habitable. If we can aid Nature in that which we lack, it is a great thing gained. It would be good policy to save the surplus water in reservoirs to be dealt out whenever required. The water which runs to waste in the bay if husbanded would more than double the products of the valley.

The Board of Supervisors should institute a survey of the valley with reference to irrigation; the streams should be examined, and the facilities for the construction of dams, reservoirs, aqueducts and ditches, to convey the water from the hills to be distributed over the various farms below. This would be a large job, but the people can well afford to pay it.

It would lead to the wonderful advancement of the wealth in this county, and the farmers along the hills who now barely make a living would become rich. In Greeley, Colorado, lands which were comparatively worthless before the introduction of irrigation now bring from \$20 to \$100 per acre. If irrigation will do that in Colorado, why will it not as much and more in California?

Mr. Holloway said that while he was in favor of preventing the water supply of this State being gobbled up by monopolists, and of instituting measures for a prompt and effective riddance of that evil, he was decidedly opposed to any system of taxation as far as irrigation was concerned. He thought that this valley did not require artificial means to increase its productiveness and wealth. That a judicious system of farming, a close approximation to the laws of Nature, would be of more benefit to the people, and a surer means of getting good crops than by changing the waters from their natural courses, and taxing the people to an enormous extent.

Mr. Erskson thought there was no question about the propriety of irrigation. The great volume of water which annually runs to waste is charged with vegetable life, and might be saved. If saved and under control we would have no freshets.

We have given the gist of the arguments pro and con. Other members ventilated their opinions, which would only be a repetition of what is above given.—*Daily Mercury*.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, December 30, 1873.

Business during Holiday week is proverbially dull. Little has been done in the Grain market, and we can chronicle no advance in the Cereals to gladden the hearts of producers. Reports from the East and Europe indicate a similar dullness. But during this period of enforced inactivity the attention of all is turned, naturally, to the weather and to prospects of the prospective crops. So far we have had a very large supply of rain, and it has fallen in such a manner as to beat prepare the waiting land. Some say, however, that we may yet have too much of it—an unusual circumstance certainly for California, where the regular complaint is of a dearth of water. But the great majority of the prospects unite in promising abundant harvests for the ensuing year. If such should prove the event, California will have, for once, two consecutive good seasons and the effect upon the whole State will be most favorable.

Receipts

Of Bay Produce at this port for the week under review, have been as follows: Flour, 15,504 barrels; Wheat, 174,336 casks; Barley, 4,875 casks; Oats, 1,411 casks; Corn, 2,178 casks; Beans, 758 sacks; Castor Beans, 16 sacks; Potatoes, 14,881 sacks; Sweet Potatoes, 176 sacks; Onions, 775 sacks; Hides, 2,554; Wool, 277 bales; Hops, 17 bales; Salt, 162 tons; Hay, 531 tons; Straw, 20 tons; Wine, 11,320 gallons; Brandy, 90 gallons; Peanuts, 196 sacks; Cotton, 9 bales; Oranges, 49,700; Lemons, 16,000.

Broom Corn

Is a delicate subject for quotation. There is, in truth, very little business being done at present in the local market. At the beginning of the season the stock on hand was nearly all taken up by a few parties, who now find that they will have a surplus which will have to be carried over till next season. Two houses have, it is said, about 200 tons over and above what they can possibly make use of. But while they are willing to sell to foreign and interior dealers at \$200, and perhaps less, for the finest grades of straight, small corn, the large broom makers, who control this market, demand \$250 from local buyers. This is evidently a policy intended to prevent competition in the manufacture of brooms in this city and State. Yet it should be added that this top price of \$250 per ton is only asked—not obtained—and hence Broom Corn can not be said to be worth that figure. This, we hope, will prove a timely hint to those farmers who, dazzled by the apparently large profits to be made from Broom Corn raising, propose to enter too extensively into this specialty. At the same time there is certainly a fair market for the article abroad, if not here, and its culture will in time be made a matter of more importance in the future than at present. Farmers must not, however, count on \$250 as a sure price for next year's crop.

Wheat

Is still stationary. As we have said, business has been very light, most holders being satisfied to wait for better terms, which all believe are coming—though, as in the mining stock market of the past few months, all do not back their opinion. Receipts have been moderate, of course, as so much of the crop has already been sent down, though we hear that still large stores are waiting for the expected turn. Some of the members of the Produce Exchange are in favor of not making the statistics public; it is not yet settled what course will be adopted. It is for the interest of the farmers that all accounts of stock in the country should be published in full—such is the universal custom abroad. We have altogether too much maneuvering and manipulating, and although farmers have long seen and understood all this, and lately have been taking effective steps to protect themselves, there still remains much to be accomplished. It is the intention of the Department of Agriculture to make all Grain statistics more thorough, correct and accessible. It will only be when farmers are each and all exactly informed as to the state of the market and its probabilities, that they will be in a position to realize the best returns for their wheat, the most important, as well as other staples. Last evening's telegram to the Associated Press gave 13s. 5d. on 13s. 8d. as the price for Average, and 13s. 9d. on 14s. 3d. for Club central. This, with the moderate rates ruling for freight to Liverpool, ought, it would seem, to give us a little lift. The New York Shipping List says: Although a steady export demand is looked for, it is not thought that extreme high prices will prevail, for the reason that the dependent markets of Europe have laid under contribution a large quantity from various sources, while Potatoes and Turnips have not been as plentiful and cheap in the United Kingdom as they are at the present time since 1845. They are also being shipped from France and Germany to England, and sold at merely nominal prices. And, besides, the autumn and winter in England and on the Continent, so far, has been altogether unexceptionable for seeding; the best season, indeed, for five or six years, and, from all accounts, it is availed of for planting an unusually large area. Of course, this is rather a remote influence, and yet it is not without present effect in keeping down speculation.

According to a calculation recently published in the Liverpool Daily Courier, respecting the probable supplies of foreign wheat in the four months from the 1st of December to the 31st of March, 1,458,000 qrs were floated on the 27th of November, and 1,422,000 qrs were assumed to arrive besides, thus making a total of 2,880,000 qrs, or at the rate of 720,000 qrs per month. The largest proportionate quantity would arrive in December, while in January there would be a great falling off, pointing to the probability of prices being more easily kept in check this month, and experiencing a greater rally in the beginning of next year. A private London grain circular, commenting upon the above calculation, says: The quantity which may be diverted from the British coast, and also exported from British ports, it will be seen, been advisedly omitted; the exports would, indeed, be most difficult to compute, but by their extent future prices will, of course, be essentially influenced. No doubt is entertained of the resumption of the Continental demand, and the same will necessarily be on a more extensive scale in the New Year, the more it may remain in abeyance in the meanwhile.

According to the official report just published, the imports of Wheat into France in October had amounted to 683,111 qrs, and the exports to only about 70,000 qrs.

Flour.

Latest mail advices from England quote Flour fully 1s per sack dearer in several markets. In London, American barrels were 6d dearer on Monday, December 30, and 6d per sack and barrel dearer in Liverpool on the following day. Flour was firm, with still upward tendency, and the Continent was manifesting some wants in competition with those of Great Britain. Our Central American export trade holds good, while it said that less calls are made from China and Japan, since the lower prices. The market here is rather undetermined, and not very much Flour has changed hands. The mills are still in full work.

Wool.

Quotations are nominal here. Business has been very active at the East, but is now quiet. We copy from a telegraphic commercial letter to the *Alta*: There have been few unimportant transactions, stock fleece is well controlled and is light. In view of a profitable want by consumers during the coming season. The stock of the Manchester Mills, which was put on the market by reason of their having given up the production of worsted goods, has been taken by the principal consumers of these wools and has naturally checked the demand for the present. California wool is strengthened in the market and buyers are firm at full quotations. The sales were 1,200 bales and 40,000 pounds at 27¢/40 Fall, and 30¢/30 Spring. At Boston, the market was quiet and with a limited demand, but as the dealers' stocks are light they are not seeking business or are inclined to make concessions. California has been quiet. Choice lots of Spring have been inquired for, while inferior grades of Spring and Fall are less sought for. The sales were 9,310 lbs. at 28¢/37 for Spring, 27¢/28 for Fall, 8 for scoured, and 15 for black.

Dairy Produce.

Butter is slowly declining, still lower prices obtaining this week. A little sharp weather was bringing it up again. Cheese holds the market. Attention is called to the Dairy Agency to be established here on the 1st or 2d, by Mr. Hegler, State Dairy Agent of the Granges. The office will be on the corner of Sansome and Commercial streets, this city.

DOMESTIC PRODUCE.

TUESDAY M., Dec. 30, 1873.

BEANS.			
Beans, sm'l wh. b.	3 1/2	@	3 1/2
do, butter.	4	@	4
do, large, do.	4 1/2	@	4 1/2
do, heavy.	4 1/2	@	4 1/2
do, pink.	4 1/2	@	4 1/2
do, pea.	4	@	4
do, Lima.	4	@	4
BROOM CORN.			
Per ton.	\$100	@	250
Butter, Cal. fab.	40	@	42
do, ordin' roll.	42	@	45
do, new flrkin.	27 1/2	@	35
do, pickled.	32 1/2	@	37 1/2
do, Western.	22	@	25
do, Eastern.	15	@	18
do, Eastern.	15	@	18
do, Oregon.	40	@	42 1/2
do, Eastern.	25	@	30

FEED.			
Brn. per ton.	18	@	20
Middlings.	27	@	30
Hay.	12	@	18
Straw.	9	@	10
Oil cake meal.	5 1/2	@	6
Corn Meal.	5 1/2	@	6
FLOUR—Superfine & Extra.			
Alvino Mills, bbl.	50	@	60
California.	50	@	60
City Mills.	50	@	60
Commer'l Mills.	50	@	60
Golden Gate.	50	@	60
Golden Age.	50	@	60
National Mills.	50	@	60
Santa Clara Mills.	50	@	60
Genesee Mills.	50	@	60
Oregon.	50	@	60
Valejo Star.	50	@	60
Venne, Oakland.	50	@	60
Stockton City.	50	@	60
Lambard, S.F.	50	@	60
FISH.			
Beef, fr quality.	7	@	8
do, second do.	6	@	7
do, third do.	4	@	5
Veal.	6	@	8
Mutton.	6	@	8
Lamb.	6	@	8
Pork, undressed.	5 1/2	@	6
do, dressed.	7	@	8
GRAIN, ETC.			
Wh't. Cal. ch'col.	15	@	25
do, shipping.	2	@	30
do, m'ling.	2	@	30
Barley, Feed.	1	@	45
do, Brewing.	1	@	55
Oats, Oat Feed.	65	@	65
do, Choice Bay.	75	@	75
do, Oregon.	75	@	75
Corn, White.	1	@	60
do, Yellow.	1	@	60
Buckwheat.	2	@	20
Rye.	1	@	80
WHEAT.			
California, 1872.	40	@	45
Eastern, 1873.	55	@	60
do New York.	60	@	60
MISCELLANEOUS.			
Beeswax, per lb.	25	@	32 1/2
Honey, choice.	17	@	25
do, cheap.	15	@	20
do, Long.	20	@	25
do, choice Nrh.	15	@	20
do Dark.	8	@	12 1/2
do Strained.	8	@	12 1/2
do Pure.	8	@	12 1/2
Onion.	1 1/2	@	2
NUTS—JOBBER.			
Cal. Walnuts.	13	@	14
Peanut per lb.	4	@	6

SAN FRANCISCO METAL MARKET.

TUESDAY M., Dec. 30, 1873.

SCOTCH PIG IRON.			
White Pig.	52	@	50
Refined Bar, had assortment.	52	@	50
Refined Bar, good assortment.	52	@	50
Boiler, No. 1 to 4.	52	@	50
Plate, No. 5 to 9.	52	@	50
Sheet, No. 10 to 13.	52	@	50
Sheet, No. 14 to 20.	52	@	50
Sheet, No. 21 to 27.	52	@	50
House Shoes, per keg.	7	@	8
Nail Rod.	9	@	10
Norway Iron.	8	@	10
Roller Iron.	8	@	10
Other Irons for Blacksmiths, Miners, etc.	8	@	10
COPPER.			
Braziers.	50	@	40
Copper Tin'd.	50	@	40
Sheathing.	55	@	45
Sheathing, Yellow.	55	@	45
Sheathing, Old Yellow.	55	@	45
Composition Nails.	25	@	25
Composition Bolts.	25	@	25
TIN PLATES.			
Plates, Charcoal, 1X per box.	14	@	15
Plates, 1 O Charcoal.	13	@	15
Roofing Plates.	13	@	15
Banco Tin, Slabs.	40	@	42 1/2
Sheet, English Cast.	18	@	22
Drill.	18	@	22
Flat Bar.	18	@	22
Flange Points.	18	@	22
ZINC.			
Zinc Sheet.	9	@	10
NAILS—Assorted sizes.	5	@	8
QUICKSILVER, per lb.	120	@	120

FRUITS AND VEGETABLES.

TUESDAY M., Dec. 30, 1873.

The supplies of Fruits and Vegetables are gradually but steadily thinning off. Oranges and Lemons are quite plenty, and thus help to make up the deficiency in the other Fruits. Grapes are few and poor, but such as are in market bring good prices. Vegetables are, almost without exception, scarce. Cucumbers and Green Corn have at last dropped off completely; for some time the supply has been very slight. Sweet Potatoes are poor in quality, and the supply is limited. Mushrooms are quite plenty at 25 cents for small yet good ones. B. Cranberries are taken up as soon as offered, the demand keeping pace with that for holiday poultry.

FRUIT MARKET.

FRUIT MARKET.			
Tahiti, Gr. 100.	—	@	—
Mexican do.	2	@	3
Cal. do.	1	@	4
Limes, M.	8	@	10
Cal. Lemons, 100.	2	@	3
Mexican do.	6	@	7
do per doz.	12	@	14
Bananas, bunch.	12	@	15
Pineapples, doz.	12	@	15
Apples, eat'g, h.x. 12	25	@	25
do Common.	60	@	1
Oranges.	—	@	—
Blackberries.	—	@	—
Strawberries.	—	@	—
Gooseberries.	—	@	—
Raspberries.	—	@	—
Apricots.	—	@	—
Plums.	—	@	—
Peaches.	—	@	—
Pears, Eating.	2	@	3
do Cooking.	1	@	2
do Bartlett.	—	@	—
Cash Apples.	—	@	—
Nectarines.	—	@	—
Walnuts, sm'l.	—	@	—
Pineapples, doz.	—	@	—
Fig.	—	@	—
Grapes, B.V. H'g.	—	@	—
do Muscat.	—	@	—
do Malaga.	—	@	—
do Sweetw'r.	—	@	—
do Mission.	—	@	—
do Root of Peru.	—	@	—
do Tokay.	3	@	4
do Morocco.	4	@	6
DRIED FRUIT.			
Apples, B. D.	6	@	8
Pears, B. D.	8	@	9
Peaches, B. D.	8	@	9
Apricots, B. D.	8	@	9
Plums, B. D.	8	@	9
Pitted, do.	17	@	18
do Extra, B. D.	5	@	6
Raisins, B. D.	5	@	6
Black Figs, B. D.	6	@	8
White, do.	12	@	20
Prunes, B. D.	6	@	8
do German.	12	@	15
Cabbage, 100 lb.	—	@	—
Garlic, B. D.	8	@	10
Green Peas.	6	@	7
Green Corn, doz.	—	@	—
Sum'r Squash, doz.	—	@	—
Marble Squash, doz.	12	@	15
Artichokes, B. D.	—	@	—
Sprng Beans, B. D.	8	@	10
Lima Beans.	—	@	—
Shell Beans.	2	@	2 1/2
Okra, B. D.	4	@	6
Okra, Green.	—	@	—
Cucumbers, B. D.	—	@	—
Tomatoes, per box.	75	@	100
Egg Plant, B. D.	—	@	—

FRUITS, ETC., PRESERVED UNDER THE

ALDEN PROCESS.

We give below a table of prices for Fruit, etc., prepared by this process, as reported by Messrs. Littlefield, Webb & Co., the agents of the San Lorenzo establishment at whose warehouse, Nos. 316 and 318 Washington street, the articles may be seen, and from whom any further information may be obtained. The preparations are put up in bulk, in boxes, containing from 30 to 50 lbs., and also in 1 lb. caddies, in cases of 2 dozen each. We add, parenthetically, that 1 lb. of Pared Apricots equals 9 lbs. of the fresh fruit; 1 lb. unpared equals 8 lbs. of fresh. This represents the average contraction of bulk. Tomatoes show the greatest reduction, 1 lb. of the preserved vegetable equaling 25 lbs. of the fresh; while the lowest degree of contraction is in Beef, Currants and Sweet Potatoes, in which the proportion is 1 lb. to 5 lbs.

APRICOTS, pared, B. D.			
do unpared, B. D.	32	@	32
Peaches, do.	32	@	32
do pared, B. D.	32	@	32
Bartlett Pears, pared, B. D.	32	@	32
Pears, pared, (sliced) B. D.	20	@	20
do do (ring) B. D.	22	@	22
Pears, 10-lb boxes, family use, extra.	12	@	12
Sliced Pears, unpared, B. D.	12	@	12
Currants, stemmed, B. D.	32	@	32
do unstemmed, B. D.	32	@	32
Royal Ann Cherries, pitted, B. D.	25	@	25
Kentish Cherries, pitted, B. D.	55	@	55
Apples, pared (ring) B. D.	12	@	12
do do (whole) B. D.	12	@	12
Apples, 10-lb boxes, family use, extra.	18	@	18
Plums, pitted, B. D.	25	@	25
Sweet Potatoes, B. D.	25	@	25
Rubrub, B. D.	25	@	25
Corn, B. D.	30	@	30
Beans, B. D.	30	@	30
Potatoes, B. D.	14	@	14
Sliced Potatoes, B. D.	14	@	14
Onions, B. D.	30	@	30
Beef, B. D.	40	@	40
Tomatoes, B. D.	75	@	75
Squash, B. D.	20	@	20
In caddies.	1	@	1

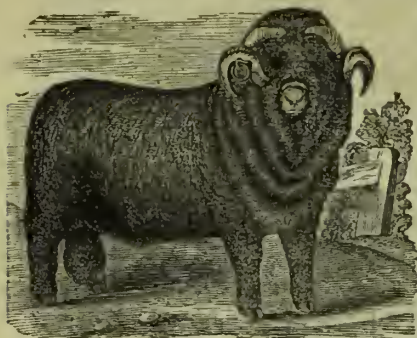
GENERAL MERCHANDISE.

TUESDAY M., Dec. 30, 1873.

The most marked movement in Groceries has been in Coffee, all the different kinds being now held at much higher figures than ruled for so long. Preserved Fish are dull of sale. Bags and Bagging remain quiet. Sugars and Syrups are meeting with good business at the advance, and exports of the latter are well received.

BAGS.							
Eng. stand, Wht	12	@	13	Devco's Petro'l	37	@	38
Detrick's Mach e	—	@	—	Barrel kerosene	30	@	—
Sewed, 22 x 36,	—	@	—	Downer Keros-e	50	@	—
Gilroy E.	12	@	13 3/4	Gas Light Oil	—	@	3
do, 22x36 do W.	12	@	14	PANTS.			
do, 22x36 do L.	14 1/2	@	15	Atlas, W. Lead.	8 1/2	@	11
do, 22x30.....	—	@	15	Whiting	4	@	—
do, 23x10.....	—	@	15	Putty	4	@	—
do, 24x10.....	15	@	16	Chalk	—	@	—
Flour Sacks 3's	13	@	16	Paris White.....	2 1/2	@	—
do, 16.....	8 1/2	@	9 1/2	Venice.....	2 1/2	@	—
Stand. Gunnies.	20	@	21	Venice.....	2 1/2	@	—
" Wool Sacks.	60	@	65	Red Lead.....	8	@	1
" Barley do.	—	@	15	Litharge	10	@	—

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.
Address N. GILMORE,
cow El Dorado, El Dorado County, Cal.

THOMAS & SHIRLAND,

Importers and Breeders of



Cashmere or Angora Goats,

PURE BLOOD AND ALL GRADES,

For Sale in Lots to Suit Purchasers.

Including a Choice Lot imported by A. EUTYCHIDES, a native of Angora. For particulars apply to

S. P. THOMAS, Sacramento, Cal.

—OR—

E. D. SHIRLAND, Auburn, Cal.

3v6-3m

Pure Bred Spanish Merino Sheep.

ONE HUNDRED BUCKS AND A FEW EWES,

Bred from Vermont Stock.

A portion were bred by JEWETT BRO., of Kern Co.
Can be seen at Sweruer Yards, corner Howard and Tenth streets, San Francisco.

JEWETT & MUNSON,

6v6-tf

Cosmopolitan Hotel.

THOS. BUTTERFIELD & SON,

Breeders and Importers of the

Cotswold, Lincoln, Leicester, Texel and

South Down

SHEEP.



—ALSO—
THE ANGORA GOAT.

Now offer for sale the Pure Bred and High Grades. We have a good lot of Bucks of crosses between the Cotswold and South Down, between the Lincoln and Leicester, and the Lincoln and Merino.

THOS. BUTTERFIELD & SON,
Hollister, Monterey County, Cal.

19v4-tf

H. H. RALSTON.
1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

Removed to 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interest that will conflict with those of the producer.

4v23-1y

100 AGENTS WANTED.

\$5 to \$25 per day, selling the attractive little "Columbia Washers." Great inducements offered. Send for Circulars. Address,
20v6-3m G. R. CODDING, Petaluma, Cal.



The attention of Wool Growers is continually invited to the
Thoroughbred Stock Bred and Kept upon the
MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and O. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the

THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

9v6-3m

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

TUSTIN'S PATENT FIRST PREMIUM WINDMILLS

ARE THE MOST POPULAR
Of any on the Pacific Coast.

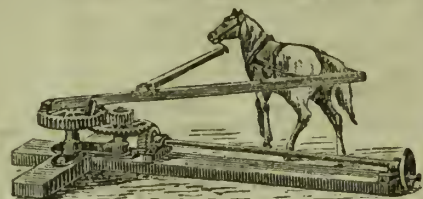
State and County Rights for sale.

Send for a Descriptive Circular containing Price List and all other particulars, postage free.

TUSTIN'S ECLIPSE HORSEPOWER



Eureka.



Economy.

Is now the favorite of this State, and sells three to one of any other make.

N. B.—A few Windmills have heretofore been made by parties in this city, and advertised under the name of the Golden State Windmill, which is an infringement on the Celebrated "Eureka" Windmill, for which the undersigned holds a UNITED STATES PATENT; and any persons making, selling or using the same without our consent will be prosecuted. We warn purchasers against deception, and will pay a liberal reward to any person giving information that will lead to the detection of parties infringing on the aforesaid Patents.

MANUFACTORY, corner of Market and Beale streets.....SAN FRANCISCO.

W. I. TUSTIN, Inventor and Patentee,

And Pioneer Windmill Manufacturer of the Pacific Coast.

sc16-1am3m

AGRICULTURAL ARTICLES.

THE "VICTOR" GANG Plows IS THE BEST.

Hule's Patent, with all improvements to '73, and with "JONES" Plow Bottoms, the "VICTOR" is the best GANG PLOW in the world. It is simple, strong and durable, and does its work efficiently. Don't fail to see it before buying. Price, \$75. Sold only by TREADWELL & CO., San Francisco. Send for circulars. We have also a large stock of Single Plows, including the "JONES," COLLINS, Boston Clipper, Peoria, etc., etc. Cultivators, Harrows, Seed Sowers, Drills, etc., etc. Send for our new Illustrated Price List. TREADWELL & CO., San Francisco. 16v6-3m

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m

MATTESON & WILLIAMSON,
Stockton, Cal.

SAN FRANCISCO

Pioneer Screen Works,

John W. Quick, Manufacturer,

203 FREMONT ST., (near Howard) SAN FRANCISCO.

Screen Punching of all kinds and qualities for

QUARTZ AND FLOUR MILLS,
AT EASTERN RATES.

I would call special attention to my slot cut and slot punched screens, which are attracting much attention and giving universal satisfaction. I was the first manufacturer who introduced these Screens to the Millmen on this Coast. This is the only establishment on the Coast devoted entirely to the manufacture of Screens. Mill Owners using battery Screens extensively can contract for large supplies at favorable rates. Orders solicited and promptly attended to.

22in9-cow-1y

SQUIRRELS.

For Game Traps, none are better than the

"Newhouse Traps,"

Nos. 1 and 1 1/2 being the best sizes for Squirrels.

For sale by

CONROY, O'CONNOR & CO.,

19v6-cow-3m

Nos. 107 and 109 Front street,
San Francisco.

O. CREGO.

S. C. BOWLEY

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Bunkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;

And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:

O. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingles, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,
24v5-3m San Francisco.

NOTICE TO WOOL GROWERS.

On the 28th day of January next we will sell at public auction, at our ranch, near Watsonville, Santa Cruz County, California, a choice lot of pure bred Angora Bucks, also a few pure bred Angora Ewels and high grade Angora Bucks of desired by the bidders. We will sell at least thirty head of pure breeds without reserve. We have the stock. The breeders of this Coast are to need of it, and we wish them to come together and make their own prices. English breeders have followed this practice for centuries, and we will try it in California. It affords breeders an opportunity of getting stock to suit them both to quality and price.

de13-1m

LANDRUM & RODGERS.

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,
San Francisco.

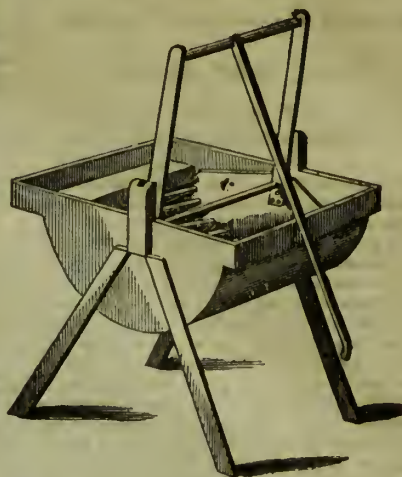
CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F.

da27-tf

HUMBOLDT WASHER.



This Machine has been thoroughly tested by competent judges, and has proved itself to be the most reliable and speedy, doing its work more perfectly and with less injury to clothes than any other Washer ever offered to the public.

It will wash from a pocket handkerchief to a bed quilt or blanket in a perfect manner, and is never out of order, but always ready for use, and if properly taken care of will last many years.

It is so simple in construction, having but little or no ornament, that the only way to properly appreciate its value is to give it a trial.

There are now over one thousand of these Machines in use in this State, and they have as yet only been introduced into a few counties. They were first offered in Sonoma, at the District Agricultural Fair, held at Petaluma, September, 1872, where were also several other machines on exhibition, and some of them held in high estimation, but after a trial the premium was awarded to the "HUMBOLDT WASHER." It was also exhibited at the State Fair, at Sacramento, the same year, where its merits were thoroughly tested and the First Premium awarded to it.

We challenge competition, firmly believing the "HUMBOLDT WASHER" to be the BEST MACHINE ever offered to the public.

List of Agents.

For further particulars address

J. M. ROSE, General Agent,
Stony Point, Sonoma County.

Or the following agents:

HOLLY & DRUMMOND, Agents for Marin and Sonoma Counties, Stony Point.

MARCUS HAWLEY & CO., San Francisco.

J. M. LOGSDON, San Bernardino.

J. BIGGS, Napa City.

L. D. WISNER, Farmersville, Tulare County.
19v6-1am3m

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS.

PIECE MILK-PANS.

STRAINER PAILS,

CREAM PAILS,

MILK PAILS.

ETC., ETC., ETC.

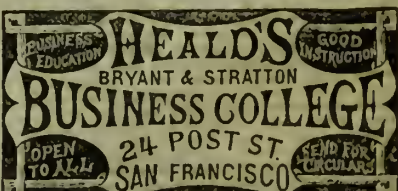
The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m

SAN FRANCISCO.



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,
2v6-tf President Business College, San Francisco.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to
22v6-lv ELWOOD COOPER,
President Board of Directors.

NURSERY NOTICES.

ESTABLISHED 1853.

Stock for Nurserymen and Florists.

TERMS CASH.

Cherry Seedlings—Mazzard.....	\$12 per 1000
" " " " " " " " " " " "	20 per 1000
Apple Seedlings.....	12 per 1000
Pear Seedlings.....	15 per 1000
Walnuts, English, 4 to 6 ft.....	15 per 100
" " California bl'k, 4 to 6 ft.....	15 per 100
Spanish Chestnuts, 6 to 12 in.....	15 per 100
Cork Elm, 4 to 6 ft.....	15 per 100
" " 6 to 8 ft.....	20 per 100
Blue Gums, or Eucalyptus, in variety.....	\$3 to 10 per 100
Magnolia, Grandiflora, 3 to 5 in.....	3 per doz.
" " 6 to 12 in.....	6 per doz.
" " 12 to 18 in.....	12 per doz.
Golden Arborvita.....	8 to 12 in..... 6 per doz.
" " " " " " " " " " " "	12 to 18 in..... 6 per doz.
Heath-leaved Arborvita, 12 to 18 in.....	2.50 per doz.
Crataegus Arbutifolia, 2 to 4 ft.....	6.00 per doz.
Enonymous Reptans, Variegata.....	2.50 per doz.
" " " " " " " " " " " "	Pulchella..... 2.50 per doz.
" " " " " " " " " " " "	Argentea Marginata..... 3.00 per doz.
" " " " " " " " " " " "	Japonica..... 3.00 per doz.
" " " " " " " " " " " "	Aurea..... 3.00 per doz.
Swedish Juniper, 12 to 18 in.....	3.00 per doz.
Heath, Mediterranean "Hardy".....	2.50 per doz.

Will only sell in quantity specified at these prices. If less, 10 per cent. added; if more, 10 per cent. discount.

BERNARD S. FOX,
San Jose, Cal.

Fruit Trees! Fruit Trees!

AND WHERE TO PURCHASE THEM.

The Santa Clara Valley Agricultural Society has awarded:

Largest collection of Pears, first premium.....	B. S. Fox.
Best twelve varieties of Pears.....	B. S. Fox.
Largest collection of Apples.....	B. S. Fox.
Best twelve varieties of Apples.....	B. S. Fox.
Best collection of Plums.....	B. S. Fox.
Largest collection of Nuts.....	B. S. Fox.
Best soft-shelled Almonds (Languedoc).....	B. S. Fox.

Forest Trees, Shade Trees, large and small, in quantity.

BERNARD S. FOX, San Jose, Cal.

Agent, Mr. THOS. MEHERIN, Battery street, San Francisco. oc18

Fruit, Shade and Ornamental

EVERGREEN TREES AND PLANTS for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.

Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address **THOMAS MEHERIN,**

516 Battery Street, SAN FRANCISCO.

P. O. Box 722. 24v6-3m

FRUIT AND ORNAMENTAL TREES.

GLEN GARDENS.

ONE MILE EAST FROM SACRAMENTO.

My stock embraces all the most desirable varieties known, including several new Peaches, among which are the Beatrice, Louise, Early Rivers, Rivers' Early York, Stanwix Early York, Victoria, Prince of Wales, and several others, (all hybridized by S. Rivers of England) and fruited on my grounds this year for the first time in California.

The Louise and Beatrice are 15 and 20 days earlier than the Hale's Early.

Being the first to import these new fruits, including many sorts not mentioned, purchasers may rely upon getting trees true to name. Also, the FREEMASON and SALWAY, the most valuable late peaches in cultivation.

Blackberry, Raspberry and Strawberry Plants; fresh Locust Seed—CHEAP FOR CASH.

E. F. AIKEN,

de27-1m Proprietor.

TO FRUIT GROWERS.

The undersigned offers for sale a fine stock of one-year old and dormant budded Trees of the following new fruits:

EARLY BEATRICE PEACH—The earliest Peach in the world; one to three weeks earlier than Hale's Early. ST. JOHN—The best second early Peach in the South. PLOWDEN—Said to be earlier and finer than Hale. FREEMASON—The best Peach ripening about Sept. 15. PICQUETS LATE—See Rural Press, June 7th, 1873. BLOOD-LEAVED PEACH—New and very ornamental. VAN BUREN'S DWARF, and ITALIAN DWARF—Good fruit, and adapted to small gardens.

WILD GOOSE PLUM—Early, good and productive. MINER PLUM—Later, fine.

Also, a general assortment of other varieties of fruit, including Cherries. Nursery, three miles west of Vacaville, on the Suisun road. Address

D. E. HOUGH,
Vacaville, Cal.

16v6-3m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway, Oakland, Cal.

GREEN HOUSE PLANTS, EVERGREEN TREES, SHRUBS, ROSES, ETC. 100,000 MONTEREY CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM TREES, including:—EUCALYPTUS GLOBOLUS (Blue Gum)—extra fine street and shade tree. EUCALYPTUS VIMENALIS—both sorts very popular. ACACIAS in variety. Monterey Pines, Lawson's Cypress, etc., etc. Orders attended to. Address:

M. KING, Nurseryman,
23v6-3m OAKLAND, CAL.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

TREES, TREES, TREES —AND— PLANTS.

In any quantity from one tree to 10,000, both whole sale and retail, at lowest market rates. Fruits guaranteed true to name. I have many new varieties of fruit in my collection which are far superior to the old standard varieties. Among them is the celebrated Beatrice Peach, guaranteed true; this Peach is 20 days earlier than the Hale's Early, and in every respect a fine peach. My stock of Shade Trees and Grape Vines is the largest in the State, and a fine assortment.

Send stamp for printed Catalogue, Price List and directions for planting and training, or come and see the stock, at the CAPITAL NURSERIES. Office and tree depot U street, between 15th and 16th streets, Sacramento, Cal.

ROBT. WILLIAMSON, Prop'r.

Special rates to Patrons of Husbandry. 24v6-3m

TREES FOR SALE.

The undersigned offer for sale at their Nurseries,

Near Niles Station, Central Pacific Railroad, Alameda county, Cal., a fine stock of STANARD FRUIT TREES of the orchard varieties, best adapted for California. Our Trees are one and two years old, and all well grown and well rooted, and true to the label.

We invite Planters and Dealers to examine our stock before purchasing. Send for a Descriptive Catalogue and Price List. Trees can be sent by regular freight routes or by Express, as directed. Careful attention given to packing for shipment. Local Agents wanted, to whom a liberal commission will be paid. Address the undersigned, either at Centerville, Alameda Co., Cal., or at 418 California st. San Francisco, Cal. 18v6-4m

SHINN & CO., Proprietors.

ALMOND TREES.

The subscriber has a large lot of young Almond Trees, one, two and three years old, in a thrifty condition, of the celebrated Languedoc variety, which will be disposed of at reasonable rates.

Orders may be sent to the undersigned, and the trees will be properly packed and delivered at Niles Station.

B. D. T. CLOUGH,

(By Express) Niles Station, Alameda Co., Cal.

P. O. Address, Centerville, Alameda Co., Cal. 14v6-4f

ALMOND TREES.

40,000 Brier's Languedoc Almond Trees.

One year old from the bud—CHEAP FOR CASH.

Liberal deductions to the trade and to those planting large numbers. The tree grows rapidly, bears young and constantly, blooms late, is hardy. The almond is large and sweet, with a soft shell.

Send your orders for these and all kinds of fruit and nut trees, to

W. W. BRIER,

24v6-2m Alvarado, Alameda Co., Cal.

THE OLD MAPLE LEAF NURSERY

Has constantly on hand all varieties of FRUIT AND ORNAMENTAL EVERGREEN and DECIDUOUS SHRUBS, also a large assortment of choice ROSES too numerous to mention. Green House Plants, Flowers and Bulbs, Garden, Grass and Flower Seeds of all kinds, are for sale by

L. M. NEWSOM, Prop'r.

Washington St., Brooklyn, Cal. 23v6-6m

THOS. A. GAREY'S Semi-Tropical Nurseries,
San Pedro street, two miles below the Court House, LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit Trees in Southern California.

Grafted Orange Trees a Specialty.

14v6-6m **THOS. A. GAREY, Proprietor**

Priced catalogue sent free. Address P. O. Box 285.

PRYAL'S NURSERIES.

FRUIT,

Ornamental and Evergreen Trees,

SHRUBS AND PLANTS,

VEGETABLE AND FLOWER SEEDS, GREENHOUSE AND BEDDING PLANTS,

Embracing all of the most desirable kinds,

Are Now Ready and For Sale.

BLUE GUM AND OTHER VARIETIES OF

EUCALYPTUS.

Boxwood Plants for Garden Walks.

Roses of all the New and Old Varieties.

Correspond with me, and, if possible, come and see my trees, etc. All orders will receive prompt attention. Address:

A. D. PRYAL,

Oakland, Alameda Co., Cal.

DEPOT AND SEED STORE—Broadway, opposite the City Hall; Nursery and Greenhouse, 3¼ miles north of Oakland, and one mile from Oakland Horse Railroad depot at Temecal.

Botanical collectors in all parts of the world are requested to correspond. 25v6-4f

Brooklyn Nursery,

13TH AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cypress, (\$3 to \$15 per hundred), 10,000 Australian Blue Gums, and about 2,000 assorted Roses. Also a choice selection of the various kinds of ornamental shrubbery, etc. Special attention given to the laying out of landscape gardens. Orders received at the Nursery, or at the office of J. P. SWEENEY & CO., Seedsmen, Nos. 409 and 411 Davis St., S. F. 24v6-3m

JOHN CAREY, Proprietor.

FRUIT AND ORNAMENTAL TREES.

Small Fruits,

Evergreens,

Shrubs,

Roses, Etc., Etc.

Dealers and Nurserymen supplied at Low Rates.

Catalogues furnished on application.

JOHN ROCK,

San Jose, Cal.

15v6-4f

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, **W. H. & G. B. PEPPER,**

21v6-1y Petaluma, Sonoma Co., Cal.

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy BLACKBERRY SETS, for sale at LOWEST RATES. Orders may be addressed through DEWEY & CO., of the Rural Press, San Francisco; ROBT. WILLIAMSON, Capital Nurseries, Sacramento; or to me,

CALVERT T. BIRD,

San Jose, Cal.

25v6-3m

AUSTRALIAN GUM TREES.

250,000 on hand for this season, at rates to encourage forest culture. Also, 50,000 Cypress.

Nursery on 12th street, one block north of Tuhhs' Hotel, East Oakland, Cal. Or address, Box 80, Oakland.

BAILEY & CO., Proprietors.

Beautiful fresh Cypress Seed, \$3 per pound, sent by mail. 25v6-3m

OUR SEEDSMEN.

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who raise

Vegetable, Flower and Tree Seeds of all kinds.

Long experience, extensive practice, and the abundant production of this year's seed crop, enable us to offer a selection of Superior Seeds for California and Foreign Soils, and also places us in a position to maintain the lead in the market for Pure Seeds, and much cheaper than those sold by other seedsmen.

A large assortment of Imported DUTCH BULBS and GLASSES just arrived.

ALFALFA, CLOVER, TIMOTHY, KENTUCKY BLUE GRASS, ORCHARD GRASS, and all other varieties.

FRUIT TREES, SHADE TREES, HARDY SHRUBS, and a general assortment of all kinds of VEGETABLE PLANTS.

Notice.—We will send, free of postage, on receipt of order, 25 varieties of garden seeds in small packages price, \$1.25; or the larger size packages—price, \$2.50.

Send for Catalogue and Price List.

18v6-4m **SEVIN VINCENT & CO.,**

607 Sansome st., San Francisco.

Alfalfa Seed.

A large quantity of very choice Alfalfa Seed for sale by

15v6-4f

R. JONES, K street, north side,

One door below Tenth, Sacramento.

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a rates that, with proper cultivation on suitable land, will make them among the most profitable crops grown. For further particulars address

PACIFIC OIL AND LEAD WORKS,

3 and 5 Front street, San Francisco. P. O. Box 1443. 12v6-3m

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco. 19v6-4f

WESTERN GROWN SEEDS.

Save Time and Money. Buy direct of the GROWER. Vegetable, Field and Flower, fresh and true to name.

Catalogue for 1874 sent FREE, by

GEO. S. HASKELL & CO., Seed Growers,
Rockford, Ill. 25v6-2m

HIGHEST HONORS

AWARDED TO THE

Weed Sewing Machine!

AT THE

Vienna Exposition, 1873.

Grand Medal of Progress!

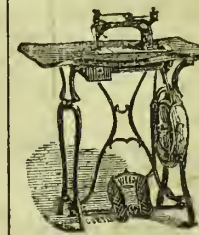
Grand Medal of Merit!

—AND—

TO CAP THE CLIMAX.

Grand Medal of Honor

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



A. MEAD & CO.,

General Agents for the Pacific Coast.

OFFICE, 152 NEW MONTGOMERY STREET,

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily operated Sewing Machine in the market.

Always in order and ready for work. In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m Grand Hotel Building, S. F.

WHITE LEGHORN CHICKENS

—AND—

EGGS.

CHOICE FOWLS AND FRESH EGGS AT

REASONABLE RATES.

ALSO A FEW GOOD

DARK BRAHMAS AND BLACK SPANISH.

F. N. WOODS & CO.,

dc27-4t 67 California Market.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Dec. 30, 1873.

FOR WEEK ENDING Dec. 10th, 1873.

CONDENSER FOR STEAM PUMPS.—David Stoddard, S. F., Cal.

PAPER FEEDING MACHINE.—Chas. M. Wielings, S. F., Cal.

MEANS FOR SINKING BROKEN PILES.—Elijah C. Boobar, S. F., Cal.

PREVENTING THE CORROSION OF IRON AND STEEL.—R. A. Fisher, S. F., Cal.

FLUX FOR TREATING ORES AND METALS.—P. N. Mackay, S. F., Cal.

WATCH CHAIN.—Pierre Frontier and Augustus Bellemere, S. F., Cal.

BRT BRACE.—Joseph Buchtel, Portland, Oregon.

BRAKE BEAM FOR CARS.—Daniel Wellington, Virginia City, Nevada.

WIRE MATTRESS FRAMES.—George V. Bunker and William J. Bunker, Yankton, Dakota Territory.

BUTTER WORKER.—Simeon H. Bush, Boistfort, Washington Ter.

Plow.—Cornelius M. Clark, Seward, Nebraska.

BARREL TAP AND FAUCET.—George B. Taylor, Oakland, Cal.

SCREW PLATE.—Theodore L. Van Dorn, Omaha, Nebraska.

TRADE MARK.

WHISKY.—David Porter, S. F., Cal.

*The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & Co., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with greater security and in much less time than by any other agency.

S. REEVES sends a notice to this office giving the name of his P. O. As we cannot afford to look over thousands of names to find your address, please write again. js3-tf

A Good Binder for \$1.50.

Subscribers for this journal can obtain our Patent Elastic Newspaper File Holder and Binder for \$1.50—containing gilt title of the paper on the cover. It preserves the papers completely and in such shape that they may be quickly fastened and retained in book form at the end of the volume, and the binder (which is very durable) used continuously for subsequent volumes. Post paid, 25 cts. extra. It can be used for Harper's Weekly and other papers of similar size. If not entirely pleased, purchasers may return them within 30 days. Just the thing for libraries and reading rooms, and all who wish to file the PRESS. fambp

SEALS MADE TO ORDER

FOR FRATERNAL SOCIETIES,
FOR CORPORATIONS,
FOR LEGAL OFFICERS,
FOR ASSOCIATIONS,
FOR EVERYBODY who wants a well executed Seal of any design. Executed with as little delay as possible. Presses included. Designs drawn when desired.

DEWEY & CO.,
Publishers and Engravers.

DEWEY & CO.,

American and Foreign

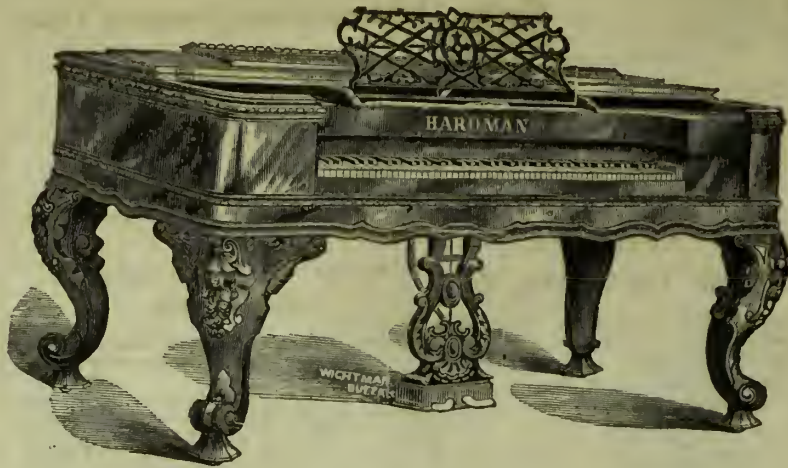
Patent Agents.

No. 338 Montgomery St.

SAN FRANCISCO.

Patents Obtained Promptly.
Caveats Filed Expeditiously.
Patent Reissues Taken Out.
Patents Secured in Foreign Lands.
Assignments Made and Recorded in Legal Form.
Copies of Patents and Assignments Procured.
Examinations of Patents made here and at Washington.
Examinations made of Assignments Recorded in Washington.
Examinations Ordered and Reported by TELEGRAPH.
Interferences Prosecuted.
Opinions Rendered regarding the Validity of Patents and Assignments.
Rejected Cases taken up and Patents Obtained.
Every Legitimate Branch of Patent Agency Business promptly and thoroughly conducted.
SEND FOR CIRCULAR.

HARDMAN PIANO.



Messrs. A. L. Bancroft & Company have secured the Pacific Coast Agency for

THE IMPROVED HARDMAN PIANO,

WHICH IS THE MOST SUCCESSFUL MEDIUM-PRICED INSTRUMENT NOW MANUFACTURED. IT IS A MAGNIFICENT SQUARE GRAND, FULL-SIZED, AND OF ORNAMENTAL FINISH.

The HARDMAN PIANOS are made with the Improved French Grand Action, the best in use; the keys and ivory are also of the best quality, and the Pianos are heavily strung with the best imported wire, the cases being made strong to bear the strain.

The cases are first-class, both in solidity and durability of construction and beauty of finish. They are double veneered with the finest rosewood that can be procured, and have solid rosewood mouldings, solid blockings and solid bottoms.

The Pianos of this new scale combine every improvement that has been recognized of practical utility by people of cultivated musical taste, and the tone is equal in power and quality to that of any other piano manufactured.

Each instrument will be fully warranted for five years.

Mr Hugh Hardman's Factories in New York are turning out THIRTY PIANOS a week, and the leading piano dealers in the Eastern cities are acting as his agents.

Our Music Warerooms contains a large assortment of Pianos, square and upright, by popular makers; also, a fine stock of the celebrated

PRINCE CABINET ORGANS,

Sheet Music, Music Books, and Musical Merchandise. For circulars and price lists, address

A. L. BANCROFT & CO.

Music Department—721 Market St., San Francisco.

no29eow2t

HINTS FOR INVENTORS. We will send on receipt of stamp for postage, FREE, our 52-page Circular containing 112 Illustrated Mechanical Movements; a digest of PATENT LAWS; information how to obtain patents, and about the rights and privileges of inventors and patentees; list of Government fees, practical hints, etc., etc. Address DEWEY & CO., Publishers and Patent Agents, San Francisco.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls: Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California. ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS. 7v6-tf-16p2

H. S. CROCKER & CO.,

IMPORTING AND WHOLESALE

Stationers and Mercantile Job Printers,

Nos. 401 and 403 Sansome Street, SAN FRANCISCO.

PACIFIC COAST AGENCY AMERICAN LEAD PENCIL COMPANY.

Leroy W. Fairchild's Gold Pens and Pencil

Chas. Eneu Johnson & Co.'s Fine Printing Inks.

JOHN D. YOST, San Francisco. H. S. CROCKER, Sacramento. 19v2t-bp3m

OUR SPECIALTY: "BEYOND THE MISSISSIPPI." GO WEST, YOUNG MAN! GO WEST! Gold by the Bushel! Silver by the Ton! Capital required: Nerve and Honest Industry. THE FAR WEST. The Great Treasure Chamber of America. All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in CROFT'S WESTERN WORLD, for \$1.50 a year. With \$10 Premium Chromo, "AMERICAN PROGRESS," free to each subscriber. Two sample WORKS sent for 10 cents. Agents wanted.

A RANCH OF 160 ACRES.

With Barn and House, thirty or forty tons of hay, and with all the necessary farming implements, to be let for a term of years, either by the acre or on shares; situated between Medway Station and Moore's Landing, 2½ miles from either place. For particulars, enquire of CHAS. ALPERS, 228 Bush Street, at 1 P. M. 1v1-2m

Don't Have Your Teeth Extracted.



DR. BEERS' PATENT ENAMELED GOLD CROWNS, for covering Teeth broken down by Decay, have been thoroughly tested, and when properly applied will surely restore them again to usefulness and beauty. Call and see them. Office, 230 Kearny street. 1v7-cow-bp3m

PROFITABLE FARMING.

A BARGAIN

—FOR—

FARMERS AND CAPITALISTS.

We have in our hands for sale an improved farm adjoining the town limits of San Jose, that will shortly have to be cut up for town lots and residence purposes, and will meantime produce a sure income of

Over One Per Cent. per Month,

At the price at which we will sell it.

Price—\$70,000. Terms Easy. Title Perfect. Principals—Only those who have the cash and mean business—may address for three weeks

BERRY & CAPP,

Real Estate Agents,

418 MONTGOMERY STREET, S. F.

de13-1m-16p

DR. ABORN, OCUKST, AURIST,

Catarrh, Throat and Lung Physician.

The Most Difficult Cases are invited to call.

Offices and Laboratory, 213 Geary street.

Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M. 21v6-3m-16p

Improve Your Poultry.



It Costs No More to Keep Good Fowls than Poor Ones!

SEND STAMP FOR ILLUSTRATED CIRCULAR

Containing a full description of all the best known and most profitable Fowls in the country to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls, and agent for the POULTRY WORLD, a monthly magazine devoted entirely to Poultry—tells how to keep Fowls for pleasure and PROFIT. Subscription only \$1.25 per year. Address

GEO. B. BAYLEY, Box 659, San Francisco. 25v16-awho

SEEDS!

SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,

RED CLOVER,
WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p SAN FRANCISCO.

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street.....San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER SEED, etc.

Agent for GARY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE of CHARGE.

BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th. R. J. TRUMBULL, 15v6-6m-16p 427 Sansome st., San Francisco.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF EVERY VARIETY.

And raised by the most experienced and reliable growers of Europe, Eastern States and California.

My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Moulton & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass, Red Clover, White Clover,

Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,

Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the Interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk.

My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

New and Rare Plants for Spring of 1874.

John Saul's catalogue of new and beautiful plants will be ready in February, with a colored plate. Mailed free to all my customers; to others, price 10 cts. A plain copy to all applicants FREE. JOHN SAUL, 1v3-cow-3t Washington City, D. C.



Volume VII.]

SAN FRANCISCO, SATURDAY, JANUARY, 10, 1874.

[Number 2.]

Napa Ladies' Seminary.

In the engraving here presented we continue our illustrations of the educational institutions of California. For the facts contained in the following, we are indebted to the "Sketch Book of Napa County," by Menefee.

This Institution was established by Miss Harris in 1860, and conducted by her until 1864. After her resignation, and a short interim of a few months, the school was resumed by Miss Maria S. McDonald, through whose untiring energy and indefatigable labors it yearly increased in numbers and influence, by accessions from home and abroad.

Miss McDonald assumed the position of Principal in 1864, and conducted the Institution for five years, at the expiration of which time death cut short her usefulness, and overwhelmed the school with sorrow and loss. It is but due to her memory here to speak of the executive talent which she so eminently possessed, also her powers of persuasion, her rare art of discipline, her tact and originality, and more than all, her scholarship and Christian culture—all of which adapted her pre-eminently for the profession she had chosen and in which she achieved such signal success.

The event of her death left the school in the care of Miss Sarah F. McDonald, (sister of the deceased), who has since held the position of Principal, with what success the present record and condition of the school testify.

The entire history of this Institution has been one of progress, and cherished in the hearts of its patrons, it now stands well defied in its proportions and triumphant in its results.

This Seminary is duly authorized by the Legislature to confer diplomas upon such of its students as may have passed through the prescribed course of study. Since the erection of the new Seminary building, an elegant structure 40 by 55 feet and 3 stories high, the accommodations for pupils are equal to those afforded in any other educational establishment in the State. The Seminary is well supported and merits the high standing which it has attained in the public esteem.

CRANBERRY PLANTS.—A correspondent, Mr. Jos. Furrington, of Sebastopol, Sonoma Co., writes to inquire where he may obtain cranberry plants. He has already set out a large quantity of these plants, and desires to add to the area which he already has under cultivation, in this specialty. We have inquired of E. E. Moore, C. Kellogg, S. W. Moore and other prominent seedsmen of this city, and are told on all sides that there is no constant demand for cranberry settings here, and that hence they are not kept on hand. If a very large quantity were applied for, either of the dealers would obtain them from Oregon or the East. There may be a few to be had here, but they are not in the market, that is, not known to the trade. We regret that we can furnish no more definite information on this subject. We are certain that in time the culture of cranberries in this State will have acquired sufficient importance to render the keeping of plants by seedsmen a profitable business.

ON FILE.—We have a large number of interesting agricultural communications on hand that may be looked for as soon as we can spare the room. It would seem as though the cold rainy weather, drawing our patrons to evening firesides, had been fruitful of thought upon agricultural topics, and now those thoughts are being rained down upon us. Well, let them come—something of a shower of them will be found in this week's *RURAL*.

Winter Care of Stock.

There must be a better system of cattle husbandry in California, before we can take rank as thorough breeders of improved stock. We purchase the best animals to be found in the Atlantic States; bring them here to improve our more common stock; but while we may in most instances improve the blood, we fail to improve the animal, and it all comes from our niggardly provision for, and care of, our stock during the winter months.

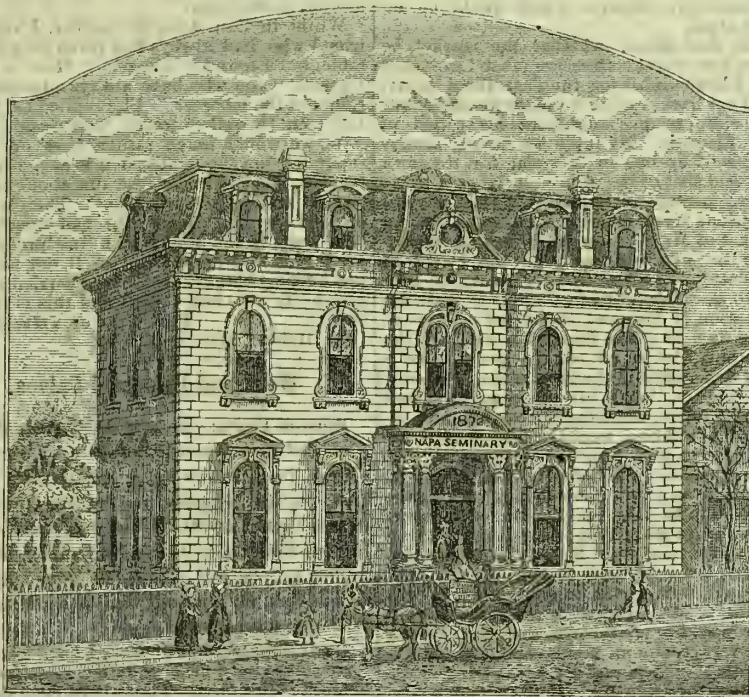
A fair amount of care is given to most of our imported full bloods, because we know they would not live without it; but we act as though we thought the first cross or half bloods require no better care or food than the veriest wild ani-

mal of alfalfa can be grown, with a yield of from 6 to 10 tons to the acre, and if allowed to lie upon the ground unharvested, to be fed off in winter, would save every animal upon the farm.

There is no use in trying to improve our breed of stock unless we mean to take some kind of care of it. It will degenerate, go back into common, faster than we can infuse improved blood, unless we feed better and take better general care than is done by many who are really desirous of improving their old stock. It always pays to keep cattle well.

A Flourishing Town.

Mr. J. H. Gregg, of the town of Orange, Los Angeles County, writes us that that town is lo-



NAPA LADIES' SEMINARY.

mals of our plains. The result is, that our half and three-fourths bloods, which at least should have half or three-fourths the full feed and care of the full blood, get none at all.

The result is, the stock with this degree of blood, and carrying with it the delicacy of physical inheritance, are dying by hundreds this winter from cold, exposure and starvation. We say starvation, for we mean that, and nothing else; for, if animals are given all the food they require and that of proper quality, there would be no dying of cattle by cold and exposure only, in any of the great lower valleys of California.

But when we make our half-hardy stock submit to both cold and scanty feed, we should not be surprised that we lose much of it. The very object of improving our breed is, that we can get along with a less number of animals, yielding the same profit, in fact a greater profit than double the number of the old common stock. We should not expect to do this, unless we can provide better pasturage and better winter food than the dried up, bleached out grass and weeds, which were refuse while yet green and succulent by the same animals in summer.

It is a burning shame to our stock owners that they will allow a single animal to starve in a country like California, where a few acres

cated about 40 miles from Los Angeles, 6 from Anaheim and 12 from the sea coast. The climate is the mildest even in that county so justly celebrated for its mildness. There is never sufficient frost to kill the tomato, and less than in any other part of the county. They irrigate from what is known as the Chatmos Canal. Have plenty of water for all purposes. Seven inches of rain had fallen up to Dec. 14th. [There must have been a considerable fall since.] The soil was wet $3\frac{1}{2}$ feet deep, and farmers were busy getting in their crops. The land is very productive, as much so as any in the State. The settlement is only two years old, yet it already numbers one hundred families, who have already planted over one million orange trees, about the same number of grape vines, besides large quantities of other kinds of fruit. There is plenty of room yet for new comers—at least 100 more families could be provided for with land at reasonable rates, and all the facilities for irrigation, etc.

IRRIGATION ENTERPRISE.—It is stated that a company of practical farmers from San José, have formed a corporation for the purpose of constructing an irrigation ditch on the north side of Kern river.

Pruning Trees, Plants and Shrubs.

With orchard trees there is, as a general thing, too much pruning done in California. Where the nearly vertical sun pours its heated rays upon vegetation, particular care should be taken that those rays fall upon the leaves and not upon the trunk or boughs of the tree, causing sun scald and blight. As a rule, there should be no pruning beyond the removal of certain superfluous branches, or those which over ride each other.

Trimming back, or cutting in, as it is called, is quite another process from pruning, and serves always to thicken up the top, instead of opening it as pruning does. The present is the time to do either and may be continued till the buds are so far expanded as to endanger their injury from the act of removal, when pruning should cease.

There are certain plants, shrubs and bushes that are pruned annually for quite another purpose than to give symmetry to the same. The rose, if upon its own root, may often be headed back, quite to the ground, for the flowers upon the new shoots or new wood, generally, are larger and fairer than upon old, bark-bound wood, but as the bloom need not be expected upon the first year's wood, a judicious selection of one and two-year-old wood should be made in order to secure an annual bloom. Roses should be trimmed and pruned now. The sap of perennial shrubs is already ascending vigorously, and it had better go into the new wood than in that which is to be cut away.

Raspberries and shrubs, in which the shoots having borne their fruit, die with the year, can have the useless stalks removed at any time after the autumn leaf-fall, because they receive no further nutriment from the root, and should be removed early, because the buds upon the new-bearing canes start early, and are liable to injury, if the cutting-away of the old stalks is delayed. The same rule should apply to gooseberries and currants.

There are a few fruit-bearing plants, as the strawberry, which are greatly improved in vigor and productiveness, by being headed down of all their leaves and tops to the very crown of the root. This should have been done before now, but if there has been but little winter growth, it can be done now with positive advantage in most cases. When it is desirable to raise a late crop, or where there is danger of late frosts, the cutting back can be deferred for a time, though strawberry plants—not the flowers—will bear considerable frost uninjured.

As regards the dried haulm, or stalks, of most of our flowering plants, the sooner they can be cleared away the better; there is no good comes of them or coarse manure or litter spread over them for their protection, in a climate as genial and generally exempt from frost as the climates of our coast and valleys below the line of our foothills.

Early autumn pruning is by some deemed objectionable, as having a tendency to promote a premature growth of the plant which is to succeed; but it is safe to adopt the rule, to clear all away as soon as the old stalks are dead to the ground.

SQUIRREL EXTERMINATOR.—Our attention has been called to a new squirrel exterminator recently introduced, put up in form of a small lozenge. It is said to be very efficacious. Further notice may appear in our columns hereafter. Jed. T. Hoyt is agent for the Pacific coast.

CORRESPONDENCE.

Silk Culture in California.

(By FELIX GILLET, of Nevada City.)

EDITORS RURAL PRESS:—Like every branch of agriculture, silk-growing, although getting to be with us, too, in California, an old subject which some might think entirely exhausted, is no less a new one upon which a great deal will be said yet; for such is the case with every industry.

As far as we are concerned in this State, we have almost everything to learn in the art of raising silkworms and preparing silk for market; and it is not a little job to found in a new country a new industry like that one. Some have tried it and failed, and discouraged, abandoned the enterprise; others tried with more or less success, but for want of a market for either cocoons or eggs, feel rather despondent at seeing their efforts so little rewarded and at a loss how to make the business pay. Such is the real condition of sericulture in California at the present day. The RURAL PRESS, I have noticed, has never been very sanguine about the possibility of establishing in our State this silk industry, and that for reasons which might at a first glance look very sound, such as the high price and scarcity of labor and the lack among our people of certain requisites for raising silk-worms. Some correspondents of the RURAL have kept in the same strain, so much so, that people desirous of embarking into the business are slow at doing it for fear of making a mistake.

Let us see how much truth there may be in such apprehensions and whether silk culture can be made, or not, here a regular paying industry; however, before going any farther, permit me to state that I have given, and am giving, to this question of silk-growing all my thoughts, labor and money; that I have studied it under all its bearings, pro and con, and that, though my opinion and views must be taken only for what they are worth, I will in the course of this essay bring forth facts and figures to show the correctness of what I advance.

The question may be divided in three, each one being absolutely necessary to the final establishing of silk culture in California; these are: first, the adaptiveness of our soil to the culture of the mulberry tree; second, the rearing of silkworms; third, a market for our silk. These are three distinct questions which I will discuss at length in the columns of the RURAL PRESS and in preference to any other paper, for I am satisfied that the said information will reach through your channel the very parties it is destined to.

I he adaptiveness of our soil to the

Culture of the Mulberry Tree,

I regard it as a question well settled, but with this difference that the rich and moist soil of valleys must be excluded, while that of our mountains must be regarded as the very best to produce a substantial and healthy food. For instance, silkworms might be successfully raised among the hills of the coast range, even in the small valleys located there, but producing lighter cocoons and superior in quality to those raised at a higher altitude among the hills of the Sierra Nevada; however, as the quality of the silk is only a secondary question, we may take it for granted that three-fourths of our soil is well adapted to the culture of the mulberry tree. But of the different varieties so far cultivated in California, it is a no less irrefutable fact that some of them are almost worthless, while other ones are greatly superior for certain reasons and more profitable to cultivate. To be more clear I will name the varieties: The *multicaulis*, I would reject as worthless; the small leaved *morus alba*, as unprofitable; the *moretti*, as producing an inferior silk. I have stated it in former letters to the RURAL PRESS, the two varieties I have found on my own experience to be the best of all, as much for the size and quality of their leaves than for their larger yield by the acre, are the *morus japonica* and grafted rose-leaved. Having those two varieties for sale, I will not dwell upon their qualities and superiority, although I will refer to them when I will speak of the experiments I made last summer.

The next question—this one of the soil settled—is

The Rearing of Silkworms.

It is certainly a very easy work, which can be done by women and children as well as by men. There are, however, certain important points from which we cannot depart or else we may meet with disaster. First, the eggs must have been well preserved, for this is a condition indispensable to a successful rearing; secondly, the hatching must be done properly, so that the worms will hatch in three successive days; thirdly, moulting times have to be watched with the utmost care. The best place where to preserve the eggs is certainly the mountains; the cold weather of the winter being very beneficial to the eggs. This is the way I treat the worms as moulting times, from the first to the last one. As soon as I notice that a part of the worms spread some silk round on the lit-

ter so as to procure for themselves a good standing when the time will have arrived to throw off the old skin, I cease altogether giving them food, never minding those that are not ready; then when the worms that went to sleep first have changed their skins, I wait to feed them till they have all undergone the same operation.

In this way the moulting is done almost simultaneously, and the worms keep on very even in size. Otherwise, if a part of the worms only are ready to sleep and food is given to those that are not, a great trouble is created, for the worms will look for another place where to get a good standing preparatory to their going to sleep, and in so doing, as that is repeated several times a day, they get weak, the moulting lasts longer, and the final consequences are, that at the last moulting the worms have hardly grown any larger, about half their size, and either die or spin a small, thin cocoon. I strongly suspect this to have been the main cause of failures in silk-worm raising in California in years past.

To prove that with proper care silk-worms can be raised in California on a large as well as a small scale, I will refer your readers to the success of F. Gillet and E. Muller, of Nevada county; Isaac Altier, of Lake county; R. Bonhomme, of Sonoma; Paul Cousonno, of Santa Clara, and other parties throughout the State. In Los Angeles where failures have been experienced, Mr. Bonhomme raised successfully last year a hundred thousand worms. At Mayfield, in Santa Clara county, Mr. Paul Cousonno, an Italian gentleman from Milan, and well posted on all pertaining to the business, from the rearing of the worms to the reeling of the cocoons, raised the worms of over eight ounces of eggs, that is between three to four hundred thousand, and obtained 1,400 pounds of cocoons which he turned into eggs and shipped them to Italy. Messrs. Cox & Co., of Santa Barbara, I have been told, have been equally successful in raising a large quantity of worms, also shipping their eggs to Europe. So it is a well settled fact that silk-worms can be raised with success in this State—this second requisite for making silk-culture possible and durable in California. Now, let us discuss the best way of getting a market for our silk. And this is a no less important question; for what would be the use to raise, successfully, silk-worms with no market for our cocoons, or a market with no remunerative returns, which would be no market at all.

In the first place, whether the market be more or less remunerative, we must have one; and as I have said it for the last three years, we will not have a market unless we introduce in the State reeling establishments called in Europe filatures. My intention having always been to start up one in Nevada, for my own benefit and that of the county at large, I wrote to several persons in France about it. Several propositions were made to me, and among them that of Mr. A. Laurent, a man of experience in the silk business, and the owner of three filatures in the south of France; he proposed to me to start one in California with the co-operation of our most interested silk-growers, and then he would fetch with him all the fixings of a filature of twenty basins, and a woman well versed in the art of reeling cocoons. Such a filature, that is all the apparatus and machinery to run these twenty basins, not including the building, would cost in France, between three to four hundred dollars, so that the whole reeling establishment would not be so expensive as some people may think; the next question to the establishing of a filature here, is how to make it work and pay; for it would take several years before it could obtain enough cocoons to have it run regular and steady, and how would it get along in the meantime? Mr. Laurent, to meet this objection, proposed to organize a company among silk-growers, each one taking about fifty dollars worth of shares, and then applying to the Legislature for some aid. If all the main silk-growers of the State were more close together, at a reasonable distance from the point where the said filature would be started, this co-operation proposition might do, but that is not the case, the distance between each other being too great. Any how let every silk-grower be well impressed with this fact, that the only way to obtain a market for our cocoons is to establish in every silk growing center a filature, where cocoons can be bought and there reeled into greege; whether we do it through the co-operation system, or by our own private means, with or without any help from the Legislature, it is anyhow, the only way of getting a market for our goods. I am satisfied that as soon as a filature would be established and meet with success, that it would not take long to have more of them wherever they would be needed. The great trouble presently is this, as there are not in any county or even several close counties put together, enough cocoons raised to keep a filature running, the person that would be willing to start up one, would have to lose money by the operation till enough cocoons could be raised; and it is at this juncture that a State premium would be of immense help, and more likely to give an impetus to silk growing than all the premiums given already to mulberry plantations and the producing of cocoons.

As to the doubt of some people about a market for greege or raw silk, there need not be any fears about it. First, a bale of silk of a hundred pounds takes so little room, and its value is relatively so great, that it can even be shipped by express to the States and Europe with a good margin for profit. Second, the silk we raise in California, since we are successful in raising the finest races of silkworms, is of a

very superior quality; and the demand is so great for such an article that a market is always sure to be had for it, and at fair prices. The next query, supposing we have a market for our cocoons, is—will it pay?

[To be Continued.]

Hired Men on the Farm.

EDITORS PRESS:—The "Granger's wife," in December 6th of the PRESS, gives the con of the question under discussion by the Farmers' Club in San José, in regard to the treatment of hired help. With all due deference to Mr. Beecher's opinion, I will here give my experience. Two years since I assumed the grave responsibility of a farmer's wife, but paid little or no attention to the hired men on the place; but after I became a "Granger" I began to feel what my duties were. My first step was to have the men's room thoroughly cleaned—just as good a house as we live in. We had a new man come, and I had his bed fixed up—sheets, pillow-cases, etc.

As yet, however, with all my good resolutions, I have not felt willing to have my little family circle intruded upon at the most pleasant reunions of the twenty-four hours. I do not see why farmers should have their hired men at their table any more than other professions.

I have never heard any complaint of their fare. I was absent from home two weeks, and on my return I found our new man giving orders for dishes that suited his taste. I had some company come in; I asked the girl to bring me another fork. She said: "They are in use on the other table." "Why is that?" "Joe said, if he could not have a plated fork he would have to buy one; he could not use a steel one."

I bore these and many other petty annoyances in silence, as I thought this man was so necessary to my husband's business.

I overheard a conversation once among our hired men which influenced me in the course that I have pursued. "There's old Mrs. —, who always sits at the table with her hired men to see how much they eat, and pours the coffee out for them, she is so afraid they will use too much sugar."

While in San José, in October, I visited a friend who had always had hired men at their table, but I found a change. "How is this," I asked, "you who have always advocated the rights of the laborer?" She replied: "One of the men (a well-educated man), said—'Mrs. —, we would much rather have our meals separate from the family, if it is as convenient for you. We are under restraint about talking, and, of course, you are also.' There's a man of good common sense. He had already been two years in the family, with the prospect of being there several more. Well, our new man has left; my blankets have been carried off, but my sheets were not taken; and this is my consolation."

THE WIFE OF A GRANGER.

St. Helena, Dec. 29th, 1873.

Weak and Deformed Calves.

EDITORS PRESS:—Your valuable journal is the source of much information to the agricultural classes, its intention being to stimulate a mutual enquiry, thereby making the knowledge of one, useful to all. I therefore avail myself of your columns to discover a remedy probably known to yourself or some of your numerous subscribers, for an evil that has afflicted my cattle for several years.

During the past two years I have lost about forty calves born dead or dying, some few days or weeks after birth. Those born dead come at three months or the full time, and are sometimes deformed in various ways, while those which live a short time seem to be weak in the loins or hinder quarter and cannot walk, although perfect in form.

My range is good, mostly burr clover and fillare grass, and all fenced, with plenty of good water. The cattle are in good condition, not too fat and mostly of good American stock, with a few half-breeds, and all the circumstances surrounding should indicate a good healthy increase, yet I have been subjected to this misfortune for the past two years, although I have made various changes to remedy it, but without avail.

I have been unable to discover the reason of this, and would request yours and the attention of any of your readers versed in such matters who may have a theory or remedy in this case, which would much relieve an

OLD SUBSCRIBER.

Santa Barbara Co.

We hope some one of our readers will be able to show our correspondent the cause of the fatality and malformation, alluded to and suggest a remedy. Without waiting for this, however, we would remark, that we have known the same to result to the offspring of almost an entire dairy herd of 60 cows, and all from the cows being worried daily by a large and savage dog, used in driving up the animals at milking time, and allowed to seize refractory ones by the nose or attempt to do so. No other cause than this, will often produce abortion in cows otherwise perfectly healthy.

Hop Growing.

EDITORS PRESS:—At this time the business of hop culture attracts the attention of many farmers and but little understood by many who wish to engage in that line of farming, and finding nothing in our agricultural papers calculated to give the new beginner a knowledge of their cultivation and care, and having a considerable experience of hop growing in this State, perhaps a few items might be of use to some who are engaging in that line. The first consideration is the selection of soil and climate suited to their growth, without which the enterprise will surely be a failure.

My experience and observations have led me to the conclusions that hops will only do well on loose alluvial deposits, such as is found on most of our streams where they enter the valleys and land that retains moisture till late in the season, or upon chalk lands that keep moist, but will not produce as much per acre; but the hops raised on chalk land is usually of a superior quality, containing a greater amount of lupuline or active matter and will bring a better price than those raised on richer soils. The climate must be free from coast or prevailing fogs and heavy blighting winds; the ground must be well prepared before the roots are put out, it should be plowed deep both ways, well harrowed and plowed eight feet each way; the roots should be cut so that each one has three buds or eyes and should be placed in the square three inches apart with eyes pointing up, then covered three to four inches deep.

The planting should be from the middle of February to the middle of March, this done the polling may be commenced; the poles should be from twelve to fifteen feet long, sharpened before hauling on the field. Use for setting, an iron bar with round point four feet long, and set your poles so they will stand firm; this done the cultivator should be put at work and the ground well stirred. As soon as the vines attain a length sufficient for training, which may be about one yard, take a gunny sack, cut it in squares of six inches, draw threads from it, wrap your vine round the pole always with the sun and tie a single knot that will slip and not damage the vine. This should be kept up till you have two vines on each pole, always selecting the most thrifty shoots; the hills should then be succored and none left to grow but those on the poles. The next in order is the picking and drying. If your crop is good you may calculate on it taking fifty days work to the acre. In order to have your hops of a uniform color, which is very important they should be, the picking should be done in as short a time as possible. Drying must be commenced with the first half day's picking and so continued. The kiln must be kept going night as well as day, drying each half day's picking twelve hours, and great care must be taken that the hops are not scorched or over dried, as in either case the hops are almost worthless, and a like care should be taken that there is not too much moisture left, for in that case they will heat and turn black and be unsaleable.

They should be nicely baled, in weight about two hundred pounds. The yield depends much upon the soil and cultivation. I have twenty acres all in the same field and all received about the same labor, part of which will average one year with another twenty hundred to the acre, while another portion will not turn out more than five or six hundred pounds. I only instance this to show how important is the selection of the kind of soil.

HOP GROWER.

Ukiah, Jan. 27th, 1873.

Cherries in January.

EDITORS RURAL PRESS:—I send you to-day a small box containing a few cherries, which I picked from the orchard of Dr. J. Dobbins in this valley. It may be an item of interest to you and your readers, as it is also to me, as I am at this time planting a large cherry orchard near where I picked these. It will also show what can be done in this valley in the production of fruit.

W. W. SMITH.

Vacaville, Solano county, Dec. 31, 1873.

The cherries were received in very good condition, ripe, but fresh as though just picked from the tree. We have a curiosity to know whether they are an exceedingly late variety of cherry, or whether they are a second growth of the season from the same tree. We would like to hear further about these cherries.

Whitewash—Wild Morning Glory.

A Benicia correspondent wants a recipe for making a wash for outbuildings, barns, carriage houses, woodsheds and fences, that will be cheaper than paint and stand the rains and weather better than common whitewash, and further would like to be informed how to kill and destroy a vine which he calls the wild morning glory. He says: The dryer and hotter the weather is, the better it appears to grow. And the more I plow and hoe or dig it up, the better it grows and spreads.

Who will oblige us and our correspondent by answering the foregoing queries?

Peanuts—Semi-Tropical Fruits.

EDITORS RURAL PRESS:—Can you give me any information concerning the planting and cultivation of the pea-nut? What kind of soil is best; what time to plant; method of cultivation and probable yield per acre—is much irrigation required?

Any information on the above points will be most thankfully received.

We have had abundant rains in this county and the farmers are in good spirits. Every plow and almost every team of horses are at work preparing the soil for planting. Some in this neighborhood are going extensively into the cultivation of semi-tropical fruits, Mr. Burlingame in particular, intends setting out several hundred orange, lemon and lime trees. Mr. G. D. Compton has proved the adaptability of our soil and climate to the growing of orange and lemon trees, as he has some very flourishing specimens of each, growing in his garden.

Richland, near Anaheim, appears to be taking the lead of all the growing towns and settlements in this county. Its delightful situation, exemption from frost, abundance of water and fertile soil make it one of the most desirable places in California for the cultivation of semi-tropical fruits, and that appears to be the principal occupation of the inhabitants, judging by the number of orange, lemon and lime trees already set out there.

DAMON A. NOMAD.

Compton, Dec. 29th, 1873.

In volume three of the RURAL PRESS, pages 184, 233 and 248, the subject of peanut culture was quite fully discussed; but as our subscription list has been much enlarged since that time, we condense from the several articles then given, for the benefit of our new patrons and present them a few words on peanut culture.

A sandy loam that never suffers from drouth is best; the borders of rivers which receive a winter or spring overflow are excellent. Lands that will give a good crop of melons will generally produce a good crop of peanuts. Plant in April or March even in localities free from frost. Plow five or six inches deep; this is enough, because the nuts will not begin to set freely, till the roots meet with the harder subsoil; harrow fine and smooth.

Break the pod, take out the kernels without breaking the skins and plant in rows four feet apart and twenty inches apart in the rows, putting three or four kernels in a hill; cover two inches deep, or deep enough to secure moisture for their certain germination. When the vines are 6 or 8 inches long they begin to blossom. Now cover all the crown of the root for 4 or 5 inches around the center, with an inch of soil, but leaving the ends of all the vines uncovered. The object of this is to press down and keep moist the stocks of the vines from which the bearing roots shoot downward from under every blossom.

The after cultivation consists in keeping the ground entirely free from weeds. Gather in October. Fifty bushels is considered a good yield per acre, but as many as eighty bushels have been grown under favorable circumstances.

Scenes in the High Sierras.

[Written for the RURAL PRESS by J. G. LEMMON.]

No. VI. — COMSTOCK SILVER MINES.

Leaving Yosemite.

Down from cloud-land, out from Paradise and on the dusty road again. So transcendent has been the scenery of the last two weeks that we are quite unwilling, though compelled, to turn our footsteps homeward, there to digest the mental pabulum garnered. The reflection that, according to all accounts, we never shall look upon a fairer scene, caused us to gaze to the last opportunity over the rim of the receding Yosemite — one of the last objects resting upon the retina of the eye, and thence preserved indelibly on memory's tablet, being the ever-lovely, shining, leaping fall of *Po-ho-no*, tearfully waving us a last adieu, but as sweetly inviting us back to view the Great Gallery again, at any future day.

After Yosemite, what can arrest attention or command description? We have no first-class volcano, like Kilauea, within easy reach, no Mammoth Cave; but we have one of the most extensive and stupendous works of man. Let us make a slight detour and add the mines of the Comstock lode to our other unrivalled "scenes."

Hastily glancing, on our return by the upper road, at Sonora, — the queen of California cities, enthroned among fruit-orchards and vineyards, — curiously examining the singular lime-stone

natural bridges over Coyote creek, we approach again the Calaveras grove of big trees.

These great *sequoias* — monsters among the monsters — ever have power to arrest attention. Here we rest for a night, glad of the chance, ere evening shadows fall, of again roaming through the grove, mounting the stile to the upper side of the "Father of the Giants," gaze, wonder and adore. Great preachers are these big trees, preaching great truths. They tell of power, of wisdom, of far-reaching plans, but, best of all, they argue immortality for man. When we reflect that they have lived three thousand years, and that as there is no natural limit to the life of the *exogenous*, or outside growing plant, it is not unreasonable that man, with powers of infinite imagination, of limitless conception, of boundless aspiration, of universal belief and hope; it is not unphilosophical that the spirit of man is fitted for and will exist throughout eternity.

Gathering cones, sprays of foliage and several rare flowers, and adding to our already plethoric bales, we pursue our journey up to Hermit Valley, where the road to Lake Tahoe northward comes in, which we do not return upon but continue up the excellent turnpike eastward toward Silver Mountain.

The first part of the road is a long, tortuous climb up a crooked cañon to a pass at the great elevation of 9,000 feet. Except the sublime scenery of terraced mountains of lava on all sides, with dim stretches of valley between, and glistening peaks of snow in the far south, there was little to enliven the journey. Slowly the weary miles were added to the 500 already passed. So crooked was the road that often our camping place at night was in sight of that of the previous night, and the camp-fire of our noon halt still sent its curling smoke through the pines on the last spur below.

Silver Mountain.

At the dilapidated county seat of Alpine County — well named — my comrade suffering a violent attack of toothache, was deprived of a much coveted chance to scale the rough and difficult side of Silver Peak, 11,060 feet high, one of the highest in central California. Alone, in the still ether, I stood upon the splintered summit, above the clouds that rifted through the passes below. Chief of the splendid views from this lofty perch was the group of peaks around Yosemite, fifty miles away to the south.

Among them shone Cloud's Rest, and, ever conspicuous if in any country, the mysterious South Half-Dome, a monument at the head of an empty colossal grave, or better, a shining land mark telling where is given to man a second Eden.

Northward John Brown's monument, and beyond, lying around the hidden Tahoe, were plainly seen Job's Crystal and Tinker's Peaks; while 20 miles, farther across the railroad, uprose the dim triple turrets of Castle Peak. Nearer at hand northeastward across Carson Valley reposed the lower but most important peak in a financial view, in the known world — the silver-boweled Mt. Davidson. In the deep cañon leading to it and scattered over its east side glistened the cities of Silver, Gold Hill and Virginia. This view filled up an important interval in the observed topography of the high Sierras.

A year before I stood upon the lofty Lassen's peak in the far north; a year before that upon the gold-hearted Downieville Buttes; six months ago upon Castle peak, near the railroad; a month ago upon John Brown's monument, near Hope valley; last week upon Cloud's Rest, above Yosemite; and to-day, this lofty Silver peak between the two last, commands a fine view of many of the rest. On this summit among the splendid rocks of lava a "poor Piccola" was found. It belongs to the *Crassulacea* order, and is so sensitive that it rose up from my accidental tread, expanded its leaves all dripping with expressed juice and tremblingly warned me not to wound it again.

Carson Valley.

Carson valley is one of the largest and most fertile of mountain valleys, apparently, on this coast, but its thrift is retarded by a monopoly of its irrigating waters held at so high a figure that only the wealthiest farmers can buy — a matter for the Granges to look after.

Carson City is making substantial progress, owing to the establishment of the State buildings; the branch U. S. mint, and lately, by the locations of car shops there. We were kindly conducted through the mint — space forbids its description.

Passing up a deeply rutted road eastward, telling of heavy freight wagons, we heard first, the measured thump of a quartz battery, then came into view of Empire, a new town built up near two very large quartz mills on the Carson river, reducing ore brought from the distant Comstock lode by railroad, and also by the old-time big quartz wagon with its 10 monster mules and one or two "back actions."

A Noisy Canon.

Passing over a low divide, we were saluted by a tumultuous roar from pounding batteries, grinding machinery, and busy workmen, all swelling up from a narrow deep cañon below — probably the noisiest in the world. Twenty-five or thirty quartz mills — some with 40 to 60 stamps — are pounding away there nearly every day in the year, reducing by the nicest and costliest machinery the silver raised from the deep mines beneath Mt. Davidson. Around these mill are placed the boarding houses,

shops, saloons, etc., resting one side against the mountain, the others upheld by posts and walls. One street threads the bottom of this cañon, and the buildings on each side form nearly a continuous wall. Though by their proximity forming one community, this densely peopled cañon has two names, Silver City and Gold Hill. Beyond, over another divide, lay terraced along the slope of Davidson the prodigy of mining towns, Virginia City — 5,820 feet above the sea level; and, until the founding of Hamilton, another mining town in the same State — the highest of its size in the world.

We were assured that, large as were these towns, aggregating over 10,000 souls, the mines on the Comstock lode beneath, contained more than twice as much building material, and this information but increased our anxiety to descend to the shafts of the most extensive, most expensively worked and best paying mines ever known. By the kindness of Alfred Doten, editor of the *Gold Hill News*, letters of introduction were given to us to mine superintendents, and we prepared to make the descent the next day.

In the morning, reflecting that the officials would not be duty until late, we climbed the bushy side of Davidson, 7,825 feet high, and enjoyed for an hour a view of the cities below, the valleys around, the peaks beyond and the great alkali desert stretching away to the east, recalling the many stories of suffering in the days of caravans. Descending the south side into the noisy cañon again, we seek the mining officers, readily obtain permission and a guide, and are prepared for our further descent by changing our clothes to a suit of heavy woolen. We were then led into the lofty building where the monster hoisting works stand near the deep shafts from which the hot and smoky air rises in a swift column.

[Concluded next week.]

Progress in Glass-Making.

Siemen's regenerative process for melting of glass has proved very successful, and has been introduced in some of the most extensive manufactories in Europe. By means of its use the amount of smoke is greatly diminished, the color of the glass is improved, a greater control is obtained over the furnace, and a saving of fuel is effected wherever, by this process, slack can be substituted for large coal or lumps, such as is at present so largely in use. Should the expectations in regard to the use of this furnace for the melting of glass be fully realized, the gain in that manufacture will be very great, and the process will fully supplement those other improved methods which have brought glass-making to its present state of advancement. The substitution, some years ago, of carbonate of soda as the alkaline ingredient in glass, in place of kelp, and, subsequently, for crown and sheet-glass of sulphate of soda, in place of carbonate, was but the beginning, though a most important one, of improvement in this direction. This was followed by an increased size and better workmanship in the plates, sheets and tables, and by an improvement in the color of glass by use of purer materials and by modifications in the manner of melting. Numerous changes soon took place in the operation of flattening glass, resulting in the removal or diminution of many imperfections in glass; and to these succeeded the use of the diamond in the splitting of cylinders in the place of a red-hot iron, also an increase in the size of melting-pots and furnaces, with the view of economizing coal and labor, and the adoption, in the casting of plate-glass, of various mechanical contrivances. Finally, the use of the same pots for the two processes of melting and casting plate-glass superseded the old method of transferring the contents of the melting-pot into the vessel used for casting; and then small coal or slack was substituted, in the melting process, for large coal or lumps. — *Paint and Oil Trade*.

AMERICAN LEATHER CLOTH.—The mode of manufacturing this cloth is said to be the following: A piece of cotton texture is passed between two cylinders, the upper one of which permits a mixture, consisting of oil, resin, lampblack, and other matters to flow upon the slowly-moving canvass. From the cylinders the fabric is wound upon a drum made of wooden sticks so arranged that the successive layers are kept apart from one another. When the whole piece has been wound upon the drum, the latter is placed, with the oiled cloth on it, in a drying chamber. After drying, the cloth is smoothed by means of pumice stone, and passed a second time through the cylinders, receiving another coating of varnish. It is then dried, and these alternate operations repeated at least five times, in order to make the coating sufficiently thick. The final process is pressing the cloth so as to give it the appearance of natural leather.

METEOROLOGY OF SAN FRANCISCO.—From observations taken at the United States Signal Office in this city it appears that during 1873 the mean barometer for the year was 30.04; mean temperature, 55.07; highest temperature, 79; lowest temperature, 41; total rainfall, 18.55 inches; prevailing wind, southwest; highest velocity of wind attained, 48 miles per hour; number of days in which rain fell, 64. For December the highest barometer was 30.33, and the lowest, 29.55; the highest thermometer, 59; the lowest, 44; the total rainfall, 9.72 inches; the prevailing wind, southeast, and the number of rainy days, 17.

Bridge Building.

Mr. J. M. Goodwin, of Cleveland, Ohio, has lately patented certain improvements in bridge construction, which are described as follows in the specifications: "The object of my said invention is to relieve the principal girders, chords, side or middle trusses or beams of bridges, and girders, beams of trusses used in structures other than bridges, of the action and effect of loads moving along or over them, technically known as 'rolling loads;' and to cause the stress of any load passing along or over, or distributed unequally upon, any bridge or structure in which said invention or device is used, to act always in a direction nearly absolutely vertical, and practically vertical, upon one certain surface, and at the same time to cause the stress of such rolling loads to be brought upon such surface or surfaces by a gradual accumulation, the stress upon such surface or surfaces of the principal girder or girders, acting at all times in a direction practically vertical, as aforesaid, and with a force always in proportion to the distance from the ends of the bridge at which any load upon the supplementary girders aforesaid may be (the said load being in this connection considered as passing from end toward center, the force only, and not the character, of such stress being changed by the changing of the position of the load), thereby removing from the principal girder or girders those undulatory and otherwise disintegrating disturbances of fiber which are produced by the direct action of rolling loads; and also to cause the stress of any unequally distributed load to be transmitted to the principal girder or girders aforesaid, through the surface or surfaces, and in the direction, nearly and practically vertical, hereinbefore specified."

Constructing a Piano.

A writer has taken the trouble to give the actual material used in constructing a piano-orte. In every instrument there are fifteen kinds of wood, namely: pine, maple, spruce, cherry, walnut, whitewood, apple, bass-wood, and birch, all of which are indigenous; and mahogany, ebony, holly, cedar, beech and rosewood, from Honduras, Ceylon, England, South America and Germany. In this combination elasticity, strength, pliability, toughness, resonance, lightness, durability and beauty are individual qualities, and the general result is voice. There are also used of the metals, iron, steel, brass, white-metal, gun-metal and lead. There are in the same instrument of seven and a half octaves, when completed, two hundred and fourteen strings, making a total length of seven hundred and eighty-seven feet of steel wire, and five hundred feet of white (covered) wire. The total number of strings, when properly stretched to produce the right tone, exert a pull of over ten tons; this represents the force with which the piano is drawn towards the other end, and it explains the reason why good pianos are built so strong and so heavy. Such a piano will weigh from nine hundred to one thousand pounds, and will last, with constant use, (not abuse,) twenty to twenty-five years.

CHINESE METHOD OF PRINTING.—Among the Chinese, having some 8,000 different letters, type-foundries are out of the question, and consequently there are no type-setters among them; but they follow the primitive way of printing from engraved wooden blocks. The matter to be printed is first written by means of transfer ink upon thin paper, and this is pasted face downward upon a block of a pear or plum tree. When dry, the paper is rubbed with care and leaves behind an inverted impression of the characters. Another workman now cuts away all the blank spaces by means of a sharp graver, and the block, with the characters in high relief passes to the printer, who performs his work by hand. The two points that he has to be most careful about are, to ink the characters equally and to avoid tearing the impression, by means of a brush similar to our broom-brush. Printing-presses are not used. Proclamations, visiting-cards, etc., are printed in the same manner. An economical way of printing small hand-bills and advertisements for walls is to cut the characters in wax instead of wood; but they soon get blurred, and the printing from them is almost illegible. From a good wooden block some 1,500 sheets can be printed, and when the characters have been sharpened up a little, it is possible to obtain 8,000 or 10,000 more impressions.

They claim to have practiced this method more than four thousand years ago, while we commenced to print from wooden blocks only in the fourteenth century.—*Artisan*.

FLAMMARION, in his work on "The Atmosphere," gives the extremes of temperature at different places on the earth, as follows: in no place, at an elevation of two or three yards above the surface of the ground, and in a sheltered position, has the temperature ever been known to exceed 135°, or go lower than -73°, giving a difference of 208°, a greater difference than between the freezing point and boiling point of water. The greatest recorded difference at any one place being at Yakontsk, their warmest being 86°, and the coldest 72° below zero. The most equable climate being at the island of Pulo Penang, where the thermometer only varies 14° — from 76° to 90°.

PATRONS OF HUSBANDRY.

List of New Granges.

[Reported to the PACIFIC RURAL PRESS since our publication of the full list of California Granges on the first Saturday of the month.]

FRESNO COUNTY.

ADAMS GRANGE, Big Dry Creek, Fresno Co.: T. P. Nelson, Master; Thos. H. Wyatt, Sec'y.
BORDEN GRANGE, Borden, Fresno Co.: J. W. A. Wright, Master; J. S. Pickens, Sec'y.

KERN COUNTY.

BAKERSFIELD GRANGE, Bakersfield, Kern Co.: S. Jewett, Master; Jerome Troy, Secretary.
NEW RIVER GRANGE, P. O. Bakersfield, Kern Co.: John G. Dawes, Master; Jas. Dixon, Secretary.
PANAMA GRANGE, P. O. Bakersfield, Kern Co.: P. D. Ross, Master; J. F. Gordon, Secretary.

SAN JOAQUIN COUNTY.

LOCKEFORD GRANGE, Lockeford, San Joaquin Co.: O. C. Holman, Master; Sol. S. Stewart, Sec'y.

TULARE COUNTY.

CHRISTMAS GRANGE, Visalia, Tulare Co.: Wiley Watson, Master; H. G. Higbie, Secretary.

Election of Officers.

Salida Grange.—J. D. Reyburn, local agent, inform us that on Nov. 26th, Salida Grange No. 8, Modesto, held an election of officers for the year 1874. The result was as follows:—B. F. Parkes, M.; A. P. Elmore, O.; J. P. Vincent, L.; Wm. Parkes, S.; G. W. Lester, A. S.; C. H. Heining, C.; William Wilkinson, T.; A. H. Elmore, Sec'y.; B. T. Elmore, G. K.; Mrs. Louisa Parkes, Ceres; Mrs. E. J. Vincent, Pomona; Mrs. Mollie Chance, Flora; Bell Wilkinson, L. A. S.

Elmira Grange.—M. D. Cooper, Secretary, sends us the following list of officers of this Grange, installed on the 3d inst by the Worthy Master of Dixon Grange:

A. A. Clark, (re-elected) M.; M. L. Williams, O.; G. W. Frazer, L. (re-elected); K. McPherson, S. (re-elected); W. G. Finley, C.; Jos. McCarty, T.; M. D. Cooper, S. (re-elected); T. J. Frost, A. S.; W. C. Strait, G. K.; J. A. Clark, Ceres (re-elected); A. E. Frazer, Pomona; Kitty McCarty, Flora; L. E. Rippey, L. A. S. (re-elected).

Princeton Grange.—Officers elect:—A. D. Logan, M.; A. S. Hemstreet, O.; Jno. Boggs, L.; Chas. High, S.; A. Calden, A. S.; L. H. Helphinstine, Chap.; H. Jameson, Sec'y.; F. M. Mayfield, G. K.; Mrs. A. Calden, Ceres; Mrs. L. H. Helphinstine, Pomona; Mrs. R. R. Rush, Flora; Miss Alice Cartmel, L. A. S. Trustees—Jno. Boggs, G. Ralston, Chas. High.

Guenoc Grange.—Officers elect:—H. A. Oliver, M.; W. R. Coburn, O.; J. B. Greenfield, L.; W. G. Cannon, C.; D. M. Copsay, T.; W. C. Greenfield, S.; J. N. Hamilton, A. S.; Mrs. J. C. Murphy, L. A. S.; Mrs. A. H. Cheney, Flora; Mrs. W. R. Coburn, Ceres; Mrs. W. G. Cannon, Pomona; Mrs. A. A. Ritchie, Sec'y.

Ferndale Grange.—Officers elect: F. L. Boynton, M.; John C. Dungan, O.; Chas. J. Barber, L.; W. Stover, S.; J. Criss, A. S.; R. S. Tyrrell, C.; G. G. Dudley, T.; G. W. Griffith, Sec.; James Smith, G. K.; Mrs. James Smith, Ceres; Mrs. J. S. Freeman, Pomona; Miss A. Winfield, Flora; Mrs. W. Stover, L. A. S. Executive Committee:—G. G. Dudley, John C. Dungan and James Smith.

Bennett Valley Grange.—Officers elect: J. De Turk, M.; A. Burnham, O.; S. Story, L.; A. Lacque, S.; D. E. Miller, A. S.; C. Lyman, C.; N. Carr, T.; Jos. Burnham, G. K.; J. H. Plank, Sec'y.; Mrs. F. A. Robinson, Ceres; Miss S. R. Plank, Flora; Mrs. H. Carr, Pomona; Mrs. C. Lyman, L. A. S. Executive Committee: N. Carr, G. N. Whitaker and J. De Turk.

Walnut Creek Grange.—Officers elect:—Nathaniel Jones, M.; W. L. Huston, O.; Walter Benrick, L.; B. F. McClellan, S.; John Livingstone, A. S.; Orris Faler, C.; John Larkey, T.; W. K. Daley, Sec'y.; L. Langenkamp, G. K.; Mrs. M. E. Larkey, Ceres; Mrs. E. S. Faler, Pomona; Miss Eliza J. Jones, Flora; Mrs. M. L. Huston, L. A. S.

Camden Grange.—Officers elect: Charles H. Ivius, M.; Jas. M. Woods, O.; Wm. Leffingwell, L.; Jos. L. Leffingwell, S.; E. O. Everett, A. S.; Wm. Skinner, C.; J. D. Campbell, T.; Herbert Olmstead, Sec'y.; J. Mullen, G. K.; Mrs. M. E. Ivius, Ceres; Mrs. E. M. Utley, Pomona; Mrs. G. M. Blunt, Flora; Mrs. Anna Everett, L. A. S.

Windsor Grange, Sonoma Co.—Officers elect for ensuing year: A. B. Nally, M.; G. Kennedy, O.; E. Lindsay, L.; B. Clark, S.; E. H. Barnes, A. S.; S. V. R. Klink, C.; C. Clark, T.; J. H. McClelland, Sec'y.; Wm. Brooks, G. K.; Mrs. E. Lindsay, Ceres; Mrs. S. B. Klink, P.; Mrs. S. M. Calhoun, F.; Mrs. N. A. Kennedy, L. A. S.

Old Creek Grange.—Officers elect: Isaac Flood, M.; R. C. Swain, O.; L. H. Draper, L.; Alex. Fraser, S.; Jas. A. Flood, A. S.; Mrs. R. M. Preston, C.; J. L. Kester, T.; R. M. Preston, Sec'y.; Sam'l Kingery, G. K.; Mrs. Bettie, C.; Miss M. V. Nickolls, P.; Mrs. R. A. Kester, F.; Miss Mary Greening, L. A. S.

J. E. Edwards, Secretary of St. Helena Grange, was elected local Business Agent of the Grange on the 20th ult.

From the Granges.

Editors Press:—Our Grange at Nord, held its first annual election, on Saturday last, the installation to take place in two weeks from that time. The officers elected are: G. W. Colby, M.; Samuel Bragg, O.; John McIntyre, L.; James McCarger, S.; William Vettle, A. S.; Lemuel Sweeney, C.; Joseph R. Haughton, T.; Albert Carmeu, S.; A. Thrower, G. K.; Mary Carlisle, Ceres; Mrs. Ann Warren, Pomona; Miss Addie Turner, Flora; Mrs. George Van West, L. A. S. Storm, flood and mud have prevented regularity in meeting, but with the coming of settled weather a goodly number of initiates are expected, also additions from members of the Chico Grange, who are better accommodated at Nord, when we hope the Grange will become a synonym for social greeting and business of the highest interest to the farming community. People interested, especially in schemes for irrigation, find their ardor somewhat dampened by the present wet weather, but two or three months hence will better determine whether they can be altogether dispensed with. But the "gude mon" is nodding over a waning fire. So a "Happy New Year" and abundant success for many years to come. HANNAH.

Nord, Butte Co., Jan. 1, 1874.

SEBASTOPOL GRANGE.—M. O. Hicks, Master, writes under date of Dec. 27th, as follows:

Permit me to speak a word of encouragement for our Grange and the Order in general. In reporting our progress, though it be small, we must remember that small items make up large volumes. We had our Harvest Feast to-day, and had a good time, (and lots of it) and a good attendance, and the best of all is that we received during the day nineteen applications for membership. Does not that sound encouragingly, especially when there is lots more of good material yet to come, and ready to come too? Yes, we expect to graduate these 19 during January, and when done with them to have another class as large or larger. We shall have our next Harvest Feast on the last Saturday of January, and shall be happy to have our Brothers and Sisters of other Granges meet us and help us to enjoy the Feast; can't the RURAL send up a representative?

Watsonville Grange.—Secretary A. F. Richardson writes as follows:—"Our Grange is doing as well as one could wish, and will continue, if nothing especial occurs, to prevent. It numbers among its present members some of our most prosperous farmers. Farmers here are all ready for putting in grain, and many on the tablelands are pushing the plow to the utmost; while those on the rich bottom lands, for fear of the grain being drowned out or growing too rank, are holding on for a few days. But the land in all parts of this valley is in the very best condition, and should the season continue mild, this valley will produce well. Wheat here frequently yields 4,000 pounds (66 bushels) to the acre, by actual weight. A very bad case of small-pox has been reported at the Western Hotel, in Watsonville. I shall soon be able to send you a club of a goodly number of names for the RURAL Press."

KELSEVILLE GRANGE.—I take pleasure in forwarding a few lines to you in reference to what we are doing here: The Grange was organized on the 3d of October, by the worthy Master, J. M. Hamilton, with 19 charter members. We have at present 36 members, with assurance of a large increase as soon as tax paying is over. There is much enthusiasm among the farmers here on the subject, and we have material for a strong Grange. The farmers in this county need much improvement in their mode of farming, as we are isolated from the older and more improved agricultural counties of the State. I hope to send you a goodly list of subscribers as soon as tax paying is over. Yours Fraternally, T. ORMISTON, Sec'y.

HEALDSBURG GRANGE.—The installation of officers for the ensuing year took place at noon, Saturday, Jan. 3d, at the Presbyterian Church, which was crowded with members of the Order and their friends. Large delegations were present from Cloverdale, Geyserville and Windsor Granges. Bro. A. B. Nally, Master of Windsor Grange officiated as installing officer in a very able manner. After the ceremonies at the church were over, the patrons and their families adjourned to the Grange Hall, where a bountiful feast was spread, and all seemed to vie with each other in doing justice to it, and determine to have a good time.

[The address of Past Master T. H. Merry, at the Installation has been furnished to the RURAL at the request of the members of the Grange. We regret lack of space for it now in this issue. It may be expected in our next.—EDITORS PRESS.]

Petaluma Grange.—Is in a very flourishing condition. We now number 75 members and still they come. The installation of officers for the ensuing year takes place on the 3d of January, after which I will send you a list of subscribers. The ladies of our Order propose to receive New Year's calls at our hall at 11 o'clock, January 1st. D. G. HEALD, Sec'y.

Petaluma, Dec. 27th, 1873.
[Much obliged to Bro. Heald for the subscribers already sent.—EDS. PRESS.]

BENNETT VALLEY GRANGE.—J. H. Plank, Secretary, writes: We now number thirty members, a small membership compared with some of our sister Granges surrounding us. The peculiar situation of our valley among the hills, and the close proximity of other Granges, will always prevent us from being numerically strong. We claim the credit, and I believe the same has been granted us, of being the first Grange in California to erect a "Grange Hall," dimensions of hall 30 by 60 feet, 12 feet off main hall for ante-rooms, leaving main hall 30 by 48 feet. Before spring we expect to have the plastering and painting entirely completed, giving us then a good, substantial and well-finished hall in which we will always be pleased to receive our fellow Patrons from any part of the State.

FERNDALE GRANGE.—A letter from Secretary Chas. J. Barber of this, one of the first Granges organized in Humboldt County, says: "The Ferndale Grange is progressing surely. We have doubled our numbers since October 3d, when we organized with 30 Charter members, and I think before January, 1875, we will number 150 or more. Our regular monthly meeting came off Dec. 27th, at which was initiated 12 in the third degree. At our last meeting we elected officers for the year 1874. Their installation will take place next Thursday, Jan. 1st, when a large class will receive the 4th degree, after which we propose to have a feast and a general good time. I send you 13 new subscribers to your valuable paper, all members of the Grange."

CLOVERDALE GRANGE.—Chas. H. Cooley, Secretary, writes, under date of the 4th, as follows: At the first meeting after their reception, Cloverdale Grange adopted the constitution and by-laws recommended by the State Grange with two slight amendments. At their regular monthly meeting second Saturday in December, they elected the following officers: Chas. H. Cooley, M.; H. Keir, O.; Wm. Caldwell, L.; J. G. Heald, S.; W. D. Sink, A. S.; R. Lewis, C.; Wm. M. Howell, T.; J. B. Cooley, Sec'y; Mrs. Heald, Ceres; Mrs. Cooley, Pomona; Miss Waite, Flora; Mrs. Waite, L. A. S. All re-elected, except Treasurer and Secretary, who asked the Grange before balloting to elect others in their places. At the next regular meeting, 10th instant, Bro. Merry of Healdsburg, will install.

OLD CREEK GRANGE.—R. M. Preston, Secretary, writes: "Matters in this Grange are progressing smoothly. A number of additions have been made during the quarter just closing, with more in prospect. We have had magnificent rains, with peculiarly fine growing weather. Following soil on the hills is soaked to a depth of two feet and over; grasses are growing as fast as is possible for them to do. In all probability this section will have a very good season, both for grain and dairy farming, and in consequence Grangers are in excellent spirits."

SEBASTOPOL GRANGE.—Jos. Purrington, Secretary, writes us that he finds most of the Granges of his vicinity subscribers to the RURAL. Concerning the Grange, he says:—"We held our Harvest Feast Dec. 27; had a glorious day for it. We received 18 applications for membership, at that single meeting. Our Grange is all enthusiasm, and will be heard from, some day, to the detriment of land sharks and monopolists."

LOS BANYOS GRANGE.—Brother Viney, writes that this Grange is prospering—that they had a "grand time" at their Harvest Feast on the 27th ultimo,—10 members took the Fourth Degree. Bro. V. says the farmers throughout the San Joaquin valley are in good spirits in anticipation of good crops the coming season.

WALNUT CREEK GRANGE.—This Grange, writes Secretary W. K. Daly, which was organized a few weeks ago with 28 charter members, is growing slowly but surely. Expects that after the busy months of January and February have passed, they will be able to make a better report of progress than they have heretofore done.

SANTA CLARA GRANGE.—The Secretary of this Grange writes as follows: Nothing new. Officers were installed on 2d inst., and those at San José on 3d. Farmers are very busy now putting in the seed, jubilant over the prospects of good crops and good prices.

GUENOC GRANGE.—Bro. Ritchie, in sending the list of officers elect, says: "Guenoc Grange now numbers 47 members. Every one in that vicinity is hopeful with regard to the coming crops, and all are in favor of "No Fence."

NAPA GRANGE.—The officers of this Grange will be installed on Saturday, January 17th, by Bro. Baxter, the retiring Master, and Secretary of the State Grange.

STATE GRANGE IN NEW JERSEY.—This State, which reported only four Granges in September last, effected a State organization on the 26th of November with 24 subordinate Granges. Edward Howland was elected Master, and R. W. Pratt, Sec'y. They expect to number fully 100 Granges in that State by next spring.

New Granges.

ADAMS GRANGE, FRESNO COUNTY.—A letter from Thomas H. Wyatt, of Big Dry Creek, Fresno County, informs us that a Grange was organized at that locality on the 27th ult., by State Lecturer, J. W. A. Wright, with a full list of charter members. The following were elected officers for the ensuing year:—Maj. T. P. Nelson, M.; Thos. Hall, O.; Thos. Jeans, L.; J. W. Potter, C.; Thos. H. Wyatt, Sec'y.; W. W. Shipp, T.; Logan Potter, S.; J. A. Jack, A. S.; E. H. Patterson, G. K.; Mrs. Mary Hall, Ceres; Mrs. M. B. Ross, Pomona; Miss Lanna Jeans, Flora; Mrs. S. F. Doak, L. A. S.

LOCKEFORD GRANGE, SAN JOAQUIN CO.—Bro. E. B. Stiles, Deputy, reports the organization of a Grange by him, on the 29th ult., at Lockeford, San Joaquin county, with full number of charter members, and the following list of officers:—G. C. Holman, M.; G. B. Ralph, O.; Sol. S. Stewart, Sec'y.; Benj. Thomas, T.; A. J. Williams, S.; F. J. Megerle, A. S.; Geo. Frethaway, G. K.; John Frethaway, C.; E. P. Megerle, L.; Elizabeth Ralph, L. A. S.; Mrs. G. C. Holman, Ceres; Mrs. A. J. Williams, Pomona. The name of the Lady holding the office of Flora, has not been furnished us.

Bro. J. W. A. Wright has furnished us with the following record of his work since his last report:

CHRISTMAS GRANGE, organized on Christmas day—hence its name—Visalia, Tulare county; Wiley Watson, M.; H. G. Higbie, Sec'y.

ADAMS GRANGE, Dry Creek, P. O., Fresno county; T. P. Nelson, M.; Thomas Wyatt, Sec'y.

BORDEN GRANGE, Borden, Fresno county; J. W. A. Wright, M.; J. H. Pickens, Sec'y. This Grange, as will be seen, has been organized at Bro. Wright's new place of residence, Borden, and his friends there have insisted on his again occupying the chair.

BAKERSFIELD GRANGE, Bakersfield, Kern county; S. Jewett, M.; Jerome Troy, Sec'y.

NEW RIVER GRANGE, P. O. Bakersfield, Kern county; John G. Dawes, M.; Jas. Dixon, Sec'y.

PANAMA GRANGE, P. O., Bakersfield, Kern county; P. H. Ross, M.; J. F. Gordon, Sec'y.

Bro. Wright makes no sinecure of his office of State Lecturer. In addition to his work recorded above, he lectured and installed the officers elect at Turlock, on the 2d inst., and enjoyed a Harvest Feast.

The next day he visited Stockton Grange, lectured in the afternoon; in the evening installed and lectured at Rustic Grange, near Lathrop.

Yesterday he was to have organized a Grange at Marysville, and possible another near that city. To-day (Saturday) he lectures before the Yuba, Butte and Sutter Granges, at Yuba City. On Monday he lectures before the Colusa Grange, and on Wednesday he speaks before the Yolo Grange at Woodland.

On the 17th he meets the Granges of Napa county, at Napa City, and will probably organize a Grange at Baryessa.

THE RAILROADS AND THE WHEAT MARKET.—A short time since the wheat syndicate which was buying wheat in the neighborhood of St. Croix, Wis., in the interest of the railroad men, refused to give but 78 cents per bushel; whereupon the Granges appointed men to buy where necessity compelled farmers to sell, and otherwise store wheat until better prices were offered by buyers for transportation. They instructed their agents to pay 90 cents instead of 78, as offered by the syndicate. The speculators immediately, thereupon offered 95 cents.

Now, were the speculators swindling the farmers when they refused to pay more than 78 cents, or did they determine to lose money when they decided to pay 95 cents—an advance of nearly 20 per cent? If it had not been for the Grange organization, the farmers about St. Croix would have been compelled to sacrifice their grain at 20 per cent. less than its value. A similar class of facts, will be found to exist in every farming locality throughout the Union. Nothing but a close organization like the Grange has been found sufficiently powerful to break down such oppression.

FROM TEXAS.—Bro. James M. Thompson, sends remembrance to his Grange at Napa, through State Secretary, Baxter. He expects to return to California by the 20th of the present month. He alludes, in his letter to the barren and flowerless appearance of nearly all the rural homes where he is sojourning, presenting a most marked contrast with the tree and flower-embosomed homesteads about the villages of his own Napa valley.

Interesting Letter from Bro. Wright.

DEAR RURAL:—A Happy New Year! And why should it not be a happy one to you who have so long, so ably and fearlessly advocated the interests of the producers of our coast? You who have so truly represented the noble principles of reform which the Patrons of Husbandry in America are now successfully inaugurating? And why should not all Patrons be happy on the advent of a New Year which sees recorded among the good works of the past twelve months, the establishment of over 8,000 new Granges in the United States? This makes more than 9,500 now in successful operation with but one purpose in view, uniting not far from a million earnest men and women, determined to labor untiringly with the aid of many outside friends, in this glorious cause of reform. A few weeks more will swell the number of our subordinate Granges to 10,000. A year ago, but ten State Granges were organized. To-day there are twenty-nine, and our Order exists in every State in the Union except Delaware, Rhode Island and Connecticut.

During the last five months in our own State the number has increased from 35 to 150, or more than fourfold.

In Dec. alone, 21 were organized in California. From Dec. 10th to the 31st inclusive I had the pleasure of organizing thirteen Granges in Fresno, Tulare and Kern counties—as follows:

Dec. 10th, 10 A. M., Garretson Grange, Fresno Co., P. O. King's river; Dec. 10th, 7 P. M., Fresno Grange, Fresno Co., P. O. Fresno city; Dec. 11th, 7 P. M., Lake Grange, Tulare Co., P. O. Kingstone; Dec. 12th, 7 P. M., Franklin Grange, Tulare Co., P. O. Kingstone; Dec. 13th, 7 P. M., Deep Creek Grange, Tulare Co., P. O. Farmersville; Dec. 16th, 7 P. M., Tule River Grange, Tulare Co., P. O. Porterville; Dec. 20th, Panama Grange, Kern Co., P. O. Bakersfield; Dec. 22d, Bakersfield Grange, Kern Co., P. O. Bakersfield; Dec. 23d, New River Grange, Kern Co., P. O. Bakersfield; Dec. 25th, Christmas Grange, Tulare Co., P. O. Visalia; Dec. 26th, Visalia Grange, Tulare Co., P. O. Visalia; Dec. 27th, Adams Grange, Fresno Co., P. O. Fresno city; Dec. 31st, Borden Grange, Fresno Co., P. O. Borden.

So scattered are these farming centers, that it required a trip of nearly 500 miles by railroad, stage and private conveyance to do this work. But I had the satisfaction to leave nearly 400 new Grange members in the three counties as seed for the future growth of our Order, in that remote portion of our State. They promise to be earnest workers too, and are fully alive to the importance of our work. It was a pleasing sign of awakening interest to find larger numbers attending the meetings appointed for my return, than there when I first passed up the valley. It will be but a short time before these Granges will double their membership.

They need the benefits following from our Order, and they know it. It may be a matter of interest for your general readers to know the number of Granges organized in the United States, for each month in 1873.

Following is the Official Report: January 158; February 347; March 666; April 571; May 696; June 625; July 612; August 829; September 919; October 1,050; November 974; December (to the 13th) 517. Total to Dec. 13th, 7,964.

Few of these exist in the Territories; but the work is beginning there. Even from distant Montana, the cry comes, "We must have Granges," as will be seen from an accompanying communication.

With reference to our present season in this portion of the State, farmers are very hopeful. We have had already about six inches of rain, and rain having commenced early, our crops are a month ahead of their condition this time last year. May our prosperity for '74 surpass that of '73.

Yours,

J. W. A. WRIGHT.

Borden, Fresno Co., Jan. 1st, 1874.

Catholics as Patrons of Husbandry.

Our subscriber, Mr. Gallagher (a Patron), of Sebastopol, has inquired of Archbishop Alemany, of this city, as to whether it is against the rules of the Catholic Church for its members to join the Order of Patrons of Husbandry. The Archbishop answers that, so far as he has examined into the matter, he is of opinion there are no objections; in fact that he rather thinks favorably of the matter, and that it is advisable for Catholics who are eligible to join the Order. The Archbishop is wise, and truly Catholic in his decision.

It is well known that the Catholic Church prohibits its members from joining any secret society; but we presume the Archbishop judges—and, if so, rightly—that, in the general acceptance of the term, the Order of P. of H. is not a secret society. Its members simply meet and talk business, and that business is kept a secret, just as such things are among all business associations. The Catholic Church certainly does not require its adherents to reveal honest business secrets.

That Church, as we understand it, simply sets itself against such secret societies as may be supposed to set up a peculiar standard of morality or religion, or which practice mys-

terious ceremonies and rites, the object and purport of which are not announced. The P. of H. have no objects or purposes which are not fully and openly avowed. Their so called secrets, relate simply to business matters and certain simple, harmless signs of recognition, which may enable its members to recognize each other, when strangers, and thus prevent fraud or imposition. Against such things we presume no Church can have any objection. In this sense of the term every successful business man belongs to a secret society, or is one himself.

There are great numbers of Catholic farmers in this and the Eastern States, whose interests are identified with our Order, and whose aid and support would greatly strengthen it. This decision will remove the doubt which many have entertained with regard to joining, and give full assurance to the few who have already taken our view of the case, and identified themselves with the Order.

So important is a membership in the Order considered in some parts of the Western States, that great numbers of Catholics have broken over the prohibition, and united with the same. In Olmstead county, Minnesota, the Catholic farmers held a large meeting in Rochester township, passed resolutions favoring the movement, and regretting that the obligation of secrecy prevented their co-operation as actual members of the Order. They furthermore resolved to form an open organization, with similar objects in view as those entertained by the Granges. One of the resolutions passed, reads as follows:

Resolved—"That, though not Patrons, we aim at the same purpose, and, in a broad sense, co-operate with and fight by the side of the Order, on the same field against tyrannies which, unhappily, are possible even in a free republic."

The Catholics of the adjacent counties, at latest reports, were moving in the same direction. If the decision of Archbishop Alemany is generally concurred in by others of his faith, the door will be fully open for a large and important influx to the Order of such as are in full sympathy with us, and who might thereby add by their numbers and strength to the power and influence of the Patrons of Husbandry.

Co-operation in the Grange.

The following essay was read by D. K. Rule, Lecturer, St. Helena Grange, No. 30., Dec. 27th, and by unanimous vote ordered to be sent to the RURAL PRESS, for publication:

What is our object as Patrons of Husbandry? Co-operation. To protect the cultivator of the soil—he who lives by the sweat of his brow, "the hardy son of toil"—from the oppression of moneyed monopolists, who fully comprehend and practice "co-operation," against us, and for their own aggrandizement. We must meet these men on their own ground, fight them with their own weapons, less their dishonesty and oppression.

But this is not our sole object, or should not be. I shall leave the more direct consideration of the pecuniary advantages of our association to others more competent, and confine myself to that of a few things for our own general improvement.

The Granges have taken the place of "Farmers' Clubs," in which was discussed all things pertaining to the soil, the products thereof, and their conversion into money—money—money, the sign of property and prosperity.

The combination, elimination and dissemination of our experience and observations, as agriculturists, should certainly occupy much of the time of our Granges. Let every one bring his mite; let every Brother or Sister tell his or her successes or failures; much is to be learned from the latter—a chart of shoals and sands which we should avoid.

My present essay shall be chiefly devoted to some of the means by which we may aid each other. All which beautifies and renders home pleasant and endearing; all which refines the taste and gives pure pleasure is useful. The utilitarian who confines his idea of the useful to pounds, shillings and pence, makes a God of mammon, and knows not true enjoyment of the good things, which our one, true and beneficent God has placed within the reach of all who will obey His laws.

The beautiful of rural life is ever useful; let us cultivate it around our homes, and make home the dearest spot on earth; make our wives, our husbands, our children, prefer home to all other places.

How may we, the Patrons of Husbandry, contribute to this end?—by co-operation! Has a Sister a rare plant—let her propagate it and divide with her Sisters; has a Brother a rare or superior fruit or grain—let him do likewise. By co-operation of the Sisters of our Order, throughout this State, each and all may, in a short time, with little expense, possess every beautiful plant of our prolific soil and balmy clime. So with the Brothers; let them exchange vines and trees, grain and grass; let us be one family!

But these material things should not be all that we should exchange. Let us exchange our experiences—our thoughts. Has a Sister found a superior method of making bread or butter, or of preserving fruits, let her, through our organization, share her knowledge with

her Sisters, for it has been said that, "the nearest road to a husband's heart leads through the stomach." I, as a man and a husband, must deny this; yet every husband should be taught by his wife, to prefer her table to that of any other. Sisters, make home a charm; not only by beauty, smiles, kind words and kisses, but by material things which man's grosser nature demands. Let the Brothers also share their experiences, and render due aid to Sisters in beautifying their homes; let us study the chemistry, the anatomy, the physiology of our trees, vines, and plants—and communicate the results of our observations.

The modes and extent of beneficial co-operation are without limit; but I shall here call attention to the interchange of books and periodicals. We will say that A takes the RURAL PRESS, B the Granger, C the Agriculturist, D the Scientific American, etc.; let us have a hall, a room of our own, and after the primary reading of our journals, instead of sending them to the waste paper basket, bring them to our reading room; thus, for the cost of one, we may have the reading of a dozen publications on useful subjects. By co-operation we can soon have a library; one as useful in all respects as if personally owned, yet having cost in the aggregate, more than many of us could individually afford. This last idea I take from the communication of "Kennett," in a late number of the Granger. Having just borrowed one idea, I will borrow another from a Sister. It is drawn from her plants—cuttings of plants, placed in water and a warm atmosphere; some send forth delicate leaflets and fragile, but form no roots; they soon perish. Others send out leaves and roots, and are soon fit to plant in Mother Earth, quickly thereafter rewarding her labor and care with a rich display of verdure and bloom.

I wish that time would permit me to copy her language, but her application was, that the Grange must not be all leaves and perfume; that it must take root; then send forth things of beauty to charm the senses and purify the heart; else, like the tender leaflets and undeveloped flower buds of her rootless plants, it shall like them soon perish.

We have all read, or should have read, the fable of the old man—his contentious sons—and the bundle of rods. It is, in substance, that he bade each son bring him a rod; then ordered the oldest to bind them together firmly; each son, in his turn, was commanded to break the bundle; none could succeed. The rods were then separated by the father and one given to each to break; the task was easy! Brothers and Sisters; let us remain bound together with fraternal bonds.

I read when a boy—how long ago I will not say—a little story in rhyme—a rural one—of a young farmer who, on the morning after taking his bride home, threw a rope over the roof of his cottage, and called to Hannah Jane to pull! She dutifully and strongly pulled, but in vain. Then Richard called her to his side and said, "come pull with me—you pull and I will pull;" the rope was easily drawn over. The story ended with, "we will both pull at one end and both pull together." Granges! Brothers! Sisters! Let us all pull at one end and all pull together.

Organizing a Grange.

Wm. Collet furnishes the *Indiana Farmer* an interesting account of his experience in organizing a Grange. He says:—"Organizing a Grange is not, by any means, a desirable task, when one has to talk the matter over, stating the aims, designs and intents of the Order two or three times, and answer the questions the entire company may ask. Then, when you think you are ready to work, some one who has never given the subject a moment's thought, has never read an article in relation to it, nor in all probability has ever taken a paper in his life, says, with a grunt, 'It's all a humbug,' or perhaps, 'Well, we must have time to think on the subject, and you can't organize to-night, anyway.' I have met with such people, and again, I have been called upon to organize Granges where the people were as intellectual in mind, as polished in manners and as courteous and polite in word and action, as pure minded, as well educated and honorable as men and women should be. Such an assemblage of people I once found awaiting my coming. When I arrived, the would-be Grangers had already assembled, with a venerable gentleman filling the chair as president of the meeting, while another was making an address on the subject of the Grange, but gracefully yielded the floor to the Deputy Lecturer. It was a great pleasure to me to address so intelligent and appreciative an audience, to communicate the necessary information, and to reply to the questions propounded. Leading Republicans, Liberals and Democrats were there congregated—men prominent in their respective parties, who, ignoring for the once all political disagreements, clasped hands in the common cause, unanimously agreeing to band themselves together as brother laborers and farmers for the uprooting of the evil they deplore, and intent on securing a different class of legislation, such as will not be for the sole benefit of a few moneyed corporations to the exclusion of the rights of the great mass of the people."

Of course the "leading Republicans, Liberals and Democrats" who had banded "themselves together as brother laborers and farmers," got each a flea in his ear, which rendered the situation so uncomfortable as to make it necessary they should retire to remove it.

A Call for Granges from Montana.

EDITORS PRESS:—Allow me to send you an extract from an interesting letter I have just received from Nevada City, Montana, inquiring "What can we do to have Granges?" Among other things the writer says:

"I presume you to be a suitable person to address on the subject of organizing a Grange in Montana. There are hundreds here waiting an opportunity and desiring to become members of the Order of Grangers. It is true we have no railroads, but we have that which needs restraint, such as political rings, mercantile rings, and officers who desire to steal the honest earnings of the laboring man. I am frequently asked by my neighbors why we cannot have a Grange started, but my answer is we are too far from every one but ourselves. But this will not do, we must become Grangers. Our Legislature will soon, no doubt, bring before the public the subject of subsidizing a railroad. Now, what I desire to know is where a petition for an organization of this kind will have to go, etc."

In this way, brothers and sisters, are the producers even of our wildest regions looking to our noble Order as the only sure relief from imposition and oppression. Hope of America, as it now is, may it advance to a decisive victory, to be followed by such lasting good results as a bloody revolution can never bring. May we who are already united in the work, be firm and as a unit, in working out for all the oppressed of our land, those peaceful measures of reform which are the very ground-work of our Brotherhood.

To our Montana friends, I shall send one of our forms of application, and shall submit the case to the consideration of Dudley W. Adams, Worthy Master, of our National Grange. There are wild Indians out that way, and it may be well to advise him to send as his Deputy for that distant work some one who, in common parlance, "has a skating rink on the top of his head." For, as their various tribes of Indians (those Blackfeet and other Indians) have not yet learned enough about our Order to know how dangerous it is to scalp a Granger, they might perhaps relish taking off a scalp for one of us as much as for any other white man.

Then, who knows, but that some disappointed speculator or monopolist might use a part of that gold which they can't get our noble legislators of California to accept at this session, in order to induce some of those vagabond Indians to scalp a Granger or two, when engaged in the work of organizing, just to make the thing unpopular, you know?

You have rather a rough country out your way, my friend, but rest assured, the Grange movement will do what it can for you just as soon as possible. I should like to be able to pay your region a visit myself, but am likely to be kept too busy at home for the present.

You may be sure of one thing. When Granges are organized among you, they will place under your control the desired means for reform. Yours fraternally, J. W. A. WRIGHT.

Borden, Fresno Co., Jan. 1st, 1874.

A TERRITORIAL GRANGE, for Dakota Territory, was organized at Vermillion on the 5th of December, by Master A. B. Smedley, who was especially delegated for that purpose. Twenty-five subordinate Granges were represented. E. B. Crew, of Lodi county, was elected Master, and O. T. Stevens, of Jefferson, Union county, was chosen Secretary. (This Grange opens under most flattering auspices.)

NEARLY every article of farm produce that was grown on the delta of Kern river last year is now exhausted. It has all passed from the producer, at high prices, and is now mostly consumed. Almost the only article, of which any is left, is hay, but there is not sufficient until the next crop comes in. This scarcity is not owing to bad crops, better never grew, but to the large immigration and an unexpected demand from the mountains, where crops were not good. All the barley used for feed and seed is imported. To pay for what has been required thus far, has already taken large sums out of the county. Mr. Cross informs us he has sent away \$600 this week to pay for a short supply for his stable, and this is only one out of the many instances occurring and to occur. It is to be regretted all this money could not be retained at home. Had there been about four times the area of cultivation the past season it would have been enough. We hope, with the most productive soil in the State, we may not be placed in this anomalous, if not discreditable position again.

A GREAT many seemingly extravagant tales about the productiveness and profits of the alfalfa crop are going the rounds of the press, but here is one we know to be well within the bounds of probability and strictly true. A gentleman living in the Lower Kings River county informs us that from five acres of alfalfa he last year cut twenty tons of hay, that netted him \$10 per ton, and raised one crop of seed weighing 2,200 lbs., that netted 20 cents per lb., so that he made a clear profit off his five acres of alfalfa of \$640. Of course this story sounds small in comparison with many we hear every day, but it has this advantage, that no one will doubt its truth and will seem quite good enough to any reasonable man.



Fishing.

"Harry, where have you been all morning?"
 "Down at the pool in the meadow-brook."
 "Fishing?" "Yes, but the trout were wary—
 Couldn't induce them to take a hook."
 "Why, look at your coat! You must have fallen.
 Your back's all covered with leaves and moss."
 How he laughs, good-natured fellow!
 Bad luck fishing makes most men cross.

"Nelly, the Wrights have called; where were you?"
 "Under the trees by the meadow-brook.
 Reading, you know, and it was too lovely;
 I never saw such a charming book."
 The charming book has pleased her greatly;
 There's a happy light in her sweet blue eyes,
 And she hugs the cat in most fervid fashion,
 To staid old Tabby's intense surprise.

Reading? well, yes, but not from a novel.
 Fishing? truly, but not with a rod.
 The line is idle, the book neglected;
 The water grasses whisper and nod.
 The sportsman bold and the earnest student
 Talk softly of—what? Perhaps the weather;
 Perhaps—no matter; whatever the subject,
 It certainly brings them close together.

It causes their words to be softly spoken,
 With many a lingering pause between,
 The while the shadows chase the sunbeams
 Over the mosses gray and green.
 Blushes are needful to its discussion,
 And soft, shy glances from downcast eyes,
 In whose blue depths are lying hidden
 Loving gladness and sweet surprise.

Trinity Chapel is gay this evening,
 Bright with beauty, and flowers, and light;
 A full-dressed fisherman stands at the chancel,
 With Nelly beside him all in white.
 The ring is on, the vows are spoken,
 And smiling friends, good fortune wishing,
 Tell him his is the fairest prize
 Ever brought from a morning's fishing.

—Galaxy.

World's Festivals—Christmas and New Year.

The very circumstances of the case prevented the first colonists of New England from being a holiday-keeping people. Followers of a stern religious faith, and landing in a stern and forbidding country, where nature seemed continually to frown, and which was rendered fit to support the fathers of the infant commonwealth only by the most exacting toil, the earlier settlers frowned on holidays and holiday keeping, and the influence of their ideas and customs is felt more or less strongly even to this day. Far different were the Knickerbockers, the Virginians, and the French and Spanish colonists of Louisiana and Florida. With them religion and temperament alike favored holidays and enjoyment, and the smiling earth producing abundantly through the labor of the sun-darkened sons of Congo and of Guinea, still more disposed them to feasting and recreation. So that while the South looked to enjoyment the North looked to labor, and of all the days in the year, Thanksgiving was the only one which they could call their own. Hence arises the division of the Union into three great social as well as political sections, with varying ideas and clashing customs. The New Englander had for his great holiday, Thanksgiving; the Knickerbocker and the Pennsylvanian held high carnival on the New Year, while with the South Christmas was the great festal season of the year. Here,

On the Pacific Coast,

However, these three great elements have merged into one, and they have been leavened by the presence of a fourth, made up of the sons of every nation under heaven. Hence we equally revere Thanksgiving, Christmas, and the New Year, besides a number of national festivals, celebrated by those born beyond the seas, and whose celebration shall be continued, even when all our many and varying cosmopolitan elements shall have blended into one great people. The geniality of our climate makes the festal season more enjoyable than elsewhere west of the Empire City; but the weeping of the heavens often makes the holiday devotee sigh for the cold, clear air, the snows, and the jingling sleigh bells of the East. Christmas and New Year have long been the festal season of the Christian world, and with us they are becoming more so year by year. The season of renewal of friendships, of feasting and merry making and present making, the season of Santa Claus, and of visits, the season of peace and good will amongst men. It would seem that at the time when nature frowns, humanity feels disposed to rejoice, and that revel is necessary to offset the depression produced by the bleakness and inclemency of the season.

In Olden Times

The celebration was not confined to the two great festal days of Christmas and New Year. From Christmas day to the sixth of January, the twelve days of Christmas were one season of high revel, when young and old, wise and foolish alike gave themselves up to merriment and rejoicing. Sometimes even by high and wealthy noblemen, the season of rejoicing was kept up from October to the New Year. The festival of Christmas is essentially Christian. That of New Year, however, is cosmopolitan, and while the one can claim proudly an observance of nearly two thousand years, the other can point back to one reaching to the beginning, through a vista of untold

centuries. It was born with man, and only with him will die. Christmas Day, the birthday of the Savior, seems to have been a holiday in earliest Christian times, for Clement, the successor in the See of Rome, of the apostle, Peter, in one of his epistles, refers to its observance. It was not, however, till the time of Pope Telesphorus that it was made obligatory, but he, in the second century of the Christian Era, ordered that it be honored in the same way as the Sabbath. Nevertheless, there was a great diversity of opinion as to the day on which it should be observed, for some parts of the Christian world kept up Christmas in March, some in December, and others in mid-summer. A tragic incident connected with it occurred in the reign of the Roman tyrant Diocletian, who being in the city of Nicomedia, in Asia Minor, and hearing that the Christians were celebrating the birthday of the Savior, caused the church to be set on fire, when all within it were burned alive. The time for the celebration was settled in the fourth century by Pope Julian, at the request of St. Cyril of Jerusalem, when a convocation of the Christian Bishops of the East and West decided that it was on the 25th of December, at midnight, that Christ was born. Hence the midnight mass with which the occasion is celebrated in the Catholic, Greek, and Coptic churches. In many countries, Christmas is celebrated only as a religious festival, though with magnificent ceremonies; in others it is a social holiday as well, devoted to revel, feasting and making of presents. With us it is both, and though we have not the midnight mass with the

Gorgeous Celebration

Of France and Italy, yet nearly all our churches, the Catholic and Episcopal particularly here, are profusely ornamented with flowers and greenery, and special religious services are held therein. Santa Claus, too, makes his annual visit to young and old, particularly the young, and in nearly every household, rich and poor, the Christmas tree flourishes in all its glory, hung with gifts; and the Christmas candle is lighted. Santa Claus hails from Holland; the Christmas tree is a German institution, while the custom of giving presents takes its origin in Ireland and Britain. The greenery used to decorate houses is a relic of the Druidical customs prevalent in Pagan times among the Celtic nations. In Ireland and great Britain, Christmas is the high festival of the year, and the annual re-union of families whose members during the preceding twelve months have been separated by time and distance. Every one expects gifts, and it is the custom for apprentices and shop boys to go about requesting Christmas gifts from the customers of their masters. Some commercial houses spend as much as five thousand dollars in making Christmas presents to their customers and employees. These are made on the day following—St. Stephen's or Boxing Day. In Ireland, it is the custom for young men and boys, on St. Stephen's Day, to catch a wren, carry it about in a cage decked with ribbons from house to house, all the while singing an ancient lay, and asking Christmas donations. These are known as the wren boys. In former days, in England, a boar's head was the favorite Christmas dish; now roast beef and plum pudding forms the orthodox Christmas dinner. Formerly, in the houses of the great, a potentate, called the Lord of Misrule, held sway from All Hallow Eve to Christmas Day. In Germany, *Weihnachten* is principally a children's festival, and the *Knecht Ruprecht*, the grandfather of Santa Claus wanders about in bodily form, from house to house, leaving presents for the good children.

New Year's Day

Has been observed by all nations as a holiday from the beginning; and its origin is no doubt coeval with that of man himself upon the earth. But the day on which we welcome the annual return of the year though of old observance as such, at least two thousand three hundred years, has, until quite recent times, been observed by but very few nations. And in nothing has there been greater variety than in the day selected as the first of the year. With the most ancient Eastern nations the first day of the year commenced on or about the twenty-second of September, at the autumnal equinox, with the Chinese year it commenced at the same time, and with the Hebrews, who called it the birthday of Adam, it was the beginning of their civil year. The sacred year began at the time of the vernal equinox, on the twenty-second of March. The ancient Greeks, as also the Celtic and Teutonic peoples of northern Europe commenced the year on the twenty-second of December, the winter solstice, but the more modern Greeks commenced it at midsummer. The Romans, in most ancient times, with a year only ten months long, commenced it in March; but six centuries before the Christian Era, they changed the first day of the year to the first day of January, the day of the festival of the deity *Janus Bifrons*, which was celebrated with feasting, present makings, etc., from which

Our Present Customs Rise.

But though in Italy so long the first day of the year, it is of only quite modern adoption by other European nations. France first adopted it in 1564, then Scotland, which was closely connected with that nation, followed suit; and last, England and her then American colonies adopted it in 1752, little more than a century ago. But Russia and Greece still begin the new year on the first of September, and the Portuguese on the first of December. Thirteen hundred years ago, the French New Year was celebrated on the first of March, subsequently on the twenty-fifth of March, and then on Easter Sunday, for several hundred years. The New Year of the French Revolutionists was fixed on the twenty-second of September, but this system had only a short existence. The nations that follow the faith of Mahomet have no regular day on which to begin the year; it is

variable, one year differing from another. In the Southern hemisphere, in the Empire of Brazil, in Peru, Chili, etc., South Africa and Australia, New Year's Day occurs very near midsummer, on account of the change of seasons in the hemispheres. So that while we have rain and cold on New Year's or Christmas Day, in San Francisco, in Sydney or Melbourne the weather is suited to the climate of tropic India. In some countries, New Year's Day has only a kind of secondary celebration, but in France, Scotland, and the Middle States, it is the great holiday of the year. It is usually celebrated by making mutual gifts, or by calling on friends and acquaintances. The former is the custom in Ireland and Great Britain, the latter in France, Germany, and the United States. Many old and strange customs still linger in connection with New Year's observances, such as drinking spiced ale in England, baking cakes for the occasion, to be divided amongst the members of the family, and of which all are expected to partake, in Ireland and Germany, the cakes in the latter country being called *Hiltzel brod*.

Such is in brief an outline of the origin and customs of the two great festal days of the festive season. The celebrations of the latter on the Pacific Coast are particularly appropriate at the end of this year of plenty, and form a fitting pendant to a season of unusual prosperity.

The Strategic Cat.

All marvelous stories do not come from the West, as the following New Hampshire yarn shows:

"Talking about cats," said Uncle Tim, a regular Yankee, "puts me in mind of a cat I once owned. Let me tell you about her. She was a Maltese, and what that cat didn't know wasn't worth knowin'. Here's one thing she did: In the spring of '46 I moved into the little old house on the Crooked river. We put our provisions down in the cellar, and the first night we made up our beds on the floor. But we didn't sleep. No sooner had it come dark than we heard a tenrii' and a squeakin' in the cellar that was awful. I lit the candle and went down. Jerusalem! Talk about rats! I never see such a sight in my born days. Every inch of the cellar bottom was covered with them. They run up onto me, and all over me. I jumped back into the room, and called the cat. She came down and looked! I guess she sot there about ten minutes, looking at them rats, and I was writin' to see what she would do. By-in-by she shook her head, and turned and went up stairs. She didn't care to tackle 'em. That night, I tell ye, there wasn't much sleep. In the mornin' I called for the cat, and could not find her. She'd gone. I guess the rats had frightened her, and to tell the plain truth, I didn't wonder much. Night come again, and the old cat hadn't come. Says Betsey Ann (that's my wife), to me, says she, 'Tim, if that old cat don't come back, we'll have to leave this place; the rats'll eat us up.' Says I: 'Just you let the old cat be.' I didn't believe she left us for good and all. Just as Betsey Ann was puttin' the children to bed we heard a scratchin' and waulin' at the outside door. I went and opened it; and there stood our old Maltese on the door step, and behind her a whole army of cats all paraded as regular as ye ever soldiers! I let our old cat in and the others followed her. She went right to the cellar door, and scratched there. I began to understand. Old Maltese had been out for help. I opened the way to the cellar; she marched down, and the other cats tramped after her in regular order—and as they went past I counted fifty six of 'em! Oh, my! if there wasn't a row and rumple in that 'ere cellar that night, then I'm mistaken! The next morning the old cat came up and caught hold of my trousers leg, and pulled me towards the door. I went down to see the sight. Talk about yer Bunker Hill and yer Boston massacres! Mercy! I never see such a sight before or since. Betsey Ann and me, with my boy Sammy, was all day as hard at work as we could be, clenin' the dead rats out of that 'ere cellar! It's a fact—every word of it!"

THE AMERICAN GIRL.—The American girl is, like the rest of the creations to which we have been referring, an ideal existence. The real girl, who has just returned from the country, and is occupying herself with preparations for the approaching winter, is not at all difficult to describe. She is a girl of immense energy and but little physical strength. She has, if she can be judged by what she accomplishes, a noble digestion; or perhaps, to be more accurate, she has nobly triumphed over her digestion, and reduced it to complete submission. She is not highly educated, nor does she speak all foreign languages with smoothness and correct idiom; indeed, she has been known to play strange tricks with her own tongue. She is lively, but not witty; she is fond of laughing, without caring very much at what she laughs; she is noisy and loud when she dares to be. As a general rule she knows little or nothing of those matters which used to be considered essential parts of a woman's education, and intends, if she is rich, to have housekeeping, when once she is married, done for her by some one else; and if she is poor she does not think about it any more than she can help. Her notions about marriage itself are a curious mixture of ideas derived from novels, poems, and such acquaintance with the world as girls get from the conversation of young men who dance the German with them through the winter, and walk on the cliffs at Newport with them in the summer. Her life, if she is rich, is in general one of thoughtless pleasure.

YOUNG FOLKS' COLUMN.

Strange and Curious Birds.

The birds of the tropics are no less remarkable for their never ending variety of color and plumage than for their peculiar forms, in which



The Umbrella Bird.

the grotesque, the grand, and the beautiful are equally mingled. In our former numbers we have given illustrations of some of the most remarkable, and we follow with the Umbrella Bird and the Humming Bird.

The Umbrella Bird, or Umbrella Chatterer, has its habitat in South America, and is one of those included in the genus *Bucco*. This bird is remarkable for the crested umbrella shaped tuft of feathers which shade the eyes and the bill, and for the pendant plumage hanging down



The Humming Bird.

its breast. What may be the object of this appendage it is impossible to say—that sometimes suggested, that it is intended as a shade from the sun is not worthy of serious consideration.

The Humming Bird

Is noted amongst birds for its smallness of size and for its unrivaled beauty. The Hummer of Central America is of various kinds, the largest having a bill three and a quarter inches long, and the smallest, one three eighths of an inch in length. The principal varieties are the Fork Tailed, Long Billed, and Short Billed, Central America, the Chimborazo Hummer, Cotton Foot and Long Crested, the Emerald, Ruby, and Topaz Hummers. The Humming birds are termed jewels of ornithology on account of the extraordinary beauty of their plumage. They are peculiar to America and the West India Islands, and amongst them are the smallest birds known, the smallest species when plucked being hardly larger than a honey bee. They are of a lively disposition, almost constantly on the wing, and performing all their motions with great rapidity. Their flight is in darts, and in a brilliant sun the variations of their plumage are displayed to the greatest advantage, fully justifying the words of the poet:

"Each rapid movement gives a different dye:
 Like scales of burnished gold, they dazzle show;
 Now sink to shade, now like a furnace glow."

Fully preserved specimens of these strange and beautiful, as well as of many other curious, birds, may be seen at Woodward's Museum.

It is to the courtesy of the Manager of Woodward's Gardens, Mr. Harry Audreus, that we are indebted for the illustrations that accompany our word descriptions.

"HEADS"—By A SMALL BOY.—Heads are of different shapes and sizes. They are full of notions. Large heads do not hold the most. Some persons can tell what a man is by the shape of his head. High heads are the best kind. Very knowing people are called long-headed. A fellow that won't stop for anything or anybody is called hot-headed. If he is not quite so bright he is called soft-headed. If he won't be consoed or turned he is called pig-headed. Animals have very small heads. The heads of fools slant back. When your head is cut off you are beheaded. Our heads are covered with hair, except bald heads. There are barrel-heads, heads of sermons—and some ministers used to have fifteen heads to one sermon—pin heads, heads of cattle, as the farmer calls his cows and oxen; head-winds, drum-heads, cabbage heads, logger-heads, come to a head, heads of chapters, head him off, head of the family and go ahead—but be sure you are right; but the worst of all heads are the dead-heads who hang around for free tickets to shows and try to sponge gratis notices in papers.

"Oh, Tommy, that was abominable in you to eat your little sister's cake."
 "Why," said Tommy, "didn't you tell me, ma, that I was always to take her part?"

USEFUL INFORMATION.

Impure Water.

The *Journal of Chemistry* says: Public attention cannot be too often called to the danger of using impure water in households. The origin of typhoid fever, which so frequently runs through families in city and country, is oftener in wells and springs than is supposed. In cities it is easy to understand, when aqueduct water is not supplied, how wells may become contaminated, but for many it is not so easy to see how wells in the country, among the hills, or in the green valleys, can become so impure as to be sources of disease.

Since the general introduction of aqueduct water into large cities, typhoid fever has become more common in the country than in the city, and this disease is certainly zymotic, or one which results from a poison introduced into the blood. Wells in the country are very liable to become contaminated with house sewage, as they are generally placed, for convenience, very near the dwelling, and the waste liquids thrown out upon the ground find easy access by percolation through the soil to the water. The instances of such contamination which have come to our notice, and which gave rise to fevers, are numerous. The gelatinous matter which is often found covering the stones in wells affected by sewage, is a true fungoid growth, and highly poisonous when introduced into the system. It is undoubtedly concerned in the production of typhoid fever. How it acts it is difficult to determine, but it is at least conceivable that the spores of the fungus may get into the blood and bring about changes after the manner of yeast in beer. These spores, as is well known, develop rapidly by a kind of budding process, and but a little time passes before the whole circulation becomes filled with them, giving rise to abnormal heat, and general derangement, called fever. These fungoid or confervoid growths are always present in waters rendered impure by house drainage, and great caution should be used in maintaining well waters free from all sources of pollution.

As a solution of the difficulty the *Artisan* says: The use of quicklime in the purification of water has long been practiced by dyers, the philosophy of its action being that, by neutralizing the carbonic acid dissolved in water, the carbonate of lime held in the solution is precipitated, the latter being insoluble in water which does not contain carbonic acid. It is customary to reduce the quicklime to a creamy consistency by the addition of water, and then to mix it with the water to be purified. After thorough incorporation, the water being left to settle for some time, not only the lime added but the carbonate of lime previously dissolved in water, would be found precipitated to the bottom. During the time the water is standing, it may, however, absorb more or less additional carbonic acid, and, therefore, be rendered capable of redissolving a portion of the lime. This defect in the process is much lessened, if not entirely remedied, while the purification of the water is entirely facilitated by immediate filtering after the addition of the quicklime. The carbonate of lime, being rendered solid by the addition of the quicklime, is distributed in very minute particles throughout the liquid. If the liquid be filtered immediately on the addition of the filtering agent, the separation may be effected much more rapidly than by allowing the water to stand and settle.

The patent upon a peculiar kind of filter for this purpose has been obtained by Mr. Gustave De Mailly, a civil engineer of Brussels. He used a filter consisting of a cylindrical vertical case of sheet or cast-iron, furnished with a lid, which case contains another cylinder, which is the filter proper. This last is also formed of sheets of cast or sheet-iron, one at the top and the other at the bottom, and united by three concentric cylinders of perforated sheet-iron. In the two annular spaces thus formed he places felt or wool, which is claimed to be rendered impervious by a peculiar process. It is claimed that when water passes through this material, which it does quite rapidly, all traces of suspended carbonate of lime are removed. The cleansing of the filter is accomplished by causing water to flow through it in an opposite direction from that it pursues during the process of filtering.

TO BRONZE GAS FITTINGS.—Boil the work in strong lye and scour free from all grease or old lacquer, next pickle in dilute nitric acid till quite clean (not bright), dip in strong acid and rinse through four or five waters; repeat the dip if necessary till it is bright, next bind it very loose with thin iron wire, and lay it in the strongest of the water used for rinsing. This will deposit a coat of copper all over it, if the water or pickle be not too strong. When too strong the copper will only be deposited just around where the wire touches. When the copper is of sufficient thickness, wash it again through the waters, and dry with a brush in some hot sawdust (box dust is best), but oak, ash, or beech will do. It is now ready for bronzing. The bronze is a mixture of blacklead and red bronze, varied according to shade required, mixed with boiling water. Paint the work over with this and dry, and then brush till it polishes. If there are any black spots or rings on the work, another coat of the bronze will remove them. Lacquer the work with pale lacquer, or but very slightly colored, for if it is too deep it will soon chip off.

Test for Arsenical Colors on Wall-papers and in Paper generally.

Professor Hager recommends the following method for detecting this dangerous class of arsenical colors, which, we may remark, are not confined to green alone, for red sometimes contains arsenic: A piece of the paper is soaked in a concentrated solution of sodium nitrate (Chili saltpeter) in equal parts of alcohol and water, and allowed to dry. The dried paper is burned in a shallow porcelain dish. Usually in only smoulders, producing no flame. Water is poured over the ashes, and caustic potash added to a strongly alkaline reaction, then boiled and filtered. The filtrate is acidified with dilute sulphuric acid, and permanganate of potash is added slowly as long as the red color disappears or changes to a yellow brown upon warming, and finally a slight excess of chameleon solution is present. If the liquid becomes turbid, it is to be filtered. After cooling, more dilute sulphuric acid is added, and also a piece of pure clean zinc, and the flask closed with a cork split in two places. In one split of the cork a piece of paper moistened in silver nitrate is fastened, in the other a strip of parchment paper dipped in sugar of lead. If arsenic is present, the silver soon blackens. The lead paper is merely a check on the presence of sulphhydric acid. According to Hager, the use of permanganate of potash is essential, otherwise the silver paper may be blackened when no arsenic is present.

DYEING VENEERS.—Veneers are readily dyed upon the surface, but in this condition are much more liable to disfigurement than when the color is made to permeate the mass. Those colored throughout are therefore the most sought after, and before the late war were chiefly furnished from Paris. During the war, the supply being cut off, some German cabinet makers took up the subject, and after numerous experiments perfected a process which secures the desired result. The veneers are first soaked for twenty-four hours in a solution of caustic soda, and then boiled therein for half an hour. They are then washed with water until all the alkali is removed when they are ready to receive the dye. This treatment with soda effects a general disintegration of the wood, whereby it becomes in the moist state elastic and leather-like and prepared to absorb the color. Veneers thus treated, if left for twenty-four hours in a hot decoction of logwood, and after superficial dyeing immersed for twenty four hours more in a hot solution of copperas, become of a beautiful and permanent black throughout. A solution of picric acid in water, with the addition of ammonia, gives a yellow color not in the least affected by subsequent varnishing. Coralline dissolved in hot water, to which a little caustic soda and one-fifth its volume of soluble glass have been added, produces rose color of different shades, dependent on the amount of coralline taken. After dyeing they are dried between sheets of paper, and subjected to pressure to retain their shape.—*Paint and Oil Trade.*

USES OF WASTE PAPER.—Few housekeepers are aware of the many uses to which waste paper may be put. After a stove has been blackened, it can be kept looking very well for a long time by rubbing it with paper every morning. Rubbing with paper is a much nicer way of keeping the outside of a teakettle, coffee-pot or teapot bright and clean than the old way of washing it in suds. Rubbing them with paper is also the best way of polishing knives and tinware after scouring them. If a little soap be held on the paper in rubbing tinware and spoons, they shine like new silver. For polishing mirrors, windows, lamp chimneys, etc., paper is better than dry cloth. Preserves and pickles keep much better if brown paper instead of cloth is tied over the jar. Canned fruit is not apt to mould if a piece of writing paper, cut to fit each can, is laid directly on the fruit. Paper is much better to put under carpet than straw. It is thinner, warmer, and makes less noise when one walks over it. Two thicknesses of paper placed between the other coverings on a bed are as warm as a quilt. If it is necessary to step upon a chair, always lay a paper upon it, and thus save the paint and woodwork from damage.

TOBACCO LEAVES.—The State Chemist of Connecticut, in his report, presents some interesting information in reference to the tobacco crop, with the results of tests upon the tobacco leaves. The general summary of the reports is as follows: The most highly valued tobacco in New England is the thin, tough, elastic leaf, which burns readily to ashes. Those leaves containing the most carbonate of potash in their ashes, burn the most freely and suitably. In some combinations potash does not favor the burning, and some tobacco manufacturers improve the flavor and burning quality by artificially impregnating the leaf with acetate, citrate, or tartrate of potash, applying the latter in solution and then drying. Chlorine injures the tobacco, as also does nitric acid. Sulphuric acid, united with potash, soda, or lime, favors the burning of tobacco. The best tobacco is produced on well-drained, warm, sandy lands. It is believed heavy manuring increases the quantity of the crop generally at the expense of quality as regards texture.

DOMESTIC ECONOMY.

Cooking Meats.

The most economical way of using meat is to cook it in hot water, and serve it up in its own gravy. If it is boiled for preparing soup, the water should not be too quickly raised to the boiling point, since this tends to coagulate the albuminous portions and to prevent the juices from passing into the water. The meat should be chopped or cut as fine as possible, and steeped for some time in cold water, which should then be gradually heated up to a temperature not exceeding 150° Fahrenheit, or 63° below its boiling point. At the last moment the soup may be allowed to reach the boiling point. The bones should be crushed or broken up into small pieces, and boiled, or rather simmered, for eight or ten hours, in order to thoroughly extract their nutritive matter.

If we wish to cook meat in such a way as to preserve the maximum of nutriment in the most digestible form, we should place it in large pieces in boiling water and keep it there for five minutes. The high temperature coagulates the albumen at the surface of the meat, stops up its pores, and thus prevents the juices from escaping. After this boiling for about five minutes, add cold water to reduce the heat to about 150° F., and keep it at that temperature till the meat is sufficiently cooked. It will then be found to be tender, juicy, savory and nutritious. Salted meat intended to be eaten cold should be allowed to cool in the water in which it has been boiled.

In roasting meat, as in boiling it, the first object should be to coagulate the albumen at the surface, in order to prevent the escape of the juices. The meat should be at first placed close to the fire, kept there for ten or fifteen minutes, and then withdrawn to a greater distance from the heat. If cooked in the oven of a stove or range, the oven should be very hot when the meat is first put into it, kept at the same heat for a short time, then cooled down partially (by opening the door or checking the fire), and the roasting should then be allowed to go on very slowly so that the inner parts may be thoroughly done. The loss of weight (mostly water and fat) is nearly one-third more in roasting than in boiling.

Roast meat has the richer flavor, because certain aromatic principles are developed by this mode of cooking. The occasional "dredging" of flour over the surface of the meat helps to stop up the pores and prevents the escape of the fat. Roasted meat is not so well suited for invalids and dyspeptics as boiled meat, since it is apt to contain acid substances formed out of the highly heated fat. Broiling is a species of roasting, but it ordinarily produces a more digestible food for the dyspeptic. Frying is the worst possible mode of cooking meat, especially for persons whose digestive powers are not vigorous, as it almost invariably develops a very acrid substance known as *acrolein* and sundry fatty acids that are nearly as unwholesome.—*Boston Journal of Chemistry.*

INTERESTING TO MINERS.—We learn that a patent has been granted to Henry M. Boies, Scranton, Pa., for Improved Packages of Powder Charges for Blasting. This invention consists in packing the powder, in convenient quantities, in long tubes of paper or any fabric or material of sufficient strength, rendered waterproof if necessary, of a proper shape and size to be used as a cartridge, and of such a length in excess of the powder inside as shall allow of its being folded into a compact form, and divided for use into cartridges of any desired length or weight. Each cartridge tube or package may be easily marked with the size, and quantity, and brand of its contents; and when it comes to the consumer, he can measure off from either end the quantity desired for a blast, slide the powder away from this point, divide the tube, fold back the ends, and the cartridge is ready for use, proceeding in the same way until the whole package has been used. Thus the danger of preparing the cartridge over the open keg and the liability to damage of the exposed powder are avoided, and the time and labor of making the cartridge, as well as the materials of which it is composed, are saved.—*Coal Trade Circular.*

PUDDING SAUCE.—One quart of boiling water, four large tablespoonfuls of white or brown sugar, two of flour, one of butter, one teaspoonful of salt; nutmeg or cinnamon to taste. Two tablespoonfuls of currant or blackberry wine or cider are a great improvement. Let the whole be boiled together for about ten minutes. It is necessary to mix the flour with a portion of cold water before adding it to the boiling water.

ARTIFICIAL OYSTERS.—Take green corn, grate it in a dish; to one pint of this add one egg well beaten, a small teacup of flour, half a cup of butter, some salt and pepper, and mix them well together. A table spoonful of the batter will make the size of an oyster. Fry them a light brown, and when done, butter them. Cream, if it can be procured, is better than butter.

WARMING COLD BOILED POTATOES.—Slice and put them in a basin with a little milk or water, some cream if you have it, and a little salt. Let it remain on the stove until it is thoroughly heated through, stirring often to prevent its sticking; a bit of fish left from a former meal or some beaten egg is a nice addition to it.

GOOD HEALTH.

Drinks During Meals.

The results obtained by Dr. Beaumont in his series of experiments on the person of Alexis St. Martin, who had a permanent gastric fistula, caused by a gunshot wound, demonstrates that the gastric juice, in order to exert its solvent action upon the food, must be at the temperature of 100°.

The common, excessive and alternate use of hot and cold drinks therefore, during meals, is clearly prolific to a host of ailments in manifold ways. It impairs digestion by alternately increasing and diminishing the temperature of the gastric juice—thus retarding the solvent action of that fluid. It lays the foundation for chronic gastritis; in consequence of the excessive and reciprocal contact of the two agents, heat and cold, with the mucus membrane of the stomach, and consequently causes dyspepsia.

It also causes cracking of the enamel of the teeth and an increased susceptibility of the nerves in their immediate vicinity. Many cases of protracted odontalgia, or—in common phrase, toothache, are no doubt due to this bad practice; as also the premature destruction of the enamel of the teeth in persons of healthy constitutions.

This bad habit is the generator of many cases of disordered organs and perverted functions generally in the animal economy.

While I depreciate the use of hot and cold drinks during meals, I nevertheless advocate the moderate use of fluids of milk-warm temperature, for the reason that they act as adjuvants to mastication, insalivation and deglutition of food, and that they assist the gastric fluids in the disintegration of aliments. For instance: it is well known, that, without the assistance of some fluids, it is extremely difficult to comminute a dry and brittle cracker or other similar substance.

Still it is well we think to dispense with fluids to a good degree during mastication, as their tendency is constantly to render the process less thorough and effective.—*Laws of Life.*

PHYSIOLOGICAL PROPERTIES OF CAFFEIN.—The physiological action of coffee, according to MM. Aubert and Haase, should not be attributed to caffein, but to other principles. An injection of 0.6 cubic inch of coffee containing 0.6 grains of caffein killed a rabbit in a very short time, producing acceleration of the pulse and respiratory organs, uneasiness, and finally convulsions. An injection of 0.75 grains of caffein, however, did not produce death or any symptoms of sickness. An infusion of 770 grains of very hot coffee, corresponding to 6.3 grain of caffein, acts upon a man far more intensely than a stronger dose of pure caffein. Headache, vertigo, trembling, and similar symptoms are produced, which last upward of four hours. Coffee extract, deprived of caffein by chloroform and injected into the jugular vein of a rabbit, causes strong convulsions, but never tetanus, such as is produced by an overdose of caffein singly.

POSITION IN SLEEPING.—Sleeping rooms should always be so arranged, if possible, as to allow the head of the sleeper to be toward the north. Frequently in cases of sickness, a person will find it impossible to obtain rest if the head is in any other direction, and often a cure is retarded for a long time. A Vienna physician had a patient who was suffering from acute rheumatism, with painful cramps running from the shoulders to the fingers; and while his head was to the south he could do nothing toward his relief. On turning the bed, however, so that the head was toward the north, the patient uttered expressions of pleasure, and in a few hours a great improvement had taken place, and in a few days he was almost entirely cured. Many other cases are given by scientific persons; and people in building houses, should always have this in view.

ASPHYXIA BY ILLUMINATING GAS.—The symptoms are discomfort, inclination to vomit, convulsive movements of the muscles, especially those of the breast, the skin is cold, the breathing and pulse irregular. The remedies recommended are exposure to free air, even if cold, irritation of the skin by vinegar, and the palms of the hands, soles of the feet, and the spine with a stiff hair brush, blowing air into the lungs. When consciousness returns, place the patient in a heated bed in a room with the windows open, administer a few spoonfuls of Malaga, Madeira, or sherry wine. A mixture of tartar emetic and Hoffman's liquor, flavored with honey-water and orange-flower syrup, is spoken of as efficacious after the return of consciousness.—*Le Gaz.*

SCARLET FEVER FROM A DEAD HORSE.—Scarlet fever having attacked a whole family at the port of Amble, one of whom has died, Dr. Easton, the medical officer of health, has reported to the local authority his belief that the fever was produced from the family residing near a pond in an old quarry, in which was a dead horse. The family lived over a boat-house on the links, and being quite isolated, the fever has been confined to the inmates. Orders have been given to prevent dead animals being thrown into the pond.

CHAPPED HANDS.—Instead of washing the hands with soap, employ oatmeal, and after each washing take a little dry oatmeal and rub over the hands, so as to absorb any moisture.



PUBLISHED BY

DEWEY & CO.

T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 80 \$2.00 \$5.00
One-half inch.....1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, Jan. 10, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Napa Ladies' Seminary; Winter Care of Stock; Pruning Trees, Plants and Shrubs; A Flourishing Town, 17. Old Strawberry Beds; An Omission; Times at the East; A Tidal Wave, 24. J. C. Merryfield, 25. Patents and Inventions, 28.

ILLUSTRATIONS.—Napa College, 17. J. C. Merryfield, 25.

CORRESPONDENCE.—Silk Culture in California; Hired Men on the Farm; Weak and Deformed Calves; Hop Growing; Cherries in January; Whitewash—Wild Morning Glory, 18. Peanuts—Semi-Tropical Fruits, 19.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 20-21.

HOME CIRCLE.—Fishing (Poetry); World's Festivals—Christmas and New Year; The Strategic Cat; The American Girl, 22.

YOUNG FOLKS' COLUMN.—Strange and Curious Birds; "Hicks"—By a Small Boy, 22.

USEFUL INFORMATION.—Impure Water; To Bronze Gas Fittings; Test for Arsenical Colors on Wall-papers and in Paper Generally; Dyeing Veneers; Uses of Waste Paper; Tobacco Leaves, 23.

DOMESTIC ECONOMY.—Cooking Meats; Interesting to Miners; Pudding Sauce; Artificial Oysters; Warming Cold Boiled Potatoes, 23.

GOOD HEALTH.—Drinks During Meals; Physiological Properties of Caffein; Position in Sleeping; Asphyxia by Illuminating Gas; Scarlet Fever from a Dead Horse; Chapped Hands, 23.

THE FLOWER GARDEN.—Watering House Plants; Double Fertilization of Flowers; Guano Water for Plants; Cutting Blossoms; The Saucer System of Starting Cuttings; Saving Fuchsia Seed; A Pretty Window Plant; The Flower Garden; Save the Cockcomb Blossoms, 23.

THE HORSE.—The Common Colt-Breaker and the Trainer; Disease of Joints; Good Roadsters, 26.

THE APIARY.—Bees; Toads Eating Bees; Species of Bees, 26.

FERTILIZERS.—Preparing Bones for Fertilizers; Care of Manure; Method of Managing Manure, 27.

AGRICULTURAL NOTES from various counties in California, 28.

MISCELLANEOUS.—Scenes in the High Sierras; Progress in Glass-Making; American Leather Cloth; Meteorology of San Francisco; Bridge Building; Constructing a Piano; Chinese Method of Printing, 19. Santa Clara Valley Agricultural Society, 24. Squirrel Nuisance Abatement Law, 25.

SLATE ROOFING PAINT.—A. W. Jenkins comes to California as the sole agent for the Pacific Coast, for Gline's celebrated slate roofing paint. He offers to paint new roofs or old, making them perfectly water tight or no pay. It is claimed for this paint, that it has no equal, is perfectly water and fire proof, easily and quickly applied and cheap. For further notice of its merits see advertisement or call on the agent at Brooklyn Hotel, Bush Street, San Francisco.

RAIN TABLE.—We are under obligation to Dr. T. M. Logan, for table showing the amount of rain fall at Sacramento from 1849 to 1874. It will be found in this number of the RURAL. Also for the Second Biennial Report of the State Board of Health of California, for the years 1871, 1872 and 1873.

CORRECTION.—In our remarks last week on the culture of cotton on King's river, Fresno county, the credit of inventing the new style of cotton press should have been given to Mr. Odom, of the Georreville settlement.

A NEW PRODUCT.—In drying fruit it has been discovered that the cores and parings of the apples have a value. These are dried and sent to the factory for the making of apple jelly, or they are placed in a vat and allowed to decay and the juice made into vinegar. Thus the whole of the fruit is utilized. This is done on the old Shaker plan of making cider vinegar, but is more expensive than grinding and pressing in the usual manner. By the Alden process the cores are made into jelly.

Old Strawberry Beds.

I have two strawberry beds, each 40 feet long by four feet wide, which have furnished my family with all the berries needed for the table dessert at the proper season, for the last four years; but I noticed a decided falling off in the yield the last season. Should I dig them up and set my ground with new plants this Spring, or try to render them productive by some means, another year? The heads or crowns of the stools are four or five inches above the level of the surface of the soil; what can I best do with them?

These inquiries are presented by "A Farmer," and we answer in this wise: Trim off all the old vines and leaves quite down to the green and vital part of the crown of the plants. Spread over the whole ground a light dressing of fine, short manure and fork it in four inches deep; then fill up the spaces between the rows or hills with good garden soil, even with the crown of the plants. The spring rains will diffuse the fertilizing qualities of the manure, and you will doubtless grow a good crop.

On one of the beds allow the runners to grow and cover the spaces between the rows. After the crop is gathered, as soon as the soil will admit of working, spade up, turn and deeply cover all the old stools, leaving the new runners as much as possible undisturbed. Let the other bed remain intact, for one more season and then renew as with bed number one, and you will hardly miss your accustomed yield.

An Omission.

In the RURAL of Dec. 27th, was a letter of inquiry, asking for a good work on agriculture; also for a standard work on sheep husbandry; and lastly how to utilize the large piles of surplus straw that accumulate on the grain farms, and where there are no cattle to eat it. The following—which was omitted by mistake—should have followed the inquiry.

One of the best works of the day is undoubtedly the "New American Farm Book," originally by R. L. Allen; revised and enlarged by Lewis F. Allen. A standard work on sheep husbandry is the "Practical Shepherd," by Randall.

To convert straw or other coarse vegetable fiber in large quantities, into a good unctuous manure, there probably is no other known method equal to that given in "Bommer's method of making manure."

The first and the last named of these works can be had at the "Orange Judd Company," 245 Broadway, New York. The former for \$2.50 and the latter for 25 cents post paid.

The "Practical Shepherd" can be obtained of S. W. Moore, 420 Sansome street, S. F., for \$2.50.

Times at the East.

In a letter from J. B. Jones, of Jones & Palmer, nurserymen at Lake View, near Rochester, N. Y., under date Dec. 22d, we find the following note of the times and condition of crops in that vicinity:

The holidays are again upon us with snow, sleighing and merry times for all. Notwithstanding our paucity we are having busy times, very few kinds of business but are running along nearly full time. Farmers hereabouts have received full prices for their fruits, and with average crops cannot complain. Apples are an average, and pears a very large crop, while grapes were never better and brought paying rates. Near the line of the Erie Canal potatoes have become of late years one of our standard crops, and although only a medium crop this year and only brought medium prices (50 cts. per bushel), they pay better than grain crops. We have no bugs yet, but expect them next year. We have no Granges here, but hear of them on all sides of us.

COL. PETER SAXE has just returned from a trip to Oregon, where he has been with a fine lot of Durham cattle, comprising seven consignments for the Oregonians. The people of the Pacific Coast are largely indebted to the Colonel for much of their fine blooded stock, and having a mania for that business, we may occasionally expect to hear of valuable breeds of horned and other stock being brought here by him to add to our valuable animals.

MONOPOLIES AND THE PEOPLE.—Mr. Cloud's book, with the above title, which we have already noticed at length, will soon be placed for sale on this coast. Baucroft & Co. of this city have the agency; but we understand that it will be sold only by agents.

A Tidal Wave.

Politicians and speculators seem to be dumb-founded by the sudden and unexpected tidal wave of Grangers which is sweeping with such resistless force in every direction over the country. Two years ago these disturbers of conventions, caucusses, and breakers of "political slates" had scarcely been heard of outside of a limited circle in one or two of the northwestern States. Now they and their friends in the other producing classes are quietly taking possession of State after State; upsetting the best laid schemes and calculations of our shrewdest politicians; exposing the hot-beds of political corruption everywhere; pushing the railroad speculators and other monopolists to the wall, and stirring up things generally. The tone of their conversation, their publications, their speeches and their public demonstrations, assure the world that they mean business, and their policy and work, so far as developed, seems to meet the almost universal approval of the great mass of the people.

The politicians, speculators, middlemen and political corruptionists seem to be the only people who are at all disturbed by the apparition. The people receive them with open arms, champion their cause, and bring out men who, if they are not in every way worthy, are so far in advance of the average politician that the Grangers receive and endorse them willingly.

Witness what they are doing throughout the great North-West; see the revolution which has been effected in this State, in less than five short months; listen to the shouts that are coming up from the cotton growers of Mississippi, Alabama and Georgia; read what has been accomplished in the great State of Pennsylvania, absolutely without organization, almost without effort, and actually by the spontaneous uprising of the people moved in a common direction by a common grievance. The people of that State have endorsed a reform Constitution by the almost incredible majority of 150,000 votes, which the politicians had determined to defeat—a work which they supposed could be easily accomplished. By this supreme effort the people of Pennsylvania have ordained that railroads shall be deemed public highways—toll roads—to be regulated in the minutest detail by the power which created them; that there shall be no discrimination in fares or freights; that there shall be in that State no more consolidation or leasing of railroad lines; that railroads shall acquire no more real estate than is needed for the legitimate working of the roads; that railroad operators shall not engage in any other business than that of common carriers, etc.

The people, throughout the Union, are speaking with no uncertain tone as to their intentions and purposes. They have assumed that the record of the old political parties is such as to forfeit the confidence and respect of the people, who are therefore absolved from any further allegiance to them. The warrant for this assumption is found in the open and unblushing corruption which exists everywhere, in high places, demoralizing and debauching almost the entire business morale of the country.

The teachings of the Grange which hold in utter detestation everything of that character, naturally lead most of the Patrons of Husbandry into sympathy with the People's Movement, as the best exponent of the principles they inculcate and the measures they propose. The reaction is mutual, and the result overwhelming. The Patrona will deserve well of their country in aiding, by their silent but effectual work, the accomplishment of the great reform in which every producer, of whatever class, has a common interest. That work is of no less importance to the tiller of the soil than is the other peculiar work of the Patron—the diversion into the channel of productive industry of the surplusage of that great army of middlemen and the entire of that other army of professed politicians. Producers, everywhere, the work before you is a worthy and a noble one; then let all the forces interested in the common objective for the long pull, the strong pull, and the pull altogether.

Hair cloth is made from the hair of horses' tails, which is brought, some of it from South America, but more from Russia. In the latter country it is collected at the fairs of Nizni, Novgorod and Ishbilit. It is of all shades of color, and for use is dyed black. In the fabrication of hair cloth the hair is wetted with water and when well soaked is put into the loom to be woven with a cotton warp.

Santa Clara Valley Agricultural Society.

The annual meeting of the Santa Clara Valley Agricultural Society was held Thursday afternoon, at City Market Hall, and notwithstanding the inclemency of the weather there was a large attendance of the members. The principal business of the meeting was to receive the reports of the officers, elect new ones and to finish up the business of the year.

The minutes of the last annual meeting were read by the Secretary and approved.

The reports of the Secretary and Treasurer were then submitted, and on motion were received and recorded.

The following statement from the reports of the officers shows the condition of the Society's finances:

Receipts of the S. C. V. A. Society, from all sources, including balance 1872.....\$15,700 91

Expenditures.

Paid premiums, 1873.....\$5,616 00
Improvement on grounds.....3,154 92
Incidental expense of Fair.....3,229 22
Total expenditure.....\$12,000 14

Balance in Treasury Jan. 1st, 1874.....3,700 77

Membership.

The report of the Secretary shows the following statement of the membership of the Society: Total number of life members received from date of organization, 207; number deceased members, 7. Total membership to date, 198.

Following are the names of the deceased members: John G. Bray, Louis Prevost, F. A. Shepherd, Wm. Daniels, Mark Hardy, H. C. Melone and Thomas O. Shaw.

Amendment to the Constitution.

On motion, the first clause of Article 9 of the Constitution was amended so as to read as follows: "Any white person, on paying to the Society the sum of \$50, for the purpose of becoming a member, shall be a member thereof for life." The life-membership fee at present is \$25. The original motion was made by Mr. Ryland, who wished to substitute \$100, but after some discussion the amendment for \$50 prevailed.

Presentation.

At this junction of the proceedings, Hon. C. T. Ryland stepped forward, and in a neat and eloquent speech, in which he reviewed at length the past services of the retiring President, Wm. C. Wilson, presented that gentleman, on behalf of the members of the Society, a handsome and elegantly mounted gold cane, which bore the inscription: "Presented to Wm. C. Wilson by the members of the Santa Clara Valley Agricultural Society, January 1st, 1874. Mr. Wilson gracefully acknowledged the handsome gift, and took his seat amid a perfect storm of applause.

Election of Officers.

The Society next proceeded with the election of officers for the ensuing year. Wm. C. Wilson was placed in nomination for President, and there being no further nominations he was elected by acclamation—a just and deserved tribute to a most popular, faithful, and efficient officer. Several gentlemen were nominated for first Vice-President. A vote was then had, and C. X. Hobbs receiving the highest number cast, was declared duly elected. Cary Peebles, one of the oldest members of the society, and who has served as an officer almost from the time of its organization, was nominated for second Vice-President, and there being no opposition the secretary was instructed to cast the vote for Mr. Peebles. Daniel J. Porter and C. T. Ryland were unanimously re-elected Secretary and Treasurer, respectively. J. Q. A. Ballou, of this city, and James P. Sargent, of Gilroy, were elected Directors of the Society for the ensuing year. The election of Mr. Ballou was in accordance with the "eternal fitness of things," horticulture, the branch of agriculture which he represents, having never before been represented in the Board of the Society.

Resolutions.

The following resolutions were offered by Dr. Saxe, of Santa Clara; first:—

Resolved, By the President and members of the Santa Clara Valley Agricultural Society, that the public sale of intoxicating liquors on the public grounds of the said Society, during the public Fairs of said Society, be hereafter prohibited if within the jurisdiction of said Society; second:—

Resolved, By the President and members of the Santa Clara Valley Agricultural Society, that the public sale of pools and other demonstrations of ordinary public gambling on the grounds of the Society are a reproach and a disgrace to the moral sentiments of the population of the Santa Clara Valley, and that hereafter it be prohibited on any premises within the jurisdiction of this Society.

The sentiment of the meeting was favorable to the first resolution, but it conflicted with the terms of the lease of the grounds to Mr. Beatty and could not be passed. The second resolution, however, was passed by a large vote.

Amendment to the By-Laws.

On motion of Cyrus Jones, the last clause of section 5 of the By-Laws was changed so as to read as follows: "No article or animal shall be allowed to compete for a premium in more than one class at the same Fair, except for sweepstakes and in herds."

State Agricultural Society.

Col. Younger informed the meeting that it was entitled to representation in the Agricultural Society at its forthcoming annual meeting for the election of officers, and on motion the President was authorized to name three delegates who should attend said meeting.

On motion, the society adjourned.

MONTHS.		1849	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873
September	0.230	0.000	1.000	0.003	0.000	0.000	sp Ric	0.000	sp Ric	0.015	0.000	0.025	0.063	0.000	0.000	0.003	0.004	0.080	0.000	0.006	0.000	sp Ric	0.000	0.001	0.002	0.000
October	1.500	0.190	0.190	0.006	0.006	0.006	0.010	0.000	0.015	0.000	0.000	0.000	0.181	0.000	0.000	0.000	0.120	0.480	0.000	0.000	0.000	0.000	0.020	0.210	1.390	
November	2.250	sp Ric	2.140	0.000	1.500	0.650	0.750	0.650	0.750	0.650	0.750	0.485	0.181	0.000	0.000	0.000	0.450	0.480	0.000	0.000	0.000	0.000	0.000	0.000	1.390	
December	12.500	sp Ric	7.000	13.410	1.940	1.160	2.000	2.306	6.062	4.329	1.834	4.282	8.637	2.927	1.816	7.867	0.304	0.304	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
MONTHS.		1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874
January	4.500	0.650	3.000	3.250	2.670	4.919	1.376	2.444	0.904	2.310	2.658	16.036	1.733	1.077	4.776	7.698	3.440	6.636	4.780	1.371	2.075	4.040	1.280	.....	.....
February	0.500	0.120	8.500	8.500	3.400	0.602	0.400	2.461	3.906	0.913	2.920	4.260	2.751	1.368	0.742	2.018	7.104	3.147	3.942	1.626	1.919	4.940	4.360	.....	.....
March	10.000	1.880	7.000	3.250	4.200	1.403	0.675	2.878	1.637	0.510	3.920	2.800	2.800	1.308	1.060	1.410	0.470	1.016	2.962	1.642	0.690	1.937	0.551	.....	.....
April	4.250	1.140	0.100	1.500	4.320	2.132	sp Ric	1.214	0.981	2.874	0.475	0.821	3.333	1.680	1.410	0.360	0.470	0.808	0.270	0.448	0.270	1.454	0.512	.....	.....
May	0.250	0.690	0.300	1.450	0.210	1.160	1.841	sp Ric	0.203	1.057	1.808	0.635	0.742	0.900	0.687	0.600	0.100	0.000	sp Ric	0.008	sp Ric	0.001	0.028	0.002	.....
June	0.000	0.000	0.000	0.000	0.310	0.038	0.360	0.000	0.000	0.000	0.445	0.135	0.011	0.000	0.087	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
July	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000		
August	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000		
Total	36.000	4.710	17.980	30.365	20.065	18.620	13.770	10.443	18.991	16.041	22.026	16.548	35.560	11.579	7.868	29.512	17.924	23.506	32.769	16.644	13.072	8.470	24.062	14.208	.....

THE FLOWER GARDEN.

Watering House Plants.

In most instances house plants and growing flower stalks do not receive one-half the necessary supply of water, while in some cases too much is supplied. Every flower pot and flower box should be provided with some means of escape for the surplus water. If the earth is pressed firmly about the roots the plant will receive all the moisture it requires before this escape is made. A space of about a quarter or half an inch should be left between the surface of the soil and the rim of the pot or box, that the water may not wash the earth over the edges to the floor or into the saucers, but be allowed to stand and work gradually down. Moderately warm water seems most agreeable to these adopted children of ours, and surely they thrive best when indulged in this respect. Much that is erroneous has been said of the danger of watering house plants too freely; but they suffer more frequently from the opposite mistake. The earthen pots in general use are very porous, and evaporation through them takes place speedily in our warm, dry rooms. The earth should never be allowed to become dust dry; neither should the water stand all day in pools about the roots and lower stems, and, thus standing, become sour and disagreeable. Every flower pot should stand on a saucer or plate, and there should be a hole in the bottom of the pot, so that the dry soil may absorb water when it is poured on the plate. When the soil will absorb no more, the water on the saucer should be turned out.—*Ec.*

DOUBLE FERTILIZATION OF FLOWERS.—Mr. Arnold, of Paris, Canada, has shown that if the female flowers of an Indian corn plant are submitted to the action of pollen from male flowers of different kinds of corn plants, each grain of the ear produced shows the effect of both kinds of pollen. In an experiment related, a given female flower was subjected first to the action of pollen from a yellow variety of corn, and then to that taken from a white variety of corn; the result was an ear of corn, each grain of which was yellow below and white above. The conclusion presented is, not only that there is an immediate influence on the seed and the whole fruit structure by the application of strange pollen, but the more important fact that one ovule can be affected by the pollen of two distinct parents, and this, too after some time has elapsed between the first and the second impregnation.

GUANO WATER FOR PLANTS.—The *Farm-er and Gardener*, in reply to a correspondent, says: "All guanos are not alike in soluble proportions; hence a pound of phospho-guano will go as far as two pounds of many other brands. We use about one gallon of the former to a barrel of water. Let it remain three or four days, stirring the mixture daily. When using, we add an equal quantity of water, thus taking one gallon of phospho-guano to two barrels of water. Your solution is doubtless too strong, especially if applied when plants are in a partially stagnant stage of vegetation. Guano water must only be applied to plants when in full growth, and not when they are at rest, as is the case during our warmest portion of the summer."

CUTTING BLOSSOMS.—All lovers of flowers must remember that one blossom allowed to mature or "go to seed" injures the plant more than a dozen new buds. Cut your flowers then, all of them, before they begin to fade. Adorn your rooms with them; put them on your tables; send bouquets to friends who have no flowers or exchange with those who have. You will surely find that the more you cut off the more you will have. All roses after they have ceased to bloom should be cut back, that the strength of the root may go to forming new roots for next year. On bushes not a seed should be allowed to mature.

THE SAUCER SYSTEM OF STARTING CUTTINGS.—The *Floral Cabinet* says: The "saucer system" is simply filling a deep pan with sand to the depth of two inches; water until it is the consistency of soft mud; put in cuttings of soft wooded plants, or the young wood of roses; place wherever convenient, in or out of doors, and a satisfactory proportion of the cuttings will be rooted within two weeks, when they should be potted off. Until the cuttings are rooted, the sand must be kept wet.

SAVING FUCHSIA SEED.—Mr. Cannell, the great Fuchsia grower, says: "When the seed pods are thoroughly ripened, partly dry them in the sun, after which cut them in halves and quarters with a moderately sharp knife, and minutely examine each part; the old self-colored varieties produce seed very freely, but the choice kinds very sparingly, particularly the light varieties. An abundance of hollow seed will be found, but good plump seed is about half the size of that of the Pansy, and easily distinguished and picked out."

A PRETTY WINDOW PLANT.—The *Gardener's Chronicle* says: One of the best window plants, capable, as it appears, of resisting almost any hardships to which plants in such circumstances are subjected, is the *Aspidistra lurida*. This plant, and its variegated varieties, is grown largely in France and Belgium, in windows, corridors, etc., and might with advantage be employed here for like purposes.

THE FLOWER GARDEN.—The glory of the flower garden in September, is the aster. From the dwarf Bouquet varieties, that look as if they had been made up into bouquets by the hand of man; the Truffaut's Paeony-flowered, to the brilliant New Rose, hundreds of hues and forms fairly illuminate the parterre.

SAVE THE COCKSCOMB BLOOMS.—Those having fine blooms of cockscombs in their parterre, should carefully observe the weather, and before the appearance of frost, cut them off, and preserve them in dry vases in the house.

THE HORSE.

The Common Colt-Breaker and the Trainer.

The difference of the system of the common colt-breaker and the trainer is this: The first by punishment and brute force, breaks his colt of doing wrong; the latter teaches his to do right; he takes care to avoid his being placed in situations and under circumstances that might induce him to rebel. Let the common breaker get a colt that is nervous, timid, and apt to be frightened at anything he meets or sees, what would he do? He would take the horse purposely where he would be sure to meet constant objects to alarm him; and every time he starts, the whip goes to work. Now, if this fellow had a head that was of any use to him, he would reflect a little, and this would show him the folly and brutish ignorance of his conduct. So because the colt is alarmed already by what he sees, he frightens him ten times more by voice and whip. Hence we so often find that after a horse has shied, say at a carriage, when the object has passed it takes a considerable time before he becomes pacified. All this arises from the dread of punishment which he has been accustomed to. Horses have good memories, and do not easily forget ill-usage.

We frequently see a man on his horse refusing to face an object, determine that he shall do it, and immediately force him up to it. The very exertion used to make him do this, increases his terror of it, and a fight ensues, when, should the man gain his point and get him up to the object, the moment his head is turned to leave it he bolts off as quickly as possible; he has not been reconciled to it, and will shy at it just as much (perhaps more) the next time he sees it; for now he recognizes it as an enemy, and has been taught to know by experience what he only feared before: namely, that it was a something that would (and as he found, did) cause him annoyance and injury. Had the man, as soon as he found his horse alarmed on seeing this object, stopped him, let him stand still, caressed and encouraged him, the horse would have looked at it, and, finding no attempt made to injure him, would have gradually approached it; then smelt of it (if a stationary object), and finally have walked away very coolly, collectedly, and satisfied; and the next time he saw it, or a similar object, would care very little about it.

A little reflection would tell us that these would be the different results of the two different treatments; but, unfortunately for horses, reflection and consideration are not the predominant qualities of the generality of horse-breakers.

Now we will suppose a trainer had a colt

which was easily alarmed by passing objects, other horses galloping near him, or persons coming up to him; how would he be treated? He would be sent away by himself, where it was certain no objects would approach close enough to alarm him; here he would be exercised, whether for three days or three weeks, till he had gained composure and confidence; he would then be brought a little nearer to the subjects of his alarm, where they might attract his observation, but could in no way annoy or frighten him. Day by day he would be brought still nearer to them, till they became so familiar to him that he would cease to notice them at all, or merely as indifferent objects. Assuredly this is a more reasonable mode of treatment than the one generally resorted to; and what is more, it never fails—the fault or infirmity is got over, and for ever.

There is one description of horse with which we might be tempted, perhaps, to oblige a common colt-breaker; namely, some brute which appeared so incorrigibly sulky and vicious that we might not wish men who were valuable for better purposes to undergo the trouble and risk of having anything to do with him; not but that we should be quite aware that a man with a better head would be more likely to succeed; but for the reasons we state, we would, perhaps, give the savage to one of these kill-or-cure gentry, and let the two brutes fight it out.—*Prairie Farmer.*

Disease of Joints.

The knee joint is very large and important, and is liable to many injuries, as spain, which is immediately followed by extensive inflammation, the symptoms of which are tolerably well marked, but as a matter of course, vary somewhat, according to the injury. When severe, there is considerable swelling around the joint; the horse is lame, and, when trotted, the lameness is greatly increased, which is a marked peculiarity of knee-joint lameness. The horse, when standing, slightly bends the knee, and, if the joint is quickly flexed or given a rotary motion, he evinces great pain which is immediately shown by his instantly rearing up. In the walk he brings the leg forward with a swinging motion. Inflammation of the knee is very apt to result in partial or complete stiffness of the joint. In slight sprains of the knee there is very little swelling, and the symptoms are not so well marked, and considerable difficulty is sometimes experienced as to the precise seat of the lameness, especially by people who are not aware of the structure of this beautiful but complex articulation. In the treatment of injuries in this situation, however trivial, it is of the utmost importance that the patient should be allowed perfect rest. It is often desirable that he should be kept standing in his stall, and the leg carefully bandaged with a properly applied flannel bandage. The following liniment may also be used several times a day; equal parts of laudanum, tincture of arnica and tincture of camphor. In prolonged cases it is generally necessary to use a powerful counter-irritant, as cantharidine ointment or tincture of cantharides, which should be applied around the whole joint.—*Canada Farmer.*

Good Roadsters.

How very few good road horses we have! How few persons are engaged in breeding really good road horses! Yet there is a demand for such, and they always sell well. Most of the horses brought to the city are clumsy farm horses, without action, style or high breeding. If farmers would pay more attention to the qualities desirable in good road horses, they would get double the price they now do for their stock. If the breeder wants to raise good horses, he should first select good mares. They should be of sufficient size for road purposes, have an easy way of going, have good barrels, good style and color, and then he is ready to go to breeding. He should next select a stallion from stock noted for road purposes, that trots well, and from a family that imparts trotting action. He should on no consideration take either mare or stallion that don't suit—that don't fill the bill. Begin right and always keep right, and you will always be sure to be right. Don't buy a mare because she is a mare, but buy her because she suits you, and the same with a stallion.

Good stock pays better than poor stock. Well bred stock properly managed will always pay. There is less labor, and more pleasure, in raising fine stock than in carrying on almost any other kind of farming business.—*Ec.*

THE APIARY.

Bees.

The domestic economy of a bee hive is an extremely interesting study, and we will follow the following facts from the *Canada Farmer*: Bees are of three kinds. Every colony contains one queen, a multitude of workers, and a number of drones, just like the world in which we human beings move, except that a hive is an absolute monarchy while we rejoice as a republic. The queen is the only perfect female and lays all the eggs from which the others are produced. The eggs are of two kinds, the one hatches into drones while the other produces workers. The latter are simply undeveloped females, and every worker egg is capable of being developed into a queen. The queen-cell is a roomy pendant receptacle resembling a peanut, housing the egg and feeding it with "royal jelly." The food develops the young females. Bees raise queens when the hive becomes very populous, or when the reigning sovereign becomes jealous of a rival, or the worker of a stranger, in which case they kill her. Within five days after being hatched the young queen starts on her "bridal tour," courtships, marriages, and impregnation being accomplished on her brief flight. When a queen does not happen to come across an eligible drone at the proper period she becomes a drone layer, and the colony is therefore doomed to extinction. A queen has been known to lay 2,000 eggs in a single day. Her prolificacy is regulated by the supply of food. The average life of a queen is about three years, but it is considered better to replace her in a good season with a younger and more prolific successor. Drones gather no honey; they are consumers only, and like many human drones the fewer of them there are the better. Military order regulates the workers. They keep the hive clean, feed the young brood, build cell, gather pollen and honey, defend their homes, ventilate the hive and warm it in cold weather. Honey is gathered, not made, by the bees. Beeswax is manufactured by a very interesting process. The eggs laid by a queen bee, hatch in three days into small grubs. About the eighth day they become nymphs from which they emerge perfect bees. A queen matures in from ten to seventeen days, a worker in twenty-one days, a drone in twenty-four. If any one doubts the superiority of the female race, the uselessness of a drone, or the beauty of industry, let him visit a bee-hive. It contains a sermon more emphatic than the preaching of centuries or the most potent utterance of men.

TOADS EATING BEES.—A Missouri correspondent writes the *Bee Keepers' Magazine*: I have read that toads do little or no damage to the bee-keepers. But I lately found several on the front board of my hives, and one I watched, and within fifteen minutes saw him at four Italians and two flies; then I executed and dissected him, and found his stomach perfectly crammed with Italian workers. This was a very small toad, and I suppose could not have had less than twelve bees in his stomach. A toad twice as large would likely eat twenty-four bees, and three meals a day (I think I am right) makes seventy-two bees for one toad in a day, and a small family of four would make away with 288 bees a day. Pretty stiff. Perhaps my calculation may be too high about his three meals a day, but I am certain that when a toad finds how easy it is to get his meals at the entrance of a bee hive, he won't look for bugs or worms. But the most serious thing they can do is to gobble up the young queens returning home from their bridal trip. Let those who have their hives near the ground look out for toads.

SPECIES OF BEES.—Entomologists tell us that there are about two thousand species of *apiare* (bees.) How many of them are mere deviations from the same primitive type that produces our honey bee, we have no means of ascertaining. Of the honey bee proper (*Apis*), there are but a limited number of distinct kinds. Whether there is properly more than one species, naturalists have not determined. So far as I have seen any evidence, there is nothing to prove that they are not all of the same species, but in their diffusion over the earth they have met with different conditions, that have caused variations in color, size and other peculiarities, and they are but races, varieties or variations.—*Am. Bee Journal.*

FERTILIZERS.

Preparing Bones for Fertilizers.

It frequently happens in country places where bones are quite plentiful (and where are they not?) that there are no mills to grind them, and if applied to the land as they are, they decompose so slowly as to be of comparatively little use. In such cases chemical means, which are always at hand, are to be brought into acquisition.

Of all the various means that can be employed for decomposing and dissolving bones, the best and most practicable is wood-ashes. They are generally plentiful in country places; they prevent any unpleasant odor from being given off, and, above all, cause a rapid and complete decomposition. The bones are converted into a fine powder, which, mixed with the ashes, furnishes an excellent fertilizer, very rich in potash and phosphoric acid. The method of using them is as follows: A trench three or four feet deep, and of any desired length, is dug in the earth, and filled with alternate layers of ashes and whole bones, each layer being about six inches thick. The lowest as well as the top layers are of ashes, and each layer of ashes is thoroughly saturated with water. At distances of three feet, poles are rammed down to the bottom of the ditch, and every eight or ten days they are taken out and enough water poured in the holes to saturate the ashes. At the end of two months the whole heap is thoroughly stirred up with a fork so as to mix the ashes and soften the bones, which are then left to ferment again; water being added as often as necessary. In about three months more, the heap being worked over twice or three times more, the decomposition of the bones will be so complete that only a few of the largest bones remain, and these are taken out and put in another heap.

This method of using bones comes to us from Russia and is very highly recommended. The action of the fertilizer upon crops is said to be something extraordinary. It seems as if the salts in the bones and those in the ashes unite to form very soluble salts which can be at once assimilated by the roots of plants.

Where wood ashes are scarce, recourse must be had to horse manure. The bones are soaked a few days in water and then placed in rectangular pits, with alternate layers of horse manure, each layer being drenched with the water in which the bones were soaked. The strata of bones are three inches thick, and those of manure a foot thick. The pit is covered with earth so as to be tightly closed. The decomposition of the bones will require, in this case, about ten months, when the mixture is ready for use as a fertilizer.—*Maryland Land.*

Care of Manure.

From actual experience, I say by all means house your manure. If you haven't a cellar under your barn and cannot have one, build a shed at once over the accumulation behind the barn. You will save the cost every year. A few joists and boards will build a temporary one; the boys would be glad to do it if you give them a chance. The accumulating of forest leaves cannot be to highly recommended; they are worth twice as much as the swamp hay many farmers spend time and money to get for bedding.

Last Fall I took hold of the old homestead, and I determined at once to start out on a new order of things, and with the idea that to get good crops and improve the land was to stuff it with manure. I went to work accumulating everything that would rot and make vegetable mold. I went around the hedges of the mowing lots, in the pastures and on the roadside, and mowed all the bushes I could get and stacked them in the yard for litter. When leaves fell I went to the forests and gathered several loads, filling all the spare room I had in the barn with them. I bedded the floor thick where the cattle stood. Each morning I hosed all the wet ones with the manure into the cellar and bedded down anew.

I am not in favor of saw-dust for an absorbent, as sometimes spoken of, unless it be hard wood; pine contains pitchy substance which is not good for land. Swamp muck or peat is the best, especially if you are to use your manure on dry land—if

you are going to use it on low, black land, sand or loam may be best. Carry the low land on to the hills and the hills into the valleys, and you will improve both. I found that by the mixture of the droppings of the horse, cows, leaves, bushes, and everything of the sort, that the quality was greatly improved as well as the quantity increased.

I found, however, that having so much vegetable matter decaying, it was more apt to heat, and having no boy to work it over, I had to do it myself, which I did three times, say once a month. I shook up the green manure, putting it one side, then in three or four weeks gave it another shake and more green in its place, and so on; consequently in the spring I had a lot of rotten finely pulverized manure to use, and the result was my crops have come in this Fall nearly or quite double what they were last year, treated in the old way of farming. Brother farmers, try it, and remember the basis of success is the manufacturing of manures.—*Cor. Massachusetts Ploughman.*

Method of Managing Manure.

Mr. Von Horskysfield, owner of the largest landed estates in Bohemia, has since 1850 introduced a method of treating the accumulating stable manure, which differs from the usual process, and for which he claims many advantages, viz., economy of time, space, feed, and bedding, a great saving of money and of hands, and no necessity for such contrivances as cellars, tank-pumps, etc.; also, a far better product, no loss occurring from evaporation and rot; and finally, a decided improvement in the condition of the cattle-yards, which never show any trace of manure, either solid or liquid. He says all these favorable results are obtained in the following way: The manure is not removed from the stable until it reaches the height of five feet; the straw for bedding is cut into lengths of about five inches, and thus more readily absorbs the liquid portion and facilitates the distribution of the manure in the furrows. The entire mass is constantly compressed by the weight of the animals, and thereby kept moist, while air and consequent putrefaction are excluded. After about three months this manure is carried to the field and immediately covered in the furrows, where it readily decomposes and yields all its strength to the soil, fully doubling its usual value, according to Mr. von Horskysfield's experience. Besides this, the air in the stables is never tainted by exhalations injurious to the health of the cattle.

This plan is not new in this country, has been practiced by several, and is to be recommended where the height of the stable will permit such an accumulation during two or three months, and litter and muck are at hand to keep the stables sweet.—*N. Y. Times.*

H. S. CROCKER & CO.,

IMPORTING AND WHOLESALE

Stationers and Mercantile Job Printers,

Nos. 401 and 403 Sansome Street, SAN FRANCISCO.

PACIFIC COAST AGENCY AMERICAN LEAD PENCIL COMPANY.

Leroy W. Fairchild's Gold Pens and Pencil
Chas. Eneu Johnson & Co.'s Fine Printing Inks.JOHN D. YOST, H. S. CROCKER,
San Francisco. Sacramento
19v27-bp3m

The object of this school is to impart a thorough education in business affairs. It is open to persons of both sexes and of all ages. There is an English Department for those not sufficiently advanced for the Business Course. Sessions continue day and evening throughout the year. Students can enter at any time. All wishing to be successful should secure a practical education at this College. Send for "Heald's College Journal," and learn full particulars. Sent free to all by addressing E. P. HEALD, Pres. Business College, San Francisco, Cal. 2v27-ly

OUR SPECIALTY: "BEYOND THE MISSISSIPPI." GO WEST, YOUNG MAN! GO WEST! Gold by the Bushell! Silver by the Ton! Capital required: Nerve and Honest Industry. THE FAR WEST, The Great Treasure Chamber of America. All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in CROFUTT'S WESTERN WORLD, for \$1.50 a year. With \$10 Premium Chromo, "AMERICAN PROGRESS," free to each subscriber. Two sample WORLDS sent for 10 cents. Agents wanted.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street, (Russ House Block), San Francisco. Wholesale and retail dealer in Mens', Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods; also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission St., S. F. C. H. Gruenhausen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Obergmann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

THE BEST

SEWING MACHINE!

THE NEW IMPROVED FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily operated Sewing Machine in the market. Always in order and ready for work.

In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m Grand Hotel Building, S. F.



PRICE, \$50.

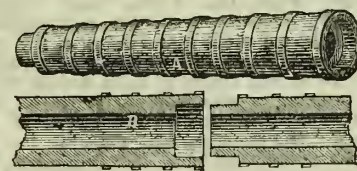
The New Wilson SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market G. A. NORTON, Gen. Ag't for the Pacific Coast. 337 Kearny St., S. F. 2v27eow-bp-ly

SOMETHING NEW.



Wooden Pipe of all Sizes.

From one to twelve-inch bore, suitable for water or gas, that will stand as much pressure and last as long as iron, for half the cost.

Send for descriptive catalogue and price list to

H. F. WILLIAMS,
11v27-awbp 331 Montgomery st., S. F.

San Francisco Cordage Company.

Established 1856.

We have just added a large amount of new machinery of the latest and most improved kind, and are again prepared to fill orders for Rope of any special lengths and sizes. Constantly on hand a large stock of Manila Rope, all sizes; Tanned Manila Rope; Hay Rope; Whale Line, etc., etc.

TUBES & CO.,

de20 611 and 613 Front street, San Francisco.

Patrons of Husbandry.

NOTICE IS HEREBY GIVEN that the office of Secretary of the State Grange has been removed to San Francisco in connection with that of the State Agency 320 California street, Room 9, third floor. By order of the Executive Committee.

W. H. BAXTER,
Secretary State Grange.

\$5 to \$20 per day! Agents wanted! All classes of working people, of either sex, young or old, make more money at work for us than for any other place or time than at anything else. Particulars free. Address G. B. Stinson & Co., Portland, Maine.

LANDS & HOMES FOR SALE

MOUNTAIN RANCH FOR SALE.

A valuable and productive ranch is offered for sale, located on the public road, between Grass Valley and Colfax. The ranch contains 560 acres of land—320 paid for, and patent received for 160—containing all the best meadow land, and 400 apple trees 16 and 18 years old. There are six lots of 40 acres each, railroad land, which will make the title good to any buyer. The dwelling house is not furnished yet; it contains ten rooms, lathed and plastered; 6 on the upper floor and 4 on the lower, with hall; a good stone cellar and one good barn. Last year 1,000 boxes of winter apples were shipped. There are 200 pear trees, and plums and peaches enough for family use. The owner cuts from 30 to 40 tons of meadow hay per year. There are from 5,000 to 7,000 cords of wood, worth \$1 per cord, now standing upon the ranch. Terms liberal. Apply to

P. H. SUMNER,

No. 311 Montgomery st., San Francisco.
September, 15, 1873.

Valuable Farm for Sale or Exchange.

1,000 ACRES OF THE BEST FARM LAND IN THE STATE OF MICHIGAN, a portion of which is well timbered. Rapidly increasing in value. Title perfect. Will be sold or exchanged, in lots to suit, for REAL ESTATE IN CALIFORNIA.

Apply to G. D. CROCKER, Room 16, No. 315 California street, San Francisco. 15v6-3m

Valuable Dairy and Grain Ranch FOR SALE.

In San Mateo County, comprising 900 acres, 400 acres under cultivation, and all well watered and substantially improved. Inquire of

20v6-3m JOS. W. JORDAN,
N. E. cor. Clay and Front sts., San Francisco.

BIBBINS & CO.,

LAND EXCHANGE,
402 Kearny street..... San Francisco.
(SUCCESSORS TO BRANDON & BIBBINS.)

Deal extensively in Country Property.

WANTED—FARMS TO SELL AND LEASE.

FOR SALE:

Farms, Grazing Lands and Tule Lands
5v5-ly Throughout the Coast.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,
Or Pacific Rural Press Office.

P. H. SUMNER,

Real Estate Broker,

311 Montgomery street.....SAN FRANCISCO.

The Improving, Purchasing and Selling of Real Estate, and Negotiations of Loans, in San Francisco and Oakland.

Also, Farms and Country Property sold and exchanged. 9v6tf

Buy Real Estate while at Low Rates.

ELEVEN W TER-FRONT LOTS, CHEAP,
Gift Map 4.

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

CALIFORNIA LAND AGENCY.

Will attend to the Location, Purchase and Sale of Lands and Farms, the Examination of Titles, and the Payment of Taxes.

1,000,000 Acres of well selected Lands in California, Oregon, and Washington Territory for sale. Also, buy and sell property in the city and vicinity.

W. M. BRANDON,

20v6-1y-16p 535 California street, San Francisco.

A RANCH OF 160 ACRES.

With Barn and House, thirty or forty tons of hay, and with all the necessary farming implements, to be let for a term of years, either by the acre or on shares; situated between Midway Station and Moore's Landing, 2½ miles from either place. For particulars, enquire of CHAS. ALPERS, 225 Bush street, at 1 P. M. 1v7-2m

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.
San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,

Subscribed, \$3,000,000. Paid in, \$1,500,000.
Remainder subject to call.

DIRECTORS IN LONDON—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Scholfield, Isaac Seligman, Julius Sington.

MANAGERS:

R. G. SNEATH and IGNATZ STEINHART,

SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v27-eowbp

SANTA BARBARA COLLEGE,
SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to ELWOOD COOPER,
22v6-ly President Board of Directors.

AGRICULTURAL NOTES.

CALIFORNIA.

CONTRA COSTA.

Gazette, Jan 23: THE RAINS.—With little intermission the rains have been falling for the past five weeks in moderate measure during the period, giving us to this date, Friday, January 2d, a total fall of eleven inches for the season, of which amount we had eight and a half inches up to the close of December, and one and a half inches have fallen in the new year. The wind is now from the west, the clouds are scattering, and we have assuring promises of a clearing up in the broad expanses of blue sky that are spreading in the arch overhead. Since the storm began, more than a month ago, there has been but little chance for plowing, and not much has been done in the central section of the county; consequently, if the rains are now over, as we hope, for the present, the seeding of the land will be delayed to a later period of the season than is usual; but with the store of water now in the ground and the spring rains that with much confidence can be relied on, we have reason to calculate on good grain crops notwithstanding the delay in getting the ground seeded for them. The delay, too, cannot be counted altogether a disadvantage since it has given the soil seed full chance to start, so that most of the weeds will be turned under and destroyed when the plows are run through the ground. The last rains have been quite warm and vegetation has come forward with unusually rapid growth, promising, with a few days of sunshine, to give the hungry cattle inviting and refreshing pasturage.

KERN.

Courier, Jan. 3: From present appearances, a very respectable amount of cultivation will be effected this season. As far as we have been able to observe, every farmer is at work, inspired with high prices, with will and energy. A considerable breadth of grain and alfalfa is already sown.

A fine warm rain set in on the morning of the 2d instant, and it promises to be of long continuance. Enough rain has already fallen to insure the best grain season we have had in this section for a long series of years.

We learn that the Farmers' Irrigating Ditch, designed to water an immense tract of land lying around and near Kern Lake, is completed, and that the water will be turned into it to-day. It is taken out of a river at a point due north of Bakersfield, and is probably not less than twelve miles in length, in some places natural channels being taken advantage of. It is one of the most valuable franchises in the county and, the coming season, will develop immense agricultural resources.

LOS ANGELES.

CO-OPERATION.—*Express*, Jan. 3: Thos. A. Garey records an action which reflects the highest credit on the sublime spirit which actuates the Grangers in their relations to their fellow-men. He says:

Happening to ride in the direction of the Agricultural Park, yesterday, I witnessed a sight long to be remembered; one that did my soul good, and I felt like exclaiming, "Surely, mankind is not totally depraved, but human kindness and brotherly love find an abiding-place on earth."

My attention was attracted to a busy gang of laborers, some plowing with gang and some with single plows (26 in all), some sowing grain while others harrowed in, and all at work on a plot of forty acres of land, the property of a poor man, sick and unable to plant his crop; in comparatively destitute circumstances and with a large and dependent family. I made enquiry, asking what the unusual scene meant, and was informed that "Enterprise Grange" had turned out en masse to put in the crop of a worthy brother.

All seemed jubilant in the consciousness of good deeds, and hope kindled in the tearful eyes of the recipient of this disinterested kindness. And we feel that at least one pair of God's children feel that they have come to bless him for the Grange union.

Here we have in this case a glimpse of the objects of the farmers' co-operative movement; to assist one another and protect themselves from oppression are cardinal doctrines of their order.

And many a poverty-stricken farmer will bless the day when wise men gave the world the combinations of the Grange.

NAPA.

DEER LAW.—*Reporter*, Jan. 3: It will be unlawful to kill deer from last Thursday until the first of next September. We would respectfully call the attention of our representatives to the fact that the time of prohibition should be changed, and commence on the 1st of December and end on the 1st of July, for the simple reason that during the month of December it is almost an impossibility to kill a doe without destroying an embryo fawn, the rutting season having commenced before the first of that month. After the 1st of July the fawns are able to take care of themselves. The change we speak of as applicable to Napa and Lake counties, would save us numbers of deer that never see the light.

SACRAMENTO.

STOCK.—*Union*, Jan. 6: Night before last there came through from the East, in the cars of the National Dispatch Company, a large number of thoroughbred sheep from Vermont, en route for San José. There also arrived twenty-one car loads of beef cattle, bound for

San Francisco, from Iron Point. As the animals were very tired, they were unloaded at the corral in this city for a few hours' rest; then loaded again, and forwarded to their destination last evening.

CATTLE KILLED.—Armstrong & Hinkson of this city purchased forty-five head of dairy cows at Galt, recently, and on Saturday they were loaded upon cars to be brought here. In starting, the locomotive gave such a jerk that all the cattle were crowded into the hind ends of the cars, and the jam was so great that six or eight of them were killed outright, and many others seriously injured, so that they will have to be sold for beef. In all thirteen or fourteen are killed or permanently injured.

HOME INDUSTRIES.—The Bergman Brothers, proprietors of the Sacramento Pottery, are just about commencing the manufacture of ink bottles and ink stands, in sizes varying from the smallest up to quarts. The ink factory will be established in this city by C. Page Bonney & Co., with Bonney as Superintendent, he having conducted a like business in Minnesota, whence he arrived a few weeks since. It is the intention to turn out inks of all kinds and at prices to defy competition, and put a stop to importation of such commodity. In addition, as soon as the necessary machinery arrives, Bonney will go into the manufacture of cracked wheat, and will gradually extend his business as the public wants may require. The site for the factory has not yet been selected, but it will be in Sacramento, and the potters Bergman are already busy at work preparing for the manufacture of ink bottles.

SAN BERNARDINO.

Argus, Jan. 1: The recent warm weather has brought up the green grass on our mesa, and Mother Earth smiles in her mantle of green. Our farmers are busily engaged in plowing, and the crop this year bids fair to equal that of any previous.

It is said that the Riverside people will, this spring, set out 300,000 vines and trees. Just think what the income will be to this settlement when all this fruit comes into market. This settlement has gone more extensively into the fruit business than any other settlement in California. They are sure to reap their reward. All that is required is a little practice and industry.

ABOUT SAN BERNARDINO.—We are permitted to make extracts from a letter written by Mr. Frazee, to Hon. T. A. Morris, of Indianapolis, Indiana:

After traveling for three years over the State of California, I can say unhesitatingly that San Bernardino is the healthiest location that I have found. It is not subject to fogs, as the coast towns; its atmosphere is dry and healthy; it is the richest and best watered valley in the State; more mill streams and more artesian water than in any two counties in this State. It is a rapidly growing city of 3,000 population. The west end of the Southern Pacific Railroad is within thirty miles of this place, and is rapidly approaching completion. The railroad from Salt Lake City is being pushed on to intersect the Texas Pacific Railroad at this place. This is a delightful climate; now (Dec. 25th,) persons are comfortable in their shirt sleeves, and children have been playing barefooted, and comfortable all winter out of doors. Flowers are in bloom; oranges are ripe; early corn has been planted and early gardens look beautiful. Wheat yields 50 bushels to the acre; alfalfa (clover), grows six feet tall, and brings an annual income of from one to two hundred dollars an acre. Land can be bought at from two to twenty dollars an acre. This is the garden spot of California for health or for making money.

SAN JOAQUIN.

RAIN.—*Argus*, Jan. 3: The rainy weather that has prevailed for some time past seems to have improved since the advent of the new year, rain falling steadily throughout the whole of Thursday and Thursday night and up to the hour of going to press with our paper on Friday afternoon, and still no appearance of letting up. The roads are still passable for the stages and light vehicles, but freighting has entirely ceased from this point. Judging from the appearance of things at the present time, the farming prospects are most flattering indeed, and three weeks of open weather in this month will enable farmers to very greatly increase the breadth of land in cultivation.

SANTA CRUZ.

Sentinel, Jan. 3: If any one doubts the mildness of the winter climate in Santa Cruz he should tarry a moment at the window of Postmaster Brazor's Store. He will there find, attached to the stem, a ripe orange which was grown in the open air in Mr. Edward Briody's garden in this city. A large number of tropical plants are in full bloom in the various private gardens of Santa Cruz.

SANTA CLARA.

AT WORK.—*Advocate*, Jan. 3: Our farmers eagerly seize upon the intervals in the rain to prepare their ground for the reception of the seed which is to yield them a golden harvest. On every hand plowing has commenced, and is being prosecuted with vigor. On the high land the ground is in excellent condition for tilling, and a short season of dry weather will place the lower portions also in suitable condition for the plow. A more auspicious season has never opened for the farmers. The rain has been copious and nicely distributed thus far, with very little frost, and vegetation has felt its benign influence, as evidenced in its rapid growth. Already the tiny blades of grass are upon the ground, the beautiful green forming a pleasing contrast to the brown earth, while

shrubs and flowers are showing signs of new life, and sending out fresh sprouts to bloom in their season. With no drawbacks, we may confidently look forward to a season of prosperity such as has not blessed our State for years.

The New Year opens with cheerful prospects for Gilroy and the district of which it is the center. In agriculture and rural pursuits the copious, but gradual, rains, without deluging the soil, have prepared it for the reception of the seed, and have facilitated agricultural and gardening operations. Plowing and seed-sowing are now going on steadily all around, and though here and there is complaint of the earth being too soft, the ground, taken all in all, is in excellent condition. So long as the plow leaves a clean, glistening furrow, and so long as the soil yields to the harrow without leaving heavy lumps of earth, there cannot be too much rain for grain-growing purposes. In fallowed ground, where seeding was done in November, the corn-grass is several inches above the ground, and looks very healthy.

The cultivation of tobacco, which is the pet enterprise of Gilroy, assumes unusually large dimensions this year. Last year the company had five hundred acres under crop, and this, it was thought, was a good area for a company that was then in embryo, and it may be said, is so yet. But this year there will be at least fifteen hundred acres under tobacco, and all in the immediate vicinity of this city. When Gilroy has been so pressed for store-room for the produce of five hundred acres, as it has been in the year just passed, where shall be found storage capacity for next year's crop, unless the company erect stores of their own, as they are likely to do, and must do?

FUTURE PROSPECTS.—Taking all in all, we have every cause for feeling elated at the gratifying prospects before Gilroy. The tobacco interest is assuming huge proportions, and that alone will contribute largely to our prosperity. It will also undoubtedly have the effect of drawing hither other industries and manufacturing enterprises, and largely augment our population. Land is already being purchased and rented by strangers to engage in tobacco raising, and the farming interest is also taking a broader scope. A considerable quantity of new land will be broken up this year to be sown to cereals, and we anticipate that our yield of grain will be much greater than ever before. We congratulate our people on the auspicious opening of the new year, and sincerely hope that it will indeed prove a happy new year to each and every one.

SOLANO.

Chronicle, Jan. 3: The plains above Sacramento were yesterday reported to present the appearance of a vast sea of water.

The water was very high around Bridgeport yesterday from the rains. The railroad embankment above Lemon's place was suffering from the body of water coming out of the Jamison cañon.

PUTAH CREEK broke from its banks Tuesday evening, and the water turned rapidly into Solano county, and covered the country in the direction of Silverville. The Yolo bank of the creek held good, and those on the Solano side are the only sufferers as far as heard from. The break occurred above the Solano House, not far from Davisville.

TULARE.

STOCK DYING.—*Della*, Jan. 1: We hear that considerable numbers of cattle are dying of starvation on the plains. This is expected in this valley at this season. The sickly and lean stock succumb to the great privations which are involved in the change from old feed to new, during the first rains of winter. No provision is made to mitigate the pangs of hunger, and no shelter is afforded from the cold, pelting, pitiless rain. All stock suffers greatly at this season on the plains, and the most hardy go bellowing with hunger from one range to another. There is a barbarity in this business worthy the attention of our legislators. We have no society for the prevention of cruelty to animals, but there is no wider range for sympathy with the brute kind than that which is excited in the breasts of humanitarians at the spectacle presented in the wholesale starvation of useful animals by their owners in this section of the State.

FOGGY.—We have had several successive days of foggy weather the past week—an unusual thing in this section of the State. For two or three days the sun was totally eclipsed; moisture settled upon everything, and the trees were constantly dropping water. As "Pretzel" would say, it reminds us of "tobacco wedder," when dampness brings the dried leaf to a proper softness for stripping, handling and packing. The misty weather has been very favorable for vegetation, and is bringing live stock on the plains through the starvation season in much better shape than usual.

COTTON.—*Times*, Jan. 3: Tulare valley promises to be a great cotton growing country. In Fresno county some fine crops have already been raised. Last year a gentleman in this county produced a crop averaging 1,600 pounds to the acre, which is worth 18 cts. per pound, thereby yielding \$288 to the acre. Mr. Joshua Lindsey has leased his ranch of 120 acres, which is about ten miles from here, to a gentleman for the purpose of further testing the experiment. He feels quite sanguine and is going to procure a cotton gin. We shall from time to time give such facts pertaining to the subject as may be of interest to our readers. Fresno, Tulare and Kern counties are favored with a genial climate, a luxuriant soil, and water advantages that make them equal if not superior to the favored cotton land of the South.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Jan. 6, 1874.

FOR WEEK ENDING Dec. 23d, 1873.

COMBINED TANK AND LIQUID MEASURE.—Joseph H. Corliss, Reno, Nevada.

MANUFACTURE OF CIGAR BOXES FROM REDWOOD.—Charles A. Hooper, S. F., Cal.

QUICK-SILVER PUMP.—Martin P. Boss, Bullionville, Nevada.

MECHANISM FOR TOWING BOATS.—Giles S. Olin, Deer Lodge, Montana.

LOCOMOTIVE FURNACE.—Andrew J. Stevens, Sacramento, Cal.

PROCESS OF PREPARING GRAIN FOR MANUFACTURE INTO FLOUR.—Oren F. Cook, Grand Island, Cal.

TRADE MARKS.

THE GIANT POWDER COMPANY.—Giant Powder Explosive Compound, S. F., Cal.

ATLANTIC GIANT POWDER COMPANY.—Dynamite Explosive Compound, S. F., Cal.

"The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. Note.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with greater security and in much less time than by any other agency.

Oakland Farming, Horticultural and Industrial Club.

January 2d. Dr. Carr (President) being absent, on motion, A. D. Pryal was elected chairman pro tem.; minutes of meeting of December 5th approved. A communication was received from Dr. Carr, regretting his inability to be present, and declining, if nominated, to continue as President. It was

Resolved, That bills for all delinquent fees and dues of members be placed in the hands of the committee on drinking fountain, for collection and that the amount collected, together with the balance now in the Treasury be expended by them for erecting one or more drinking fountains in Oakland, with suitable inscription.

On motion, Mr. A. D. Pryal, A. F. Montandon and Mrs. Jennie C. Carr were appointed a committee to publish an address on the subject of forest tree culture, and also on the sale of our public timber lands.

Resolved, That Dr. W. P. Gibbons, Dr. E. S. Carr, Mrs. G. P. Moore, A. F. Montandon, and A. D. Pryal be appointed a committee to circulate a petition to the City Council, urging that immediate action be taken on the part of the city to secure a large and suitable public park; the committee to present with the same, facts and reasons for establishing such a park.

Resolved, That we recommend the horticulturists of Alameda county to form a permanent horticultural society and to hold exhibitions annually, or oftener.

On motion of Mrs. Carr, a vote of thanks was tendered to the daily and weekly press for generous courtesies to the club since its organization.

Resolved, That this club adjourn without date.

PROFITS OF CRANBERRIES.—Cranberry vines do not, as may be commonly supposed, root into the soil. They appear to twine their roots around grasses and moss, propagating from their joints and obtaining their nourishment apparently from the water around their roots. They are strong and hardy, and, if the water is regulated properly, will multiply with astonishing rapidity. Respecting their value as a product, we have some Munchausen reports for the year 1873. One gentleman picked from his "best acre" 1,373 bushels. He received \$2.80 per bushel, and as the picking cost him \$1 per bushel, his income from that one acre was \$2,461.40. Others had a yield of from 700 to 1,000 bushels per acre, but these are examples of the greatest yields. Some parties average 113 bushels to the acre, others as low as twenty bushels, the latter being marsh, just commencing to bear. By the sudden appreciation of the marsh lands producing this article of consumption, many have almost instantly found themselves wealthy. Men who, a year or two since, would have taken a thousand or two for all they possessed, are now the "heaviest" men known to the bankers of their towns. —*Milwaukee Journal of Commerce*.

SWEET FERN FOR TANNING.—The inquisitive sons of Michigan have just discovered that tens of thousands of her acres, hitherto deemed worthless on account of the dense growth of sweet fern, are really valuable, for this luxuriant vegetable is found to be a much more powerful astringent than hemlock, and far superior to that substance for tanning purposes, yielding 40 per cent. extract where hemlock yields but 14.

In dense forests, where the sunlight can not reach the ground, only tall trees and timbers which can lift their leaves to the light can hope to flourish. Humboldt tells us that some of the South American lianas show almost a reasoning power in this particular, refusing to climb up certain trees, while those which they apparently select are just those which are best adapted by nature to their purposes.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Jan. 7, 1874.

The general aspect of the Produce market is no better. As a rule no important rises have been made. On the contrary there have been some rather unaccountable fallings off in several directions. Prices have been so satisfactory during the last few months, on the whole, that no discount will be felt by our farmers because higher prices are not obtained. Even with present ruling rates, there is no cause for complaint. The somewhat remote influence of a prospective good harvest year, for 1874, has its effect, and this, with the continuation of over confident prophecies, has kept quotations within reasonable limits. Provided that producers get their fair proportion of the profits accruing to the State at large, and their share of the evident prosperity now admitted to be real and on a solid basis, they may enter the past year in their records as one of the best they have had.

Wheat.

The total receipts of Wheat at this port from July 9, 1872, to the close of the year, amounted to 7,160,068 sacks; the exports, to 4,374,993 sacks. In the corresponding period of 1873 the receipts were 5,493,044 sacks; and the exports, 5,607,426 sacks. But the prices obtained during the latter year were so much in advance of those received in 1872 that the difference in the crop is well compensated for. Thus the price in Liverpool Jan. 1, 1874, was 1s. 3d. in advance of that of the same day one year before, and here the difference was 27 cts. 3d. cental. And Wheat is not alone in this position, as compared with returns of a year ago. From Friedlander's Circular we extract the following: The first half of the harvest year having now closed, it may be interesting briefly to review the course of the produce business during that time, certainly, in that respect, one of the most interesting periods in the history of the State. The spring and early summer did not carry out the winter's promise regarding crops, for, after February 1st, it may be said we had no rain at all. During the weeks and months of suspense that ensued, the high anticipations of the farmers gradually faded out, and by July, instead of a surplus for export of 700,000 tons of wheat, which was at one time confidently anticipated serious doubts began to be entertained if we would have to spare over 250,000 tons. The farmer, in each case finding his own crop seriously curtailed, magnified the loss to his neighbors, and instead of being a free seller at \$1.60 to \$1.65, as had been anticipated, held out for \$1.80 to \$1.85. The business done in June and July was consequently limited in amount, rates in some cases going as low as \$1.60, but averaging \$1.70 to \$1.75 cental, and hardening whenever any serious attempt was made to force purchases. In the meantime, tonnage was accumulating, and the Liverpool market showed great firmness and was slowly but steadily advancing. By the middle of August, parties who had tonnage engaged to arrive abandoned the hope of low prices for wheat, and entering the market suddenly and boldly, secured large quantities in the neighborhood of \$2.10, from which point the market rose steadily to \$2.30 per cental, which was the price in September. By this time, a very large portion of the crop of wheat had passed out of first hands, and the residue has ever since been very firmly held, although prices have never risen above those ruling in September.

During the period under review

Flour

Has been very active, and marked by a strong demand for export. The most remarkable feature in this has been the demand for Great Britain, to which country we have shipped 233,000 bbls., and will probably send 40,000 bbls. more before the season is out. This result has been brought about by the greater relative cheapness of flour to wheat. It is too early yet to say how these shipments will turn out, but as the flour exported has all been of high grade, and as great care has been taken in shipping it, we have hopes that it will meet with favor, and realize fully the anticipations of the shippers. From the *Atlas*'s summary we find that during the last six months of 1872, 485,441 sacks of Flour were here received, and 465,519 exported; in 1873, 1,036,972 sacks were received, and 1,284,121 sacks forwarded. These figures show a marked progress of one of our leading industries, the manufacture and export of Flour, especially when we take in account the Wheat figures, from which no such results could have been anticipated. Flour here is steady at the same quotations. In the New York market it has been quiet or dull for some time past.

Feed

Is, if anything, weaker, as will be seen from our tables. Hay, however, is a little firmer.

Dairy Produce

Has been influenced by the weather, and is low. Butter has fallen off very much, and much has been sent to the interior and East, to relieve our market of surplus stock. Some Eastern Butter has also been shipped back again, on the turn of the market, and more will probably follow.

Hops.

Our mail advices of Dec. 27 state that the market in New York has had a heavy tone since our last writing; the call from brewers has been light, but the lower prices which holders have been willing to accept have perhaps awakened a little more business. For the best grades of State 40 cents is now the outside rate, for cash transactions. Foreign Hops are freely offered at lower prices; English at 30c to 37c., and Bavarian, 28c. to 35c.; California Hops, crop of 1873, were at the date mentioned quoted at 40c. to 45c.

Potatoes

Are steady for White; Sweet are very scarce. The various kinds of White range widely in price, as in quality, and more depends on the condition of samples than the locality in which they were grown.

GENERAL MERCHANDISE.

WEDNESDAY M., Jan. 7, 1874.

Australian Coal is \$1 per ton higher. Coffees very firm. Oils weaker, especially Kerosene, which has fallen considerably. Preserved Fish still weak. Sugars and Syrups quiet.

RAGS.				PAINTS.			
Eng. stand. Wh't	12	@	13	Devree's Petro m	32½	@	34
Detrick's Mach e	12	@	13	Barrel Kerosene	—	@	21½
Sewed, 22 x 36,	12	@	13	Downer Kerosene	45	@	50
Gilroy 15,	12	@	13½	Gas Light Oil	—	@	34
do, 22x36, do W	12½	@	13½	Atlas W. Lead.	6	@	11
do, 22x40 do ..	14½	@	15	Whiting	1½	@	13
do, 23x40 ..	—	@	15	Putty	4	@	4½
do, 24x40 ..	15	@	16	Chalk	—	@	12
Flour Sacks ½s.	13	@	16	Paris White ..	2½	@	3
Stand. Gunnies.	8½	@	9½	Ochrs	2½	@	3
" Wool Sacks.	60	@	65	Venitian Red.	3	@	3½
" Barley do.	—	@	15	Leads	10	@	11
Hessian 45-in.gds	—	@	11½	Litharge	10	@	11
do 60	—	@	11	Eng. Vermillion	—	@	35
Burlaps, yard, 10	—	@	10½	RICE.			

Surplaps, yard... — @ 10%	China No. 1, 1/2 lb	5 1/2 @ 6 1/2
CANNED GOODS.	do 2, do.	5 @ 5 1/2
Asst'd Pie Fruits	Japan.....	6 @ 7 1/2
in 2 1/2 lb cans 2 75 @ 3 00	Siam Cleaned...	7 @ —
do Table do... — @ 2 75	Patna.....	7 @ —
Jams & Jellies 4 00 @ 4 50	Hawaiian.....	6 1/2 @ 7 1/2

Cal. Jobbing	12	@	10
Anstran, 10-ton	12	@	10
Coos Bay	12	@	10
Bellingham Bay	12	@	10
Seattle	12	@	10
Cumbr'd, cks, 25	20	@	20
do bulk, 21	20	@	20
Mt. Diablo	14	@	15
Lehigh	14	@	15
Liverpool	14	@	15
West Hartley	12	@	14
Scotch	3 50	@	10 00
Guatemala	1 00	@	4 50
Vancouver's Is	12	@	14
Charcoal, 1/2	75	@	75

Sandwich Island	24	@	24
Santa Rica per lb	24	@	25 1/2
Guatemala	1 00	@	4 50
Java	31	@	31
Manilla	24	@	24
Ground in cans	25	@	27
Chicago	10	@	10

Pac. Dry Cod new	5 1/2	@	7
do cases, 8	8 1/2	@	9
Eastern Cod	7	@	9
Salmon in bbls.	8 50	@	9 00
do 1/2 bbls 50	6 50	@	6 50
do 2 1/2 cans	2 80	@	3 00
do 1 lb cans	2 25	@	2 50
Do Col. R. 1/2	1 00	@	1 00
Pick. Oat. bbls, 22	1 00	@	1 00
Bo. Sm. K. H. 40	50	@	50
Mack's No. 1, 1/2	12	@	12

Extra	12	@	12 50
in kits, 2 75	23	@	23
Ex mess, 3 50	1 00	@	1 00
Ex mess, 1/2	12	@	12
Sm. K. H. 40	50	@	50

Assorted size, 1/2	5	@	7
Neat F. No. 1	1	@	100
Pure	1 25	@	1 25
Castor Oil, No. 1	40	@	45
do do No. 2	1 25	@	35
Cocaine	50	@	60
Olive Oil, No. 1	25	@	30
do Possel	4 75	@	5
Palm	9	@	9
do Bagicalup	1 00	@	1 05
Linseed, raw	1 00	@	1 05
do boiled	1 00	@	1 05
China nut in cs	70	@	80
do bulk	70	@	72
Sperm, crude	1 40	@	1 40
do bleached	2 20	@	2 20
Coast Whales	55	@	55
Polar, refined	55	@	55
do	85	@	95
Coal, refined	37 1/2	@	40
Oleophene	40	@	33
Devore's Bril	43	@	45
Long Island	37 1/2	@	40
Enreka	37 1/2	@	40

Cal. Cows per lb	11 1/2	@	11 1/2
do New York	11 1/2	@	11 1/2
Grain	11 1/2	@	11 1/2
Dry granulated	11 1/2	@	11 1/2
Extra do	11 1/2	@	11 1/2
California Beer	10 1/2	@	11 1/2
Golden C	10	@	10
do R. Y. grade	7	@	7
Cal. Symp. in bbls	47 1/2	@	47 1/2
do 1/2 bbls	45	@	45
do Hawaiian	20	@	22 1/2

Oolong, Canton	19	@	25
do Amoy	24	@	25
do Formosa	20	@	25
Imperial, Canton	25	@	40
do Pungsey	45	@	60
do Moyne	60	@	60
Gunpowder, Canton	30	@	42 1/2
do do	30	@	42 1/2
do do	30	@	42 1/2
Yong Hy, Canton	24	@	40
do Pungsey	40	@	40
do Moyne	65	@	85
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75
Japan, 1/2 chests	30	@	75

We quote the following: Cargo prices for Oregon Pine are \$16@18 for rough and \$26@28 for dressed; Lath \$3@3.25. Sugar Pine is quiet at 35@45; Cedar, \$12.50, \$32. and \$22.50 for the three qualities.

CARGO PRICES OF PUGET SOUND PINE

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,

El Dorado, El Dorado county, California.

11v6-cow

THOMAS & SHIRLAND,

Importers and Breeders of



Cashmere or Angora Goats,

—OF—

PURE BLOOD AND ALL GRADES,

For Sale in Lots to Suit Purchasers.

Including a Choice Lot imported by A. EUTYCHIDES, a native of Angora. For particulars apply to

S. P. THOMAS, Sacramento, Cal.

—OR—

E. D. SHIRLAND, Auburn, Cal.

3v6-3m

Pure Bred Spanish Merino Sheep.

ONE HUNDRED BUCKS AND A FEW EWES,

Bred from Vermont Stock.

A portion were bred by JEWETT BRO., of Kern Co.

Can be seen at Swerner Yards, corner Howard and Tenth streets, San Francisco.

JEWETT & MUNSON,

6v6-1f Cosmopolitan Hotel.

THOS. BUTTERFIELD & SON,

Breeders and Importers of the

Cotswold, Lincoln, Leicester, Texel and South Down SHEEP.

—ALSO—

THE ANGORA GOAT.

Now offer for sale the Pure Bred and High Grades. We have a good lot of Bucks of crosses between the Cotswold and South Down, between the Lincoln and Leicester, and the Lincoln and Merino.

THOS. BUTTERFIELD & SON,
Hollister, Monterey County, Cal.

19v4-1f

H. K. CUMMINGS,
1858.

H. H. RALSTON,
1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

Removed to 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1f

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

1 Pine street, between Montgomery and Kearny, SAN FRANCISCO.
21v2-1y



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the



THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

9v6-3m

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

THE PEOPLE'S PUMP.

THE ONLY RELIABLE PUMP FOR

Farmers, Stockmen and Stable Keepers,

BEING A

NON-FREEZING FORCE PUMP,

Working in Wells from

6 to 100 feet deep.

Suitable for either Hand or Power use.

RATE IN PRICE, FROM \$12 UP.

Send for Circular.

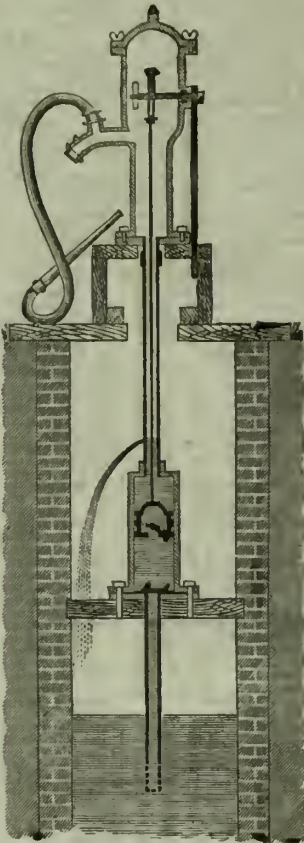
Depot for Pacific Coast,

CONROY, O'CONNOR & CO.,

SAN FRANCISCO.



13v4-family



AGRICULTURAL ARTICLES.

THE "VICTOR" GANG PLOWS IS THE BEST.

Hule's Patent, with all improvements to '73, and with "JONES" Plow Bottoms, the "VICTOR" is the best GANG PLOW in the world. It is simple, strong and durable, and does its work efficiently. Don't fail to see it before buying. Price, \$75. Sold only by TREADWELL & CO., San Francisco. Send for circulars. We have also a large stock of Single Plows, including the "JONES," COLLINS, Boston Clipper, Peoria, etc., etc. Cultivators, Harrows, Seed Sowers, Drills, etc., etc. TREADWELL & CO., San Francisco. 16v6-3m

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m MATTESON & WILLIAMSON, Stockton, Cal.

AVERILL'S CHEMICAL PAINT

Of any desired Shade or Color,

Mixed ready for application, and sold by the gallon

It is Cheaper, Handsomer, more Durable and Elastic than the best of any other Paint.

Office, corner Fourth and Townsend streets, San Francisco. Send for sample card and price list. 15v23-3m-cowhwp

HEALY & JEWELL, Agents.

PURCHASERS please say advertised in Pacific Rural Press.

O. CREGO.

S. C. BOWLEY

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Bunkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey; Helfield & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:

O. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, 24v6-3m San Francisco.

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

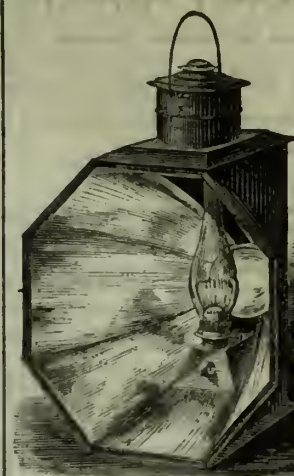
Apply to E. E. MORGAN'S SONS,

320 California Street, San Francisco.

100 AGENTS WANTED.

\$5 to \$25 per day, selling the attractive little "Coly's" Washers. Great inducements offered. Send for Circulars. Address, 20v6-3m G. R. CODDING, Petaluma, Cal.

PACIFIC LAMP MANUFACTORY.



EMILE BOESCH,
PATENTEE AND MANUFACTURER OF
LAMPS, LANTERNS AND REFLECTORS,
802 MONTGOMERY STREET, SAN FRANCISCO.

New Mining & Mill Lights.
21v27-cow-3m

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS, PIECE MILK-PANS,

STRAINER PAILS,

CREAM PAILS, MILK PAILS,

ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m

SAN FRANCISCO.

Friel's Patent Paragon Vapor Stove.

PATENT GRANTED MAY 20, 1873.

The Great Labor Saver of the Household.

ECONOMY, CONVENIENCE AND SAFETY COMBINED.



JUST THINK OF IT—No Wood, no Coal, no Coal Gas, no Stove Pipe, no Chimney, no Smoke, no Ashes, no Dirt, no Wood Bores, no Coal scuttles, no Kindling Wood, but a Friction Match, and the FIRE IN FULL BLAST IN HALF A MINUTE.

Oven Hot in Two Minutes.

Steak broiled in seven minutes! Baked Beans in thirty minutes! The fire extinguished in a moment and the house unheated!

It has no rival in all kinds of Cooking and Flat Iron Heating, and combines Economy, Convenience, Neatness, Safety and Durability! The Ladies welcome it; a little Child can operate it, and

ALL RECOMMEND IT.

Prices from \$5 to \$25, according to size. Manufactured and sold by WM. FRIEL,

69 and 71 Fourth street, San Francisco.

N. B.—Agents wanted in every town in the State. On payment of \$5 one Stove will be sent as sample.

6v6-3m-2am

Murtha's Patent Chimney Tops OR VENTILATORS.



A sure cure for smoky chimneys, and WARRANTED to give entire satisfaction when all others fail, or no pay. They are made to fit any size flue.

COUNTRY RESIDENTS, by sending the measure of the chimney flue, can have them sent to any part of the State.

Refers by permission to Supt. New Almaden Mine, W. T. Garratt; Wm. McKinnin, Thos. Boyce, Jas. Dows, J. Bandmann, and HUNDREDS OF OTHERS. Send for Price List.

RECOMMENDED BY ARCHITECTS GENERALLY.

W. O. MURTHA,

No. 16 Tyler street, San Francisco.

17v27-cowhwp-3m

MONTGOMERY'S HOTEL,

277 and 229 Second street,.....SAN FRANCISCO.

This Hotel has been newly furnished, and is situated in a central and healthy location, and is one of the few Hotels in San Francisco conducted on Temperance Principles.

BOARD, PER WEEK, \$3.50. BOARD AND LODGING, \$4 to \$5. SIX MEAL TICKETS FOR \$1.

CHAS. MONTGOMERY, Proprietor.

Passengers and Baggage taken to the Hotel free. -2v

NURSERY NOTICES.

ESTABLISHED 1853.

Stock for Nurserymen and Florists.

TERMS CASH.

Cherry Seedlings—Mazzard.....	\$12 per 1000
—Mahaleb.....	20 per 1000
Apple Seedlings.....	12 per 1000
Pear Seedlings.....	15 per 1000
Walnuts, English, 4 to 6 ft.....	15 per 100
—California bl'k, 4 to 6 ft.....	15 per 100
Spanish Chestnuts, 6 to 12 in.....	15 per 100
Cork Elm, 4 to 6 ft.....	15 per 100
—6 to 8 ft.....	20 per 100
Blue Gums, or Eucalyptus, in variety..	\$3 to 10 per doz.
Magnolia, Grandiflora, 3 to 5 in.....	3 per doz.
—6 to 12 in.....	6 per doz.
—12 to 18 in.....	12 per doz.
Golden Arborvitae, 8 to 12 in.....	6 per doz.
—12 to 18 in.....	6 per doz.
Heath-leaved Arborvitae, 12 to 18 in.....	6 per doz.
Crataegus Arbuta, 12 to 18 in.....	2.50 per doz.
—2 to 4 ft.....	6.00 per doz.
Enonymus Reptans, Variegata.....	2.50 per doz.
Pulchella.....	2.50 per doz.
—Argentea Marginata.....	3.00 per doz.
—Japonica.....	3.00 per doz.
—Aurea.....	3.00 per doz.
Swedish Juniper, 12 to 18 in.....	3.00 per doz.
Heath, Mediterranean "Hardy".....	2.50 per doz.

Will only sell in quantity specified at these prices. If less, 10 per cent. added; if more, 10 per ct. discount.

BERNARD S. FOX,
San Jose, Cal.

Fruit Trees! Fruit Trees!

AND WHERE TO PURCHASE THEM.

The Santa Clara Valley Agricultural Society has awarded:

Largest collection of Pears, first premium.....	B. S. Fox.
Best twelve varieties of Pears.....	B. S. Fox.
Largest collection of Apples.....	B. S. Fox.
Best twelve varieties of Apples.....	B. S. Fox.
Best collection of Plums.....	B. S. Fox.
Largest collection of Nuts.....	B. S. Fox.
Best soft-shelled Almonds (Languedoc).....	B. S. Fox.

Forest Trees, Shade Trees, large and small, in quantity.

BERNARD S. FOX, San Jose, Cal.

Agent, Mr. THOS. MEHERIN, Battery street, San Francisco. ocl8

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.

Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address THOMAS MEHERIN,
516 Battery Street,
SAN FRANCISCO.
P. O. Box 722. 24v6-3m

FRUIT AND ORNAMENTAL TREES,

GLEN GARDENS,

ONE MILE EAST FROM SACRAMENTO.

My stock embraces all the most desirable varieties known, including several new Peaches, among which are the Beatrice, Louise, Early Rivers, Rivers Early York, Stanwick Early York, Victoria, Prince of Wales, and several others, (all hybridized by S. Rivers of England) and fruited on my grounds this year for the first time in California.

The Louise and Beatrice are 15 and 20 days Earlier than the Hale's Early.

Being the first to import these new fruits, including many sorts not mentioned, purchasers may rely upon getting trees true to name. Also, the FREEMASON and SALWAY, the most valuable late peaches in cultivation.

Blackberry, Raspberry and Strawberry Plants; fresh Locust Seed—CHEAP FOR CASH.

E. F. AIKEN,

de27-1m Proprietor.

TO FRUIT GROWERS.

The undersigned offers for sale a fine stock of one-year old and dormant budded Trees of the following new fruits:

EARLY BEATRICE PEACH—The earliest Peach in the world; one to three weeks earlier than Hale's Early. ST. JOHN—The best second early Peach in the South. FREEMASON—The best Peach ripening about Sept. 15. PLOQUETS LATE—See Rural Press, June 7th, 1873. BLOOD-LAIVED PEACH—New and very ornamental. VAN BUREN'S DWARF, and ITALIAN DWARF—Good fruit, and adapted to small gardens.

WILD GOOSE PLUM—Early, good and productive. MINER PLUM—Later, fine.

Also, a general assortment of other varieties of fruit, including Cherries. Nursery, three miles west of Vacaville, on the Suisun road. Address

D. E. HOUGH,
Vacaville, Cal.

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway,
Oakland, Cal.



GREEN HOUSE PLANTS,
EVERGREEN TREES,
SHRUBS, ROSES, ETC.
100,000 MONTEREY
CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM TREES, including:—EUCALYPTUS GLOBULUS (Blue Gum)—extra fine street and shade trees. EUCALYPTUS VIMENALIS—both sorts very popular. ACACIAS in variety. Monterey Pines, Lawson's Cypress, etc., etc. Orders attended to. Address:

M. KING, Nurseryman,
23v6-3m OAKLAND, CAL.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees. Send for priced Catalogue.

24v6-6m

TREES FOR SALE.

The undersigned offer for sale at their
Nurseries,

Near Niles Station, Central Pacific Railroad, Alameda county, Cal., a fine stock of STANDARD FRUIT TREES of the orchard varieties, best adapted for California. Our Trees are one and two years old, and all well grown and well rooted, and true to the label.

We invite Planters and Dealers to examine our stock before purchasing. Send for a Descriptive Catalogue and Price List. Trees can be sent by regular freight routes or by Express, as directed. Careful attention given to packing for shipment. Local Agents wanted, to whom a liberal commission will be paid. Address the undersigned, either at Centerville, Alameda Co., Cal., or at 418 California St., San Francisco, Cal.

SHINN & CO., Proprietors.

ALMOND TREES.

The subscriber has a large lot of young Almond Trees, one, two and three years old, in a thrifty condition, of the celebrated Languedoc variety, which will be disposed of at reasonable rates.

Orders may be sent to the undersigned, and the trees will be properly packed and delivered at Niles Station.

B. D. T. CLOUGH,

(By Express) Niles Station, Alameda Co., Cal.

P. O. Address, Centerville, Alameda Co., Cal.
14v6-1f

ALMOND TREES.

40,000 Brier's Languedoc Almond Trees,

One year old from the bud—CHEAP FOR CASH.

Liberal deductions to the trade and to those planting large numbers. The tree grows rapidly, bears young and constantly, blooms late, is hardy. The almond is large and sweet, with a soft shell.

Send your orders for these and all kinds of fruit and nut trees, to

W. W. BRIER,

24v6-2m Alvarado, Alameda Co., Cal.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER,
Petaluma, Sonoma Co., Cal.
21v6-1y

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy BLACKBERRY SETS, for sale at LOWEST RATES. Orders may be addressed through DEWEY & Co., of the Rural Press, San Francisco; ROBT. WILLIAMSON, Capital Nurseries, Sacramento; or to me,

CALVERT T. BIRD,
San Jose, Cal.
25v6-3m

Brooklyn Nursery,

13TH AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 30,000 Cypress, (\$3 to \$15 per hundred), 10,000 Australian Blue Gums, and about 3,000 assorted Roses. Also a choice selection of the various kinds of ornamental shrubbery, etc. Special attention given to the laying out of Landscape Gardens. Orders received at the Nursery or at the office of J. F. SWEENEY & CO., Seedsmen, Nos. 409 and 411 Davis St., S. F.

JOHN CAREY, Proprietor.
24v6-3m

FRUIT AND ORNAMENTAL TREES.

Small Fruits,
Evergreens,
Shrubs,
Roses, Etc., Etc.

Dealers and Nurserymen supplied at Low Rates. Catalogues furnished on application.

JOHN ROCK,
San Jose, Cal.
15v6-1f

PRYAL'S NURSERIES.

FRUIT,

Ornamental and Evergreen Trees,

SHRUBS AND PLANTS,

VEGETABLE AND FLOWER SEEDS, GREENHOUSE
AND BEDDING PLANTS,

Embracing all of the most desirable kinds,

Are Now Ready and For Sale.

BLUE GUM AND OTHER VARIETIES OF

EUCALYPTUS.

Boxwood Plants for Garden Walks.

Roses of all the New and Old Varieties.

Correspond with me, and, if possible, come and see my trees, etc. All orders will receive prompt attention. Address:

A. D. PRYAL,

Oakland, Alameda Co., Cal.

DEPOT AND SEED STORE—Broadway, opposite the City Hall; Nursery and Greenhouse, 3 1/2 miles north of Oakland, and one mile from Oakland Horse Railroad depot at Temescal.

Botanical collectors in all parts of the world are requested to correspond.

25v6-1f



My business is to supply what every farmer of experience is most anxious to get, perfectly reliable Vegetable and Flower Seed. With this object in view, besides importing many varieties from reliable growers in France, England and Germany, I grow a hundred and fifty kinds of vegetable seed on my four seed farms, right under my own eye. Around all of these I throw the protection of the three warrants of my Catalogue. Of new vegetables I make a specialty, having been the first to introduce the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of others. My Catalogue containing numerous fine engravings, taken from photographs, sent FREE to all.

JAMES J. H. GREGORY,

de27-2t-eow

Marblehead, Mass.

TREES, TREES, TREES

—AND—

PLANTS,

In any quantity from one tree to 10,000, both wholesale and retail, at lowest market rates. Fruits guaranteed true to name. I have many new varieties of fruit in my collection which are far superior to the old standard varieties. Among them is the celebrated Beatrice Peach, guaranteed true; this Peach is 20 days earlier than the Hale's Early, and in every respect a fine peach. My stock of Shade Trees and Grape Vines is the largest in the State, and a fine assortment.

Send stamp for printed Catalogue, Price List and directions for planting and training, or come and see the stock, at the CAPITAL NURSERIES. Office and tree depot U street, between 15th and 16th streets, Sacramento, Cal.

ROBT. WILLIAMSON, Prop'r.

Special rates to Patrons of Husbandry. 24v6-3m

THOS. A. GAREY'S

Semi-Tropical Nurseries,
San Pedro street, two miles below the Court House,
LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit Trees in Southern California.

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

OUR SEEDSMEN.

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who raise

Vegetable, Flower and Tree Seeds of all kinds.

Long experience, extensive practice, and the abundant production of this year's seed crop, enables us to offer a selection of Superior Seeds for California and Foreign Soils, and also places us in a position to maintain the lead in the market for Pure Seeds, and much cheaper than those sold by other seedsmen.

A large assortment of Imported DUTCH BULBS and GLASSES just arrived.

ALFALFA, Clover, Timothy, Kentucky Blue Grass, Orchard Grass, and all other varieties.

FRUIT TREES, SHADE TREES, HARDY SHRUBS, and a general assortment of all kinds of VEGETABLE PLANTS.

NOTICE.—We will send, free of postage, on receipt of order, 25 varieties of garden seeds in small packages price, \$1.25; or the larger size packages—price, \$2.50. Send for Catalogue and Price List.

SEVIN VINCENT & CO.,
607 Sansome st., San Francisco.
18v6-4m

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF
EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California.

My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS—

BULBS, Flower and Bulb CHROMOS from Vick,
(Rochester) and Monnier & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS
EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,
Red Clover, White Clover,
Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,
Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the Interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk.

My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.
1v7-3m

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a rates that, with proper cultivation on suitable land, will make them among the most profitable crops grown. For further particulars address

PACIFIC OIL AND LEAD WORKS,

3 and 5 Front street, San Francisco.
12v6-3m P. O. Box 1443.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.
19v6-1f

WESTERN GROWN
SEEDS.

Save Time and Money. Buy direct of the GROWER. Vegetable, Field and Flower, fresh and true to name.

Catalogue for 1874 sent FREE, by
GEO. S. HASKELL & CO., Seed Growers,
Rockford, Ill.
25v6-2m

WHITE LEGHORN CHICKENS

—AND—

EGGS.

CHOICE FOWLS AND FRESH EGGS AT
REASONABLE RATES.

ALSO A FEW GOOD



DARK BRAHMAS AND BLACK SPANISH.

F. N. WOODS & CO.,

de27-4t 67 California Market.

NOTICE TO WOOL GROWERS.

On the 28th day of January next we will sell at public auction, at our ranch, near Watsonville, Santa Cruz County, California, a choice lot of pure bred Angora Bucks, also a few pure bred Angora Ewls and high grade Angora Bucks if desired by the bidders. We will sell at least thirty head of pure breeds without reserve. We have the stock. The breeders of this Coast are in need of it, and we wish them to come together and make their own prices. English breeders have followed this practice for centuries, and we will try it in California. It affords breeders an opportunity of getting stock to suit them both in quality and price.

de13-1m LANDRUM & RODGERS.

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,
OIL Cakes and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.
Office, 3 and 5 Front street.
Works, King street, bet. Second and Third. fel5-eow

Horse Clipping—Price, \$6 per Horse.

Our friends and patrons are hereby notified that we are prepared with the BEST HORSE CLIPPING MACHINE in the country to do and guarantee first-class work.

20v6-3m PRINCE & CHANTRY,
Norfolk Stables, Cor. Ellis and Mason, S. F.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel U. S. A., Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F.
de27-1f

Fourth Year of the Pacific Rural Press.

The publishers of this journal design making its weekly issues during its fourth year (1874) still more acceptable and valuable than those of the past. To accomplish this, we propose to furnish

More Editorial Labor;
Better Prepared and Condensed Reading;
A Greater Variety of Contents;
Contributions from our More Experienced Writers;
Uniformly Better Ink and Paper;
Uniformly Better Press Work;
A Choice Selection of Engravings;
A Complete, First-Class Journal;
A Journal Worthy of its Field;
A Paper Worthy of its Patrons.

We shall strive to make it an ever welcome visitor to those who desire to constantly

Improve the Heart and Mind,
And shall give a larger space to our HOME CIRCLE department, which from the first has been a popular feature of the RURAL.

Our aim is to gather information from all reliable sources, in the varied forms in which it is to be obtained. Our work is to distill our gleanings of all superfluities; condense such information as is of most importance to our special class of readers—give it to these in the plainest and fewest words possible, saving their time by our labor. Thus we will render well prepared and

Seasonable Intelligence,
Devoid of useless verbiage. Our

Leading Departments

Will be continued under the following heads:

The Home Circle,	The Horse,
Young Folk's Column,	The Swine Yard,
Short Stories,	Sericulture,
Home and Farm,	The Vegetable Garden,
Useful Information,	The Flower Garden,
Domestic Economy,	The Vineyard,
Good Health,	The Orchard,
The Dairy,	Tropical Fruits,
The Apiary,	Small Fruits,
Poultry Notes,	The Cereals,
Horned Stock,	Pasturage, etc.,
Sheep and Wool,	Fertilizers,
Ghosts,	Miscellaneous.

Practical Farmers
Know how important it is that the above subjects should be treated from a local standpoint—that generally the farming tactics of the East will not do for this coast, that agriculture, in its infancy here, can derive greater benefits from an exchange of experience through the columns of the press than in older fields. Constantly observing and studying developments in the special field we represent, we can be expected to give true information on agricultural subjects, than more general writers at home or abroad.

Our Traveling Correspondents
Will do much service by gathering a large amount of interesting information from various parts of the Coast, which, but for their research and practiced observation might never be placed on record or reach the eye of the reading public. Of our many

Local Correspondents
We have particular reason to be proud. No paper on this Coast—old or new—has ever been so highly favored with volunteer contributions. They are talented, reliable, independent and generous representatives of an intelligent and enterprising people, noble types of good humor, unselfishness and true progress.

Short Stories,
Original and selected, will hereafter appear in each number. Their selection, we trust, will be such as to render them popular and unobjectionable to all. In addition to a large number of

Fine Engravings,
Representing Choice Stock, Farm Products, Scenery, Remarkable Productions, Improvements in Farming Implements and Machinery, Works of Art and the Beautiful in Nature, we shall from time to time present the modest

Faces of Prominent Farmers
Who, as pioneers in the development of agriculture on this Coast, or as active laborers in the "Farmers' Cause," are worthy of the distinction they enjoy, and the favor with which they are looked upon by our many readers at home and abroad.

Patrons of Husbandry.
We shall continue to give our weekly summary of matters connected with the interest and progress of this growing and important movement. We shall aim to give information as fresh as possible in this department. Its readers are aware that the RURAL has been in the lead in calling farmers to organize. We shall continue to work zealously with the Granges for the noble objects of the Order.
The present is an

Important Period
In the history of our Coast. The coming 12 months promise greater developments in its agricultural progress than has been experienced in any previous year. Agriculturists are alive to improvements in every direction, and those who would keep up with the spirit of the times should certainly read the RURAL PRESS.

The S. F. Market Reports
Will receive greater attention in the department of DOMESTIC PRODUCE than that of any other weekly journal. We shall spare no pains to render the reports as reliable and complete as possible. By the employment of our special reporter we hope to make this very important part of our paper one of its best and most satisfactory features.

Kind Words and Acts
Have done much to build up in this isolated and sparsely settled coast so large and complete an agricultural journal as the PACIFIC RURAL PRESS. We commence the new year with a regular circulation of

Over 5,000 Copies,
A far greater issue than that of any weekly on this Coast, independent of a daily publication. If our friends will continue to "help us help ourselves," we hope to reach a circulation of 8,000 this year, and do a correspondingly greater service of good. While we have the greatest advantages and can make by far the best weekly for

Agriculturists on This Side of the Continent.
We cannot expect one-half so large a circulation as journals in older and more populous districts. Consequently readers cannot rightly expect such a paper here at Eastern rates.

No Premiums But a Good Paper
Do we offer. A flashy chromo (or cheap map), with an ill suited paper, will hardly satisfy the farmers of this Coast, whose time is too precious for trifling. To many of you the benefit of a reliable and valuable paper should reach a hundred fold its cost, while to all a poor journal would be dear at any price.

Sample Copies Furnished Free
On receipt of stamp for postage.

Agents are Wanted
Who will do more or less active canvassing. To such we will furnish free samples and pay liberally for their services.

Terms of Subscription:
One year (payable in advance) \$1.00
Six months 2.25
To Granges and Farmers' Clubs, furnishing club lists, \$3 per annum.

DEWEY & CO., Publishers.
Office, No. 338 Montgomery Street, San Francisco.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE
Vienna Exposition, '73.
Grand Medal of Progress!
Grand Medal of Merit!
AND TO CAP THE CLIMAX,
Grand Medal of Honor.



Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,
152 New Montgomery Street, SAN FRANCISCO. 2v7 6m

Designing
and
Engraving
at
This Office.

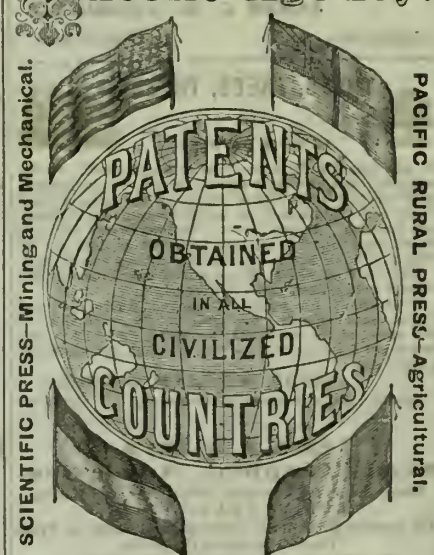
We are prepared to do fine Wood Engraving for illustrating Landscape Scenery, Buildings, Machinery, Works of Art, Manufactured Articles, Trade Marks, Seals, Etc. We have a first-class

Machine for Engraving

A portion of the work, which can be finished thereby more perfectly than by the eye and hand alone. Our patrons can depend upon first-class work always, and at reasonable prices. Samples can be seen at our office.

DEWEY & CO.

DEWEY & CO'S
SCIENTIFIC PRESS
Patent Agency.



OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others by reasons of long establishment, great experience, thorough system, and intimate acquaintance with the subjects of inventions in our own community. All worthy inventions patented through our Agency will have the benefit of an illustration or description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent business, and obtain Patents in all civilized countries. The large majority of U. S. and Foreign Patents granted to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. ADVICE AND CIRCULARS FREE.

DEWEY & CO.,
Publishers, Patent Agents, and Engravers.
No. 338 Montgomery St., San Francisco, Cal.

Dividend Notice.
SAN FRANCISCO SAVINGS UNION.

No. 532 California Street, Cor. Webb.
For the half year ending with the 31st of December, 1873, a dividend has been declared, at the rate of nine (9) per cent. per annum on Term Deposits, and seven and one-half (7½) per cent. per annum on Ordinary Deposits—free of Federal Tax—payable on and after the twelfth of January, 1874. By order,
Jal0-4w LOVELL WHITE, Cashier.

DR. ABORN, Oculist, Aurist.
Catarrh, Throat and Lung Physician.
The Most Difficult Cases are invited to call.
Offices and Laboratory, 213 Geary Street.
Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M.
21v6-3m-16p

PURCHASERS please say advertised in Pacific Rural Press.

THE BEST
Sewing Machine
FOR ALL KINDS OF
WORK
THAT WAS EVER PUT BEFORE THE
PUBLIC.

Send for Descriptive Circulars and samples of work.

BAY NURSERY,
OAKLAND, CAL. (Established in 1852.)
JAMES HUTCHISON, Prop'r.

HAS FOR SALE, WHOLESALE AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Daphnes, Araucarias, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Eucalyptus, Acacias, Peppers, Cypress, Pines, Junipers, Cedar of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tube Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine.
2v7-3m

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of
NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,
SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A
CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,
(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.

Nursery on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.

Letters by Mail or express will reach us.

Jal0 MILLER & SIEVERS.

ORNAMENTAL EVERGREEN TREES,

FOR SALE AT
THE OLD MAPLE LEAF NURSERY.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Trees, and especially Cedrons, Podocarpus, or Peavins Cedar Reeds.

L. M. NEWSOM,
East Oakland, 12th St., near Tubb's Hotel.
Send for Catalogue. Jal0

Cyrus Jones. Gen. Giles A. Smith. L. H. Hicks.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Duchesses, Rose of Sharon, Booths, Miss Wileys, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara avenue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO.,
2v7-3m San Jose, Cal.

NEW IMPORTATION.

50 ALMOND TREES (soft shells, largest fruit.)
30 CHESTNUT TREES (grafted, largest fruit.)
25 OLIVE TREES (largest fruit.)
60 HAZELNUT TREES (three kinds, the best.)
50 BLACK CURRANT TREES.
25 JUNE TREES.
25 PISTACHIO TREES.
25 CAPER TREES.

Choice plants, adapted to this climate, and warranted, will arrive in San Francisco by the Pacific Mail steamer, due January 24, 1874, and are from the best nursery in France. For sale by
E. GAUTHIER,
Jal0-1t 258 Third St., S. F.

McLAREN, JAMES & CO.,

DEALERS, MANUFACTURERS AND INTRODUCERS OF

NEW INVENTIONS

FOR THE PACIFIC COAST.

Also, General Business Agency,
No. 605 CLAY STREET, SAN FRANCISCO, CAL.
Jal0-bp-3m

AUSTRALIAN GUM TREES.

250,000 on hand for this season, at rates to encourage forest culture. Also, 50,000 Cypress, in shipping order. Nursery on 12th street, one block north of Tubb's Hotel, East Oakland, Cal. Or address, Box 80, Oakland.

BAILEY & CO., Proprietors.
Beautiful fresh Cypress Seed, \$3 per pound, sent by mail, warranted pure and of the finest quality.
2v6-3m

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of
Vegetable,
Agricultural,
and Flower Seeds,
Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seed.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER,
WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,
No. 317 Washington Street,
6v2-1v16p SAN FRANCISCO.

(ESTABLISHED IN 1852.)

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street.....San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants,
Ornamental Shrubs, Fruit and
Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE. BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th.

R. J. TRUMBULL,
15v6-6m-16p 427 Sansome St., San Francisco.

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,
425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE, 21v6-1f

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure White-faced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California.

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-1f-16p2

Fine Grade

SPANISH MERINO SHEEP.

25,000 head are now owned by this association, and we are in constant communication with parties all over this State, who buy and sell SHEEP and SHEEP RANGES. Parties wishing to purchase or sell are invited to call at the office of the San Joaquin Valley Wool Growers' Association, 15 Stevenson's building, 331 Montgomery street, San Francisco. Jal0-1m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m



Volume VII.]

SAN FRANCISCO, SATURDAY, JANUARY, 17, 1874.

[Number 3.]

Alfilerilla, or Filere, and Its Kindred Plants.

Erodium Cicutarium, and *Erodium Moschatum*.

By RALPH RAMBLER—FOR RURAL PRESS.

California is justly noted for the beauty and novelty of its native plants. Its flora is no less remarkable for plants that are useful, rather than ornamental. Of the various members of the latter class, none are more widely distributed, more generally known, and more justly celebrated, than the pasture plant here described and illustrated.

Alfilerilla, or *Fil-e-ré*, as we really pronounce it, has been ranked in a previous paper as the "prince among our pasture plants," and we think it richly merits this distinction.

Bunch-grass, salt grass, from which stock running loose, get all the salt they need; tule grass, burr clover, and many other species of clover, both native and introduced; the lupines and various other rich succulent plants, which are lavishly spread in spring over our mountain and hill sides, our valleys and our river bottoms, furnish the richest and most varied food for the hundreds of thousands of sheep, cattle and horses that are annually pastured in our State.

Even when dry and crisp, as most of the plants are from June till December, they are devoured as eagerly and seem as nourishing as the best of hay. Indeed, in many localities, where this native growth is rankest, it is frequently mown and cured for hay. Entirely dried and lacking in substance, as it generally appears, stock feed upon it and are kept in the finest condition during our severest winters.

Among all our flora, no plant is more valued for such purposes throughout the State, and more widely celebrated, than the plant of which our engraver has given us most excellent likenesses from nature.

Botanically, our *alfilerilla*, or, as we prefer to give it, *fil-e-ré*, is an *Erodium*, as has been frequently stated in descriptive works on California. This generic name is from the Greek *erodios*, meaning a heron or crane, and is given on account of the close resemblance of its seed-pod and stem to the head, neck and breast of that bird, as can be readily seen by a moment's inspection. Hence, in works on Botany its common name is given as Herons-bill, and even Storks-bill.

Its California name, *alfilerilla*, is a Spanish diminutive from *filer*, a pin, and literally means *the little pin*. It is given because the long, tapering seed-pod is like a pin. For this reason it is frequently called a pin-plant. Its long and musical Spanish name is reduced by usage to the more convenient form *filere*, in that practical, characteristic style, which Californians have for finding the quickest and shortest way for doing everything.

This plant is frequently spoken of as a native of the Pacific Coast. So long has it been known here, so universally is it distributed in our State, and so well does it thrive on its adopted soil, that we do not wonder at this common error.

It is not, however, a native of America. More than forty species of *Erodium* are known and described by botanists, and a majority of them are natives of the shores and islands of the Mediterranean. One species is described as a native of Siberia; another, of the Cape of Good Hope; one variety is from Numidia; and the two which are so common in California, *E. cicutarium* and *E. moschatum*, are given as natives of Great Britain.

So, our familiar and valued friend, the *filere*, is an exotic from the Old World. As a pioneer, it is even more venerable than a "49-er." We do not know that history tells us when it first emigrated to its new home. It probably came with some of the first shipments of wheat, and barley, and other seed that were brought to our shores. But like the millions of Europeans who have sought homes in America, it has found in California a soil and climate so congenial that it has taken entire possession, and it seems so much at home, that we have come to look upon it as among our aborigines. And does this seem strange, when we remember how similar our climate is to that of portions of Southern Europe, Western Asia, and Northern Africa?

Filere belongs to the geranium family, which, besides the sweet-scented and cultivated plants of that name, comprises also the wood-sorrels, the balsams or touch-me-nots, and the garden nasturtium, or *tropæolum*, one species of which (*T. majus*), a native of Peru, is very remarkable for the following fact, which, we are told, was "first discovered by the daughter of Linnaeus." At night, its large orange flowers, shaped like those of the larkspur, or snapdragon, "emit spontaneously at certain intervals vivid sparks, like those of an electric machine."

When any of our lady friends are tending

coarse-leaved *filere*, by which our people most generally distinguish them.

The excellent object-teaching of the engraver makes any attempt at a minute description of these plants unnecessary. We will, therefore, point out only a few of the different qualities which distinguish the species. A strong odor is a mark of these plants, as it is of other members of the geranium family. Mash the stem and leaves of *fine-leaved filere*, and they emit the odor of parsnips very decidedly. *Coarse-leaved filere*, besides having coarser and rather shorter stems, leaves closer together and rather smaller flowers, has also a very

able the seed to force its sharp points into loose soil and plant itself.

After a wet winter, *filere* grows very rank on soil of any strength. It sends out branches two and even three feet long, and form a very dense herbage which makes the best of wild hay. Its stems are full of mucilage, and Indians are said to eat them with evident relish.

These two are the only species of *filere* that the writer has been able to detect in San Joaquin valley.

Possibly we also have a variety of *E. cicutarium* called *hippinatum*, because its leaves are very finely divided. Loudon says the latter variety is a native of Numidia. We may also have in some portions of California the species known as *E. romanum*, so called because it is a native of Italy. Some species may have been introduced into California by the early Jesuit missionaries. Future research will show whether we have other species. The *filere* is one of our earliest plants to flower, and one of the latest to remain green.

Let us try to make clear this bond of union among plants which would otherwise seem far removed from each other. We will not say, at variance with each other, for, in the world of flowers, almost a universal harmony prevails. To have this tie understood, we must again call attention to the stamens of flowers, which, as we have previously explained, are the male members of the vegetable kingdom.

Look at the stamen of any flower, and you will find it consists of three parts, viz: a single thread or stem, called the filament; at the end of this a knob of various shapes, called the anther, and on this anther a fine dust, or pollen, the fructifying power of plant life.

Now in all this class of plants just enumerated, and the members of its families are counted by thousands, the filaments of the stamens are more or less closely united at their bases in one body, and they encircle in various ways the pistils, which, you know, are the female members in the world of flowers.

All these plants, Linnaeus combined in his 16th Class, and called it *Monadelphia*, from two Greek words meaning one brotherhood.

In this brotherhood, is one of the most noted trees in the world, the baobab, or monkey-bread tree of Africa (*Adansonia digitata*). Its leaves and flowers are quite similar to those of some kinds of passion-flower.

On the banks of the Senegal, specimens of this tree are now growing which many naturalists believe to be the oldest trees in the world, certainly as old as our giant redwoods, perhaps older, they say.

According to the best means of calculating known to botanists, the age of one is estimated to be over 6,000 years!

Yet, they do not attain a great height. About 60 feet is their maximum. Their breadth is immense, in proportion to their height. The estimated diameter of the largest is 25 feet. Some trunks are not more than 12 or 15 feet high, with a circumference of 60 or 70 feet. Their branches, like huge trees, are 40 or 50 feet long, with their smaller branches touching the ground. Some of their roots exposed by the washing of the river banks, are more than 100 feet long. Their fruit is gourd-shaped, from 9 to 12 inches long, and 4 inches in diameter, of a pleasant acid taste. Hence a common name for this tree is *Sour gourd*. This tree fills in the household economy of the Africans of Senegal, almost as important a place, as the reindeer does for the Laplander and Esquimaux.

While the fruit furnishes a refreshing and nourishing article of diet when ripe, they also make of this gourd various vessels for domestic use. From its bark, they make thread and ropes, and cloth. From the latter, these dusky savages clothe themselves and families, and very economically too, on account of the small amount of material needed to meet the size of their patterns. When food is scarce, they eat the small leaves. With the large ones they cover their houses. With the ashes of the leaves they make a very fair soap. Both leaves and bark are used medicinally.

Such is this great Linnæan brotherhood of plants to which our humble and beautiful *filere* belongs. This principle of oneness, discovered by Linnaeus, can then unite by a common tie plants so remote in place and seemingly so unlike in nature, as to include in the same vast family our simple pasture plant and the odd monkey-bread of Africa.

San Joaquin Valley, Jan., 1874.



ALFILERILLA, OR FILERE.

their beautiful and valued pets, the rose geranium and its kindred, which beautify their windows, rooms and conservatories, do they ever stop to think or have the time to learn, why this plant is called *geranium*. You know there is a reason for everything. This name and *erodium* are given for very similar reasons, as seems natural when we think of the close relationship of the plants to which they belong. Geranium is from the Greek word *geranos*, a Crane, and the name is given, because the seed-pod bears some resemblance to a crane's bill. For this reason, cranesbill is a common name of the geranium among botanists.

In the engraving, Fig. 1 represents an entire plant of *E. cicutarium*, very much reduced from its natural size, in order to give those unfamiliar with it, a correct idea of the general appearance of this noted plant. Fig. 2 represents stem, leaves, flowers, seed-pods, and seeds with their spirally twisted filaments, of this species in their natural size. Fig. 3 is a natural sized leaf of *E. moschatum*.

The striking difference between the leaves of the two species, gives to the former the common name of *fine-leaved filere*, and to the latter,

strong odor of musk. Hence its specific name, *moschatum*, or *musky*.

The name, *ciutarium*, from *cicula*, meaning hemlock, is said to be given to the first species, because its leaves are finely divided, like the leaves of that notorious plant. But we must confess, it is not altogether agreeable to associate in any way with so nutritious and attractive a plant as is this general favorite, an herb, like hemlock, so repulsive from its poisonous qualities, and with so black a historic record, if for no other reason than its being made an instrument of death for one of the noblest of philosophers, by the sentence of his unjust and misguided accusers.

The flowers of both of these species are of a delicate pink or rose-color. Each has a five-cleft calyx, five petals, five stamens, and produces five-harbed seeds, like the seeds of spear-grass. The appearance of these seeds, when matured, and the manner in which they are attached to the stem supporting them, is well indicated by the engraver.

The tendency to twist, especially when exposed to the heat of the hand or sun, seems to be a means which nature has provided to en-

CORRESPONDENCE.

Silk Culture in California—Concluded.

[By FELIX GILLET, of Nevada City.]

I can tell your readers how much they can expect for a pound of cocoons, of the French-annual races. In the first place, as wages are higher here than in Europe, the filature will have to buy cocoons at a price that will allow a reasonable profit for reeling them into grege, therefore, taking that into consideration, we would not probably have more than 75 cents a pound, and it may be only 65 cents, (that is of fresh cocoons while the chrysalis is yet alive; otherwise when it has been killed and dried up, cocoons weigh three times more and are worth accordingly); in Europe and elsewhere, filatures buy cocoons right after they are spun, killing the chrysalis themselves. A pound of dried cocoons would then at the above rates be worth between \$1.75 to \$2.25. It is easy with the above prices for silk-growers to find out how much they can get for their crop of cocoons, providing of course they would have a market for them. I can assure them that 65 to 75 cents for a pound of fresh cocoons is the biggest price they can get, so that they need not bother the RURAL or any other paper about the way of getting a market for their goods and the price they will get for them.

As I intend in this essay to go before any objection that can be made, or answer beforehand any questions that may be put to me directly or through the press, I will tell your readers how many pounds of fresh cocoons can be raised with an ounce of eggs and how many worms a single person can take care of. On the average, from 25,000 to 40,000 cocoons are obtained from an ounce of eggs; 25,000 cocoons will weigh about 85 pounds, which at 75 cents a pound would make from \$60 to \$64. I always mean French-annual cocoons, like the Bionas races, and not Japanese, annual or Bivoltines. A person can easily take care of about 50,000 to 75,000 worms, more so, people that have families. To rear that number of worms a room of 24 feet by 16 and eleven feet from floor to ceiling would be required; if smaller, a smaller number of worms, then, would have to be raised; it is now to be seen that cocoons at 75 cents a pound would be remunerative enough.

So far, people that have planted mulberry orchards did it in the expectation of making much money by it; for they were told that they could clear a thousand dollars an acre by turning their cocoons into eggs for the European market. This was a great mistake, for we cannot rely at all on this egg trade; and although some silk-growers here can make considerable money with silk-worm eggs, we will have most of us to try to make the business pay in simply raising cocoons at so much a pound. We will make less, it is true, but we shall have every year a sale for our cocoons, which we might not have for our eggs. Any farmer or any person having a room for that use and leaves for feeding the worms, can clear in 40 days, easy, from 50 to 200 dollars in silk-worm raising; and I challenge any man to show me any other product of the farm and garden that will net in so short a time, with so little labor, as much money. I say 40 days, for an education of silk-worms from hatching time to the spinning of cocoons will take about that time; it is only the last two weeks that give much work, during the first three ages the worms being yet too small to require much food. Here are figures on the number of hards required to raise silk-worms on a large scale. In France and Italy, in an education of 250 grammes of eggs (nine ounces), that is of 300,000 to 400,000 worms in round numbers, one person is employed during the time of the incubation; two in the first age; four in the second; six in the third; eight in both the fourth and fifth. To make of California a silk-producing State, we must not, however, think that silk-worms have to be raised on a large scale; on the contrary, for it is the small producer multiplied by the thousands that makes anywhere of any industry a national one. I always did look to our farmers to build up our silk industry, by having each of them raise from 25,000 to 100,000 worms. Here are on that subject some interesting statistics on the number of people engaged in raising silk-worms in France, and the quantity of cocoons produced by them, that is, for the year 1872.

All together 139,922 persons raised silk-worms in that country; 103,621 on a small scale, and 36,301 on a large scale. They hatched 711,209 ounces of eggs, that yielded 9,207,608 kilogrammes (about 20,000,000 pounds) of cocoons; (a small produce, caused by the epidemic still raging there). At the average price of \$1.27 a kilogramme, the whole crop would amount to \$12,000,000. With a full crop, it would double and triple that sum.

So we see that three out of four persons raising silk-worms do it on a small scale, though the number of persons that do it on a large scale is certainly larger than anybody, I believe, has any idea of. In Italy four times as much silk is raised.

Another difficulty to those existing already in raising silk-worms on a large scale, is the scarcity of hands and the high rates of

labor. But it is a mistaken idea to believe that because hired hands are dear, we cannot make the business pay; and I have seen it suggested in the RURAL PRESS that we would have to employ Chinamen, to make it pay. Do not believe that, I mean as long as the latter will ask from \$1 to a \$1.50 a day; boys and girls can be had at a cheaper price, and I would by far prefer the latter at the same wages to Chinamen. I hired a boy at \$15 a month without board, and I know he did as much work as any of those lazy Celestials would have done. If, of course, Chinese labor would come down to 50 cents a day, there might be more profit to employ them. Silk-worm raising is such an easy, light work, that boys and girls may be employed with as much advantage as men as far as the performing of the labor is concerned, but certainly at cheaper wages. I have never employed a Chinaman yet on my land, and I hope that I will not be compelled to employ any. Give first our boys and girls a chance, for in no other industry can they be worked with so much advantage as in that one of silk growing.

Another incorrect idea is to believe that silk is raised in China at such low prices that it is impossible for us here to compete with them in raising silk-worms. It is true that Chinese silk is cheap, half cheaper than the fine silks raised in Europe and California, but because it is an inferior article and badly reeled, that China and Japan silk is used for common cloth, the other for the finest cloth. Taken to Europe, our silk from the beautiful races of silk-worms which we successfully raise in California, like the Bionas, Brianza, etc., will sell nearly double of what will bring those Asiatic silks. Therefore we must not care how cheap they will produce silk in China, as long as we are able to raise a superior article which has a ready sale, so great is the demand for the finest silk. It is the reason, too, why we cannot look to those San Francisco silk factories for a market, for they find their advantage to use the inferior but cheaper silk from Asia; while in Europe to weave those splendid goods that make the admiration of the world, they do not have enough of this number one silk like ours.

It is not so, neither, that in China and Europe they can raise cocoons so much cheaper than here, taking into consideration the capital invested. The only advantage they have on us is the cheapness of labor, while the other costs are the same, and some, like the materials for building a cocoonery, in our favor. In fact, in China and Europe, land is very high, a great deal higher than in California, so that we can raise leaves as cheaply here as they do there. In China, as well as in Europe leaves sell from one-half a cent to two cents a pound, according to localities and years; but nearer two cents than one-half a cent. The main difference between those countries and California lies then, in the higher wages we have to pay hands for cultivating our mulberry orchards and raising our worms; and I assert that this difference does not, after all, amount to as much as people may imagine at first glance.

To resume, I will say that silk culture may very well become in this State a settled regular industry; but people embarking into the business must not expect to make by it as much money as over-enthusiastic pioneers led them to believe. I have shown by the foregoing essay that our soil is favorably adapted to the culture of the mulberry tree; that silk-worms can be successfully raised, if properly taken care of; that we may get a market for our cocoons by establishing in every county where cocoons are raised, filatures for the manufacture of raw silk or grege; that the raising of cocoons can be made remunerative, considering the little labor and small capital it requires, at 65 to 75 cents a pound for cocoons; and further, that to make the business pay still better, we must save labor as much as possible and plant none but large leaved varieties of the Morns Alba family. Finally, that the only way to make of California a silk-producing State, is to have farmers and everybody else so situated for doing it, to plant a few mulberry trees and raise silk-worms on a small scale. At any rate it will take time to reach this end, and it is only by uniting our efforts that we shall be able to overcome obstacles and see our perseverance crowned with success.

I do not believe that I am over-estimating the possibility of making silk culture prosperous in this State and as well settled an industry as any that we have already in our midst. Sooner or later, filatures will be established in California; till then, of course, silk-growers cannot well expect to get rid of their cocoons; but on the other hand they need not give it up, and had better wait patiently; take good care of their trees, plant new varieties, keep on raising silk-worms at least for practice, and with the establishing of filatures their expectations may be fully met.

I will now give a few details on experiments made by me last summer. As I have said in former letters, the two varieties of mulberry trees that I keep, and which I introduced myself in this State, are two large-leaved varieties—the Morns Japonica and Grafted Rose-Leaved. Just to experiment, I fed one part of the worms with wild leaves, another part with half wild and half grafted (rose-leaved), and a third part with grafted leaves alone. The result was exactly the reverse of what it would have been in Europe, the finest, largest worms, and which were all of the same size, were those fed with the grafted leaves, next those fed with half grafted and half wild leaves, while those fed only with wild leaves were very irregular in

size and spun smaller and lighter cocoons. Otherwise they were all very healthy. I will certainly repeat the experiment and on a larger scale next year. My experiments would show any how that the grafted rose-leaved variety bears leaves which contain more nutriment than leaves from the wild varieties. In our dry soil and dry climate, it is probable that the wild leaves do not contain enough water to make of them a very substantial, although healthy food; while with the grafted rose-leaved, enough water is naturally contained in its thick leaves to constitute of it a food by excellence for the worms.

Before closing up this letter, I will add that I have just learned by two Italian gentlemen at San Francisco, and on their way back to Italy from Japan, with a load of silk-worm eggs, that Japan will not be able this year to supply Europe with half the quantity of eggs needed there next spring. There would have been a good chance this winter for some of our silk-growers to find a good market for their eggs in Europe where their supply will fall short of the demand.

Nevada City, Dec. 27th, 1873.

Winter Supply of Butter.

EDITORS RURAL PRESS:—While many are advocating a greater diversity of husbandry, people are slow to devise any other than the old, and often shiftless ways in trying new pursuits. Hence, people refuse to begin many new undertakings, that do not appear to be remunerative.

Last winter, car loads of fresh butter were brought from Massachusetts, and sold at very high prices in our city markets. Butter is constantly coming from the East, via the Isthmus, as well as from Oregon. Only last week, I notice the arrival of a ton of imitation butter to be sold in our little town.

Butter can be made here—genuine fresh butter—from the cow's milk, at all seasons of the year and sold at remunerative prices, at a much lower figure than it now bears in the market, by a timely attention, first, to the time of the cows coming in; and secondly, by furnishing proper food in the dry season of the year.

My own experience has been only with one cow, as my business is fruit-growing; but it will establish a rule. During the last twelve years, I have, as a rule, had a fresh milk cow late in the fall; have fed carrots and squashes freely in addition to hay as well as the pasture, which I keep green by irrigation.

It is surprising how small a spot will serve for the pasture—only a fractional part of an acre. I have a picket pin of iron, which I drive into the ground, and the cow is tied to it with a rope of suitable length. Having occasion to buy a new cow last June, I secured a young heifer, only two years old last March, of Alderney and Durham blood. She has now been milked nine months, and has kept up her flow of milk till the late storms set in; and my wife sells 2 pounds of surplus butter a week.

A trip East overland, a year ago, the latter part of last Nov., I saw at the Humboldt Station, (in a perfect desert-looking country, if there is one on this route,) a plot of thrifty alfalfa in bloom, kept so from a reservoir and fountain. The water was brought from a mountain spring for station purposes and a howa what may be done by means of irrigation.

I. A. W.

Santa Clara, Jan. 3, 1874.

If this kind and mode of feeding will pay, with one or two cows, would it not on a larger scale?

Scuppernong Grape.

EDS. PRESS:—General Harrison, who is just here from New Orleans, tells me of a fruit quite extensively grown there, from which they manufacture perhaps, the choicest champagne; it is known there as the Skepernong or White Muscadine grape. My object in this, is to ascertain if such a vine is in any of your nurseries in or about San Francisco. I am anxious to get it.

F. W. GIBSON.

El Monte, Los Angeles county, Jan. 1, 1874.

The Scuppernong is a well known grape at the East, and doubtless might prove an acquisition to our list of best wine grapes, if it is not already here. We think we have seen and eaten the grape in California, but do not recollect where. Perhaps some of our nurserymen who advertise with us, will give us light on the subject of the Scuppernong.

Downing says: It is a very distinct Southern species, found growing wild from Virginia to Florida, and climbing the tops of the highest trees. It is easily known by the small size of its leaves, which are seldom over two or three inches in diameter, glossy and smooth on both the upper and under surfaces. It is found quite too tender for a northern climate, being killed to the ground by our winters. At the South it is a hardy, productive and excellent wine grape. The White and Black Scuppernong scarcely differ, except in the color of the fruit.

GREEN OR DRY FEEDING.—A correspondent asks: In what manner can the most grazing be had from a field sowed with barley or other grain? Whether to feed as it is growing, or the grain and straw when ripe?

If any of our readers ever made such experiment, we hope they will forward the result and their opinion to the RURAL.

The Stock Starving Business.

EDITORS RURAL PRESS:—If I may judge from the reports in newspapers from all parts of the State, the losses of stock from starvation and cold have been unusually large this fall and winter, the stock men seeming to learn nothing from experience, but year after year continue to

Trust to Luck,

Just as a large majority of the grain farmers do—but reprehensible as is the conduct of the latter, it is not half so bad as the utter want of judgment and foresight in the former. One trusts entirely to the rain to make and mature his crop; if it fails he has a diminished income, but still his family, and his animals do not lack for food; but the other permits his stock to suffer and die, from his failure to provide food, at a time when he must know, if he knows any thing, that they must, and will need it; in most cases this is simply caused by pure meannesses, and if it was not for the suffering of the unfortunate animals, I, for one, would rejoice at their loss. Men who will not take care of their stock deserve to lose. It is in the power of every stock man to provide food for his animals, against the time when he must know that food will be needed. In fact the time has come when the cattle and sheep raising business must be entirely reformed, the natural pastures are overstocked, and the feed even in a good grass year is consumed long before the advent of the rains, then the stubbles form a temporary resource, but as plowing commences with the rains, they generally are obliged to subsist upon their fat like the bears during the time they are forced to wait for the growth of the new grass; if they are fat they may possibly worry through somehow, but if thin, as they generally are, then their sufferings soon end. It is no difficult or impossible thing to provide a stack of hay, or even threshed straw for such a contingency; the latter costs nothing but hauling and stacking; for the farmers generally burn it to get rid of it, and would be glad if any one would haul it away and save them the trouble.

This stock-starving business is a crime, and, as there is no law to punish it, the Granges should take measure to prevent it in future, by refusing to admit, or by expelling those who practice it.

Alfalfa

Is the great remedy for all this trouble, but here the difficulty occurs again; the miserable brute who is too lazy, or too mean to provide hay or straw, is too lazy or too mean to secure suitable land, prepare and sow it with alfalfa. There is no hope either for these fellows or for their unfortunate stock. The constantly increasing area of cultivated land and the natural increase of stock will soon settle this question. It is now

Alfalfa or the Desert.

Those who will not provide artificial pastures, or food, must move on before the advancing tide of cultivation. And this reminds me of Mr. Jewett's admirable letter on alfalfa. Let the stockmen take heed to what he says; he gives them facts. With alfalfa, mesquite and other cultivated grasses ten times the stock can be kept, and well kept, and with double, treble, or quadruple the profit. There are in this State immense areas now available and suitable for the cultivation of these grasses, where there is abundance of water for irrigation. When these are occupied the completion of other irrigation works will have vastly increased the area. In fact, if our Legislature does its duty this winter, by passing a proper and suitable irrigation law, the irrigable area will likely increase faster than stock. But, unfortunately, so few men who know anything about irrigation get elected to the Legislature, that it is highly improbable any general law can be passed this session. This is the most important measure that will come before that body, and a bill prepared in this county, where the subject is better understood than in any other part of the State, will be presented, and is now in the hands of the Los Angeles delegation, who will urge its passage, either as a general law for the whole State, or, if they think it impossible to pass one, as a special law for this county. Like the fence law, it may possibly have to be tested on a small scale before being tried on a large. The only objection to this plan is the loss of two years. We know what we want, and, fortunately, our delegation are a unit on this question. We are impatiently awaiting the passage of the bill, to enable us to go to work. It will add more than one million acres to the area of irrigable lands in this county, and provides an effectual remedy for extortion or favoritism on the part of monopolies, but otherwise presents no obstacle to the investment of private capital by companies.

WM. R. OLDEN.

Anaheim, Dec. 30, 1874.

INQUIRY.—EDITORS PRESS:—Some eighteen months ago I saw a notice, in a New York paper, of a French work on *Hydroscopy*, the author's name not remembered. His theory was being successfully reduced to practice by his pupils. Do you or any of your readers know the precise title of such a work? Please answer in your paper.

JOHN HALL, M. D.

Riverside.

Who will answer the above inquiry?

Winter Feeding.

EDS. RURAL PRESS: The "Discontented Man" is here in our community also. Before the snow, Dec. 3d, many of our farmers wore long visages, for they saw all the signs of another year of drouth. With the snow, and the rain that followed, their countenances improved to a smile of content. Dec. 29th, "everybody and his boys," were going to begin plowing in earnest, by way of a good ready. The doubtful plow and the unwilling horse were tested a little on the Saturday previous.

Monday came; rain all day. Tuesday, rain. Wednesday, rain in the forenoon. Then cleared off. Thursday and the New Year, rain all day, and now "is the winter of our discontent;" cows standing about, spine arched—like a swine that has declared war. Barns getting empty. One farmer has turned his plow-team out on pasture for lack of hay. The Ark-ensaw traveler found a man whose house never leaked a drop in dry weather, and when it rained there was no time to fix it. So with our farmer about feed. Now the straw is all destroyed. He was not very busy when tons of straw could have been had for the hauling. I have not fed any hay this season to my gang-plow team—five animals—and they have been thriving all winter at a cost of nine cents per day each. I stacked barley straw, covered it, laid in shorts, and use a straw cutter, and nine cts. per day keeps my team so saucy that I have to give them an extra corral for daily exercise. Neighbors: Straw pays me better than hay.

GEO. K. MILLER.

Hog Disease, Perhaps.

EDITORS PRESS:—While helping Mr. Bowen, of Tule river, dress hogs to-day, we found the small intestines covered with globular masses, filled with air, and upon pressure would burst like a bladder and having the same appearance. The air bladders were from the size of a grain of wheat to the size of a small marble, and impregnated with blood; between the air bladders were layers of fat apparently in a healthy condition, the intestines being of a dark hue, and in an apparently unhealthy state. The hog fatted as well as three others in the same pen, weighed when dressed 320 lbs. Now, can you or any readers of the Press, tell us the cause of the intestines being in such a condition. Let us hear from the medical faculty on the subject; they, perhaps, as well as others might be profited by investigating the matter.

Plano, Jan. 7th, 1874.

BUTCHER.

Potato Crop of 1873.

A correspondent, B. W. C. P., writing from Table Bluff, Humboldt county, says:

I would like some one to tell us why potatoes are not doing better than they are. Last year there was not one surplus potato, and this year the crop is short all over the State; this county alone is over seventy-five thousand sacks short, and though Oregon shipped a great many to San Francisco last year, this year the demand at home will not justify them in shipping any, even at two cents per pound. I think there must be a screw loose somewhere.

In all countries and climes in which the potato is grown, there seems to be occasional periods of two, three or more years in which there is not the usual yield, though no disease appears to cause the diminution. It is yet to be determined whether it is owing to climatic influence or other cause.

APPARATUS FOR DRYING GRAIN.—M. Coignet has recently devised an apparatus for the purpose of drying grain and other substances at a cheap rate, and without destroying the germinating power of the seeds at the same time. For this purpose the articles to be dried are placed upon perforated stages, and traversed by a current of air from above, downward, heated to the proper temperature, from 104° to 122° Fahrenheit, which he finds best to suit his purpose. A still higher temperature, namely, from 300° to 310°, applied in the same apparatus, enables him to dry certain animal matters, intended as manures, without causing the loss of their nitrogenous material; but as such a temperature of dry air would be apt to cause combustion, he replaces this by superheated steam. In this way he has succeeded in preparing twenty cubic metres per day, and he is of the opinion that in this way we can best make use of animals which, in certain countries as Buenos Ayres, Australia, &c., are killed for their hides and tallow, and the decomposition of which in great quantities is so liable to produce pestilence.

INCREASE IN POPULATION.—It is estimated that during the past year, the population of California has been increased upwards of 25,000 by means of immigration alone. Placing the additions by birth at 15,000, which is a safe estimate, as the proportion of births over deaths is very large, California being considered the healthiest State in the Union, and we have a total increase of 40,000 for the year. If this rate of increase continues, by the time another year shall have rolled around, we will have a population of over one million.

MISCELLANEOUS.

Type-Setting Machines.

The question is very often asked by publishers, with a strong emphasis on the first word, "Is there a type-setting machine which will economise the labor of the printing office, or save us from some of the inconveniences attendant upon the illness, incompetency, or, as sometimes happens, the natural perversity of type-setters?" We must say that, for our part, we would rather deal with the crookedness of the compositor. No type-setter has yet been invented equal to Nature's own compositor, and none will yet be invented equal to it until the principle upon which inventors proceed in working out the problem is radically changed. We are shown Kastenbein's machine, in the office of the *Christian Union*, and are told it "works admirably;" but we see one man with a pick and another with pincers, helping along the man who plays the machine, while another corrects and takes up the type, and yet another opens the apparatus and shakes up the "supply tubes" or forces open a gate. We find that the distributor does not work with half the rapidity, and is still more complicated. Yet we are told that "the London Times uses six of them." That should settle the matter, only it does not; and we feel that even if the London Times used fifty of the machines it would make them no better than they are.

The truth is that no machine within the means of the printer has yet been invented which will do the necessary work. No such machine can or will be invented, as we have said, until the principle adopted is radically changed.

Delcambre's Type-setting Machines differ but slightly from those above referred to. These are the only machines we know of in regular use in New York newspaper offices, yet we think that no one could observe the trouble they give, and their rather meager results, and believe that machine type-setting had become a fact. The capacity claimed for the setting machine is but 3,000 or 3,500 an hour. Deduct from that the fact that you must have a still more complicated distributor of half the capacity; that these machines are delicate, valuable, hard to sell, and requiring special operators, and the fact that "the London Times uses six like them," is but a meager recommendation.

As in this brief notice, in reply to many questions, we are confining ourselves solely to those machines which are most in use or seem likely to be, we will next consider the Westcott Type-Setter. This is in many respects an important machine. In the first place it does away with a distributor, at best a rather absurd part of a type-setter, for it is hard to expect a machine built to set type, to be able to undo its work to advantage; it is a cheaper machine, less likely than some others to get out of order, and contains more real power for usefulness within itself than any other. It is not likely that it is the last result that inventors will yet arrive at, but it certainly has high claims. It consists of a compact iron semi-cylinder, containing matrices moved with keys. These matrices travel to a reservoir of melted type composition; the type is made, passed through its gauges and cutters and moved to its proper place finished and cold, more quickly than it could be taken from a box.

We have seen this machine work, and find it to be one of the most ingenious, as it is certainly one of the most interesting machines we have ever seen. It is called, after its inventor, "The Westcott Type-Setting Machine," but it must occur to any thoughtful printer that type making is a very nice operation; that the inspector in a foundry must be constantly at work with his glass and his gauges to discover the smallest changes and differences; that type made as described must be subject to flaws, as indeed are all type; that the cutters and gauges must eventually wear out, etc., etc. Yet practice will soon tell us about these things, and it is possible that experience will remedy them. If so, the occupation of the type-founder, except for fancy type, is modified. Meanwhile we are told that the Harpers have ordered so many, and others so many, etc., facts which say little in favor of the machines, but show that they will be so well tried that printers will know soon enough whether they can use them to advantage or not. The machine is apparently not very fast, but it must be borne in mind that there is no distribution to be done.

Lastly, we must say a word for Orrin Brown's machine, which, we learn, working to advantage at the present time in Boston. It is on book-work, however, and this is an important fact. It is probable indeed that the first available type-setters will be used for this purpose.

If any questions are answered in the above, the whole object of the article is gained, and we may say that few printers need trouble themselves for some time to come about any advantage they hope to derive from type-setting machines, especially if wanted for small offices.—*Newspaper Reporter*.

NEW CAR STARTER.—Amos Whittemore, of Cambridgeport, Mass., has obtained a patent for a device whereby the momentum of the car is made to lift one end of the car in stopping, and the weight so raised is made so to act as to help the car forward in starting.

Recent Experiments With Diamonds.

Diamonds are rather costly objects to subject to destructive experiments on an extended scale, and not many investigators have been favored with the privilege of doing it. Thanks, however, to the liberality of the proprietor of a large diamond-cutting establishment in Amsterdam, a certain M. von Baumhauer has been permitted to make numerous studies of the behavior of these interesting gems when subjected to high temperature under various conditions, thus adding largely to our knowledge of the diamond's nature and properties.

The combustibility of the diamond in oxygen was demonstrated long ago; what the pure heat upon it has remained a matter of doubt. Some experiments seemed to show that at extremely high temperatures the diamond is slowly converted into coke or graphite, an effect observed especially when the gem is subjected to the energetic action of a powerful galvanic battery. In certain experiments, in which Moren and Schrötter raised diamonds to the highest heat of a porcelain furnace, care being taken to prevent contact with air, a slight discoloration of the surface was observed, whether due to heat or imperfect protection against oxygen could not be decided positively. Inclosed is a bit of hard coke, and placed in a plumbago crucible packed with charcoal powder, diamonds operated on by Siemens and Rose withstood, without the least change, the temperature at which cast iron melts. A cut diamond, under similar conditions, subjected to the heat of molten wrought iron for a considerable period of time, was superficially blackened, but otherwise unaffected. By some this experiment has been interpreted as implying the slow conversion of the diamond to graphite at the temperature at which wrought iron melts. It is possible, on the other hand, that the change was due to air in the crucible; indeed probable, in view of the experiments more recently made by M. von Baumhauer.

By an ingenious device, the last named experimenter was able to subject diamonds, surrounded by an atmosphere of dry hydrogen, to a temperature at which both diamond and platinum holder become invisible; but with uncolored diamonds, their transparency and brilliancy were not in the least affected. Heated in contact with air, diamonds were not only blackened, but reduced in weight, showing positive combustion. In oxygen they burned with a vivid incandescence at a temperature below white heat. In a crucible which allowed the combustion to be observed through a sheet of mica, the burning diamond was seen to be surrounded by a white flame, less bright without and tinged with violet on the outer edge. Pure diamonds burned tranquilly, retaining their sharp edges even when so reduced as to be visible with difficulty. Impure specimens snapped and flew.

Burned in an oxyhydrogen flame, capable of melting platinum, diamonds emitted a brilliant light and wasted rapidly, but did not blacken. Heated to a high temperature in an atmosphere of carbonic acid, they were slowly consumed, decomposing the carbonic acid, and combining with its oxygen with loss of weight. Similarly treated in superheated steam, no effect was produced, showing that at white heat the diamond does not decompose water, as might be expected from its affinity for oxygen. In regard to the supposed transformation of the diamond into coke or graphite by means of pure heat, especially by that of a battery of 100 Bunsen elements, M. von Baumhauer is very doubtful. It should not be admitted, he holds, until the effects observed are proved to be not the result of chemical action, produced by foreign matter, or by the transformation of particles of carbon from the charcoal poles to the surface of the diamond.

The effect of heat on colored diamonds is more pronounced, with the exception, perhaps, of gray and yellow gems, which appear to resist such action, the same as the colorless ones. Green diamonds are variously affected. One of a dirty green tint was changed to pale yellow, with a slight increase of its transparency; but its brightness remained the same. Another, so green as to be almost black, likewise retained its brilliancy, but gained in clearness, while its color was changed to violet. A light green gem lost its color entirely, but was otherwise unaffected. Brown diamonds lost most of their color, showing under the microscope a limpid field scattered with black spots. A diamond almost colorless assumed, under the influence of heat (out of contact with air), a deep rose color, which it retained some time when kept in the dark. In the light its color faded, but always returned again with heating. A naturally rose colored diamond reversed the phenomena, losing its hue with heating, and afterwards gradually regaining it.—*Scientific American*.

ON THE PREPARATION OF CHLORAL HYDRATE.—This article is made by pressing chlorine gas into alcohol of about 96 degrees, for about 12 to 14 days, until it attains a gravity of 41° B. The product is then purified by mixture with an equal volume of sulphuric acid and distilling, a large amount of hydrochloric acid being thus driven off. The chloral is then itself distilled off, the product is again rectified by distillation, water is added to the distillate and it is set aside to crystallize. As by-product, ethylene and ethyline chloride are produced, which are purified by fractional distillation, and also used as anæsthetics.—*Druggists' Circular*.

Frame Buildings.

We in America, if we would secure ourselves from the repetition of wide and overwhelming conflagrations, must be governed by Old World examples, and abandon that extensive use of timber which has characterized American structures of all kinds. Whole cities of frame buildings are altogether too unsafe to be tolerated. Planks are entirely too perishable, too frail, too combustible, for houses; and their use, excepting for flooring or interior trimming, ought to be prohibited. Many of our towns of large size are composed entirely of frame buildings; fires of frightful extent continually occur in them, and they rest ceaselessly under the danger of total extermination.

It is surprising how largely timber is used in our architecture. Sometimes handsome and costly churches erect on their stone towers spires of timber. Brick and stone buildings have often wooden cornices, and a more effective device than this for encouraging the progress of a conflagration could hardly be conceived. In large cities like New York the erection of frame buildings is prohibited, and it has become a question whether a similar restriction should not extend to all congregations of buildings, however small. It has become a fashion in this country to admire frame buildings. Large, and even pretentious villas, in suburban places, are, by choice, constructed like big tinder-boxes, the perishable and the frail seeming to be preferred to the substantial and the lasting. The houses that are erected in such numbers in the villages and towns outlying our great cities are built as if on purpose to supply, at some day, the material for a tremendous bonfire. A single match might ignite them. In no other country are the rates of insurance so heavy as in ours, in none others is the insurance business so extensive, and in none others is it rendered so precarious in consequence of extensive conflagrations. We burn up in every decade enough property to enrich half the population. We spare no expense in ornamenting and beautifying our structures, and yet seem to grudge the cost of rendering them stable and secure. What is needed in order to prevent disastrous conflagrations is far less of ornamental trickery and very much more of substantial strength in the buildings than now mark any of our frail and dangerous commercial centers.—*Am. Builder*.

PROFESSOR AGASSIZ.—The doctors are puzzled to account for the symptoms of the disease by which Agassiz lost his life, and a careful autopsy has been made. The brain and all the vital organs, especially the heart, were examined with great care. The stomach and liver were free from disease; but in the heart were found evidences of the trouble with which the Professor suffered a few years ago. Special attention was paid to the brain, which was found to be very large and heavy, though its exact weight has not yet been determined. Careful examination was made of the base of the brain, and to insure success in this, it will be necessary to allow it time to harden.

STEAM TO AUSTRALIA.—J. C. Merrill & Co., agents for the Australasian and American Steamship Company, report that the steamer *MacGregor* will arrive in San Francisco on or about the 19th proximo, and sail on Tuesday, the 27th. Clyde-built steamers specially adapted to this line have been built, and will therefore be dispatched on schedule time every twenty-eight days. Annexed are the rates of fare from San Francisco: To Honolulu, first-class, second-class and steerage, \$75, \$50, and \$40, respectively. To Fiji Islands, \$150, \$125 and \$90. To Auckland, \$160, \$135 and \$90. To Sydney, \$200, \$150 and \$100. To Melbourne, \$220, \$160 and \$110.

WATCH SPRING.—Hair-springs, says a writer in the *Victoria Magazine*, are made in the factory, of finest English steel, which comes upon spools like thread. To the naked eye it is as round as a hair, but under the microscope it becomes a flat, steel ribbon. This ribbon is inserted between the jaws of a fine gauge, and the dial-hand shows its diameter to be two twenty-five hundredths of an inch. A hair plucked from a man's head measures three twenty-five hundredths—one from the head of a little girl at a neighboring bench—two twenty-five hundredths. Actually, however, the finest hair is twice as thick as the steel ribbon, for the hair compresses one-half between the metallic jaws of the gauge. A hair-spring weighs one-fifteenth-thousandth of a pound troy. In straight line it is a foot long.

THE SPECTROGRAPH.—The name is given to a simple little device for copying drawings, exhibited in the French department of the Vienna Exposition. It consists of a board, near the middle of which is a piece of window-glass fastened at right angles to it by means of two grooved wooden uprights. When placed near a window, with a drawing or copy on the end of the board nearer the window, its reflection in the glass causes it to appear upon a sheet of white on the opposite side of the glass. In this way quite an accurate tracing can be made by one who is no draftsman.

CEMENT FOR PIPES, ETC.—J. Spillar recommends a mixture of pulverized iron borings, kaolin, and sirupy silicate of soda as a lute for fixing on the heads of stills which are required to stand a high temperature. We should judge the same might be found useful in other situations, such as the joints of cast iron furnaces, for instance.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F. General State Agent: J. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

List of New Granges.

[Reported to the PACIFIC RURAL PRESS since our publication of the full list of California Granges on the first Saturday of the month.]

FRESNO COUNTY.

ADAMS GRANGE, Big Dry Creek, Fresno Co.: T. P. NELSON, Master; THOS. H. WYATT, Sec'y.
BORDEN GRANGE, Borden, Fresno Co.: J. W. A. WRIGHT, Master; J. S. PICKENS, Sec'y.

KERN COUNTY.

BAKERSFIELD GRANGE, Bakersfield, Kern Co.: S. JEWETT, Master; JEROME TROY, Secretary.
NEW RIVER GRANGE, P. O. Bakersfield, Kern Co.: JOHN G. DAWES, Master; JAS. DIXON, Secretary.
PANAMA GRANGE, P. O. Bakersfield, Kern Co.: P. D. ROSS, Master; J. F. GORDON, Secretary.

SACRAMENTO COUNTY.

FRANKLIN GRANGE, Georgetown, Sacramento Co.: AMOS ADAMS, Master; P. K. BEAKLEY, Sec'y.

SAN JOAQUIN COUNTY.

LOCKEFORD GRANGE, Lockeford, San Joaquin Co.: G. C. HOLMAN, Master; SOL S. STEWART, Sec'y.

TULARE COUNTY.

CHRISTMAS GRANGE, Visalia, Tulare Co.: WILEY WATSON, Master; H. G. HOBBS, Secretary.

YUBA COUNTY.

MARYSVILLE GRANGE, Marysville, Yuba Co.: C. G. BOCKIUS, Master; JAS. M. CUTTS, Sec'y.

The Grange and its Harvest Feasts.

The concluding ceremony connected with the conferring of the 4th degree,—the Harvest Feast—is becoming decidedly popular and interesting, and every new Grange looks forward with much interest to the time when it can celebrate it for the first time. And indeed the feast loses none of its interest even when reached for the third, fourth, or even a much greater number of times. The Harvest Feast is always a welcome occasion; not alone for the "fat things" and nature's many gifts, which come fresh and fair from the very home of the producer, but also from the genuine "feast of reason and flow of soul" which always accompanies them.

It is desirable that due attention should always be paid to making these occasions profitable, for intellectual culture and improvement. In addition to the valuable information which may be communicated at such times by the older or more experienced members, capable of giving real instruction, special efforts should also be made by the presiding Masters to draw out the younger members. Let them be encouraged to say something, be it ever so little, as an exercise for intellectual improvement, if for no other purpose. Many can better speak thus, at a table, when everybody is free and easy, than in a formal meeting of the Grange, where there is so much parliamentary or set show of persons and places. It should be remembered that the Grange is the school where the farmer, and the farmer's son and daughter is to learn to do his or her own business, and his or her own talking. It is to take the place of the debating club, connected with the school or the village, where the young student or mechanic has in times past laid the foundation of his future fame as a speaker. Debating clubs have heretofore been almost inaccessible to farmers from their isolation apart from populous communities and advanced schools. The Grange, however, is now a debating club of the farmer's own making, brought right to his very door. We have already got over ten thousand of them in full blast all over the land! If we don't hear of them, bye and bye, giving the first impetus to some young orator who will eventually be heard and honored on the floors of some of our State Legislatures, or in the halls of Congress, you may set us down as a poor prophet.

The farmers are going to be heard in such places soon, in their own proper persons and not by lawyer proxies; and the Grange is just the place for such young men to first show their aptitudes; or where they may acquire studious habits and aspirations for public life. And we believe, too, that the Grange will send out better men—men of far better principles than a large majority of those who have gone out from either our academies, our workshops, our counting rooms, or our law schools. The Granges have undertaken a work of reform; they have started at the bed rock, and they propose to make thorough work of it, in every department of business, education, and legislation. Those who don't believe this, will either live to see its accomplishments or die soon.

One Hundred and Fifty Granges.

We have now one hundred and fifty Granges organized and in full operation in California—a goodly number to count up in about eight months, in a State so sparsely settled as this, and still the work of organization is going on, if anything, more rapidly than ever. Granges have now been organized in nearly every farming county in the state, and we shall not be surprised if by the next annual meeting in October, that number should be fully doubled. In the mean time the membership is everywhere increasing. In the spring the work will grow more rapidly than ever, as that is a season of comparative rest for California farmers, while their crops are maturing. The seed is sown—the leaven is working and we are already reaping most satisfactory results.

We hope soon to see the good work extending into our mountain counties, wherever sufficient farming centers exist to form a nucleus for such organizations. We have seen it stated that miners are being received into the Order in some of the mining regions in the east, but we think the policy a bad one, especially since another and a sister organization is soon to be introduced here, to which miners and mechanics, and all other producers will have free access—the two organizations being based upon the same principles and managed in the same manner, will be almost identical in interest. United they will be a power indeed, and if their work is restrained within bounds, as we doubt not it will be, great good, and naught but good will come of them to all parts of our common country.

SPECIAL NOTICE.—Patrons should bear in mind that one of the chief conditions on which the Grange Agency in this city is able to purchase for them at such low rates, is a strict observance of the pledges given that all such transactions, prices, names of firms with whom the business is done, etc., shall be kept strictly secret. Serious trouble has arisen in several instances on account of the thoughtless imprudence of members who have divulged the names of firms, amount of prices, etc. Patrons should remember that business men, as well as Granges, must have secrets which it is right and proper should be kept inviolate. A word to the wise, etc.

CHANGE OF PURCHASING AGENT.—We regret to state that Bro. G. P. Kellogg, our late efficient purchasing agent, has been compelled, from private reasons of his own, to resign his position as State Agent. While the Order will regret to part with so able and efficient an agent, Patrons may rejoice that the choice of the Executive Committee has fallen upon so worthy a successor as Bro. I. G. Gardiner, who has already had considerable experience in that office, in connection with Bro. Kellogg. From this date all communications to the State Purchasing Agency should be addressed to I. G. Gardiner, 320 California street—Room 9, as heretofore.

GRANGE PURCHASING AGENCY.—We would suggest that Patrons should more generally avail themselves of the benefits of the Grange Purchasing Agency, in this city, in obtaining agricultural implements and general household supplies. A great saving may be made by so doing. All information in relation to the Agency and the means by which advantages may be derived therefrom, may be obtained by Patrons on application to the Masters of their several Granges. This system gives Patrons everywhere about all the benefits which are usually derivable from well managed co-operative stores, and that without the employment of any local capital.

CIRCULAR OF THE EXECUTIVE COMMITTEE.—Particular attention is called to the circular of the Executive Committee, dated Jan. 10th. This circular has already been forwarded to the several subordinate Granges, in each of which it should be read at the first meeting held after its reception. But as many patrons are often absent at every meeting, it would be well for each individual to see to it, that he becomes personally cognizant of the circular of Jan. 10th. Those who were not present at its reading can have the opportunity of learning its contents by applying to the Master of the Grange to which they may belong.

FRUIT AGENCY.—In answer to numerous enquiries we would say that the Executive Committee are maturing arrangements for the establishment of a Grange Agency in this city for the sale of fruits. It will come in due time, and, it is hoped, in season for all but the very earliest fruit which may come in the present season. Due notice will be given in these columns, of the establishment of this Agency.

EDEN GRANGE.—This Grange, at Haywoods, meets at 1 o'clock, Saturday, January 17th, for public installation of officers.

From the Granges.

SNELLING GRANGE.—W. Lee Hamlin, Secretary, writes under date of Jan. 12: I send to-day ten names for your welcome paper the PACIFIC RURAL, some old and some new subscribers, all Patrons of Husbandry. Snelling Grange, No. 105, was organized, Oct. 23d, 1873, by Bro. H. B. Jolley, of Merced, and member of State Executive Committee, with thirteen charter members. We have been increasing in members gradually, until we, on January 10th, at our last meeting numbered 35 names on our roll book, and "still they come," at the rate of from 12 to 15 per month, with their applications. At our last meeting, our Grange adopted the constitution and by-laws recommended by State Grange, with one slight amendment, of Sec. 4, Article 5; inserting the word *returned* in place of *refunded*. I cannot afford, to close this item of news, without some reference to our installation, or the good time following it; and I know of no better way, of describing it, than by quoting the closing portion of Secretary's report. "After the conclusion of the installation ceremonies, the members of our Grange, brothers and sisters of neighboring Granges, together with several spectators, repaired to the hotel of our genial and most Worthy Lecturer, where a bounteous table awaited them. About 50 persons were seated around the joyous board, and the memory of that sumptuous feast, seasoned with the nerve invigorating wine, manufactured and concentrated, by our Worthy Steward, will ever be cherished as one of the most genial and social gatherings of our time. At the conclusion of said feast, the members of Snelling Grange returned to the Hall, where after a few remarks, and some skirmishing, and vote of thanks to Committee on feast, adjourned to meet on Saturday, Jan. 10th, 1874.

DAVISVILLE GRANGE.—EDITORS PRESS:—I often notice in your paper that Yolo county is omitted in your notes, and as I know that if we are last we are not least, I will give you a few items of what is going on our lively burg of Davisville. You are aware that Davisville Grange was organized, September 23d, 1873, and that it is consequently quite young as yet. It was started with only 15 charter members, but we now number 40, with 12 applicants to be initiated at our next meeting. By spring we expect that every farmer in this part of the county will belong to it, and the prospects are that in a few months more we shall have a strong and active Grange. At our annual election, all the original officers, with but two or three exceptions, were re-elected for the ensuing year. Chas. E. Green was re-elected Master, and John Krimmer, Sec'y.

The prospects for a crop in this neighborhood are good. All grain sowed before the rain looks very encouraging, and if the rains hold off for one month to give the farmers a chance to put in their crops, I believe Yolo will raise more wheat this year than she has ever before. When the ground is all seeded I will write you again. Yours fraternally, JOHN KRIMMER, Sec'y.

CAMBRIA GRANGE.—May E. Ivens, Correspondent, writes that the birthday of the Order was duly celebrated by a feast in the afternoon, and a Terpsichorean entertainment in the evening. Our correspondent speaks in glowing terms of the latter, and adds:—"Our Grange can produce more wide-awake members, and if we don't succeed in all undertakings, it will not be for lack of trying with all our might. We hope to enlarge our subscriptions to the RURAL, and would not do without it for twice the price asked. All Patrons should support it willingly and thereby add largely to its usefulness. A list of the officers of the Grange for the ensuing year accompanied the above, which will be found in its appropriate place.

PLAZA GRANGE, located in Olimpo, Colusa county, is in a prosperous condition. Quite a number of new members have already been added, and several applications were before the Grange at the opening of the year. The bad weather during the month of December was a great drawback to the attendance; there having been about 18 inches of snow on the ground there at one time.

CALISTOGA GRANGE, is progressing finely. All the members seem to take a deep interest in the cause, and are generally prompt and regular in attendance. The first accessions were made on the 27th ult., at which time eight persons took the first degree. There are several applications for membership. This, it will be recollected is one of the recently organized Granges; but it will soon give a good account of itself.

SONOMA GRANGE.—Alfred V. Lamotte, Sec'y., writes:—Our Grange has taken quite a lively start of late, and if applications for membership continue to come in as rapidly as they are doing at present, we shall have our hands full with our initiations and advancements, and but little time for other business for some time to come. Please accept our thanks for many attentions, in the way of papers and forms of By-Laws, etc.

SANTA CLARA GRANGE enjoyed its second Harvest Feast on the 27th ult., when the 4th degree was conferred on 16 new members.

CACHE CREEK GRANGE.—The officers elect of this Grange, for the ensuing year, were installed by Bro. Wm. Sims, Master of Buckeye Grange, on Jan. 3d. After the installation the Fourth Degree was conferred on eleven Brothers and seven Sisters. By invitation, Buckeye and Capay Granges were with us. Our spacious hall was filled, and our Harvest Feast was a decided success. The utmost good feeling prevailed and all went home happy.

There has been no plowing yet in this county. The rains have been so continuous since they began that the ground has not been dry enough to plow. The ground is thoroughly wet, and all feel confident of a crop. Summer fallow and volunteer grain is up and looks well. At the meeting of January 3d, the following resolution was unanimously adopted:

Resolved, That each member be requested to report to this Grange at the first meeting in February. March and April, the number of acres each of wheat and barley they have sown, and what the promised yield is, and that our delegates to the C. C. be requested to have steps taken at their next meeting to ascertain the amount of grain sown in the county.

Is not this a move in the right direction? Should we not, now that good crops are a certainty, begin to let the ship owners of the world know that we will have a large amount of freight to move? And how can we communicate this information better than for each Subordinate Grange to report either to the C. C., or direct to the Executive Committee of the State Grange, the number of acres and probable yield, and let it be published to the world when all may know. It will also be an advantage to the members to know something near the amount of grain produced.

Yours fraternally, L. D. STEPHENS, Sec.
Cache Creek, Cal., Jan. 6th, 1874.

PAJARO GRANGE.—A correspondent of the Granger, under date of Jan. 2, speaking of this Grange, located at Watsonville, says: "The inclemency of the weather has prevented our Grange from holding its usual meetings. At our last meeting the fourth degree was conferred on eight members, and a bountiful harvest feast was prepared by our sisters. We have several applications for membership to act on as soon as we commence work again. We are working slowly but surely, and harmoniously. The only obstacle is a hail to meet in, which we will no doubt remedy next spring by building one.

The storm has somewhat retarded the farmers from further plowing or seeding, although the farmers on the hills can commence plowing again with two or three days of dry weather.

Before this year expires may the foundation of the Patrons of Husbandry be solid and substantial. May our enemies be subdued and conquered, and the farmer of our golden land proclaim freedom and liberty.

AZUSA GRANGE.—At the last meeting of the Azusa Grange, No. 74, Los Angeles Co., Cal., held at the Azusa school house, on Thursday, first day of January, 1874, the Fourth degree was conferred on two members, at which time a bountiful Harvest Feast was spread by the ladies of the Order, which was heartily enjoyed by all. Several of the brothers and sisters of Alliance Grange were in attendance. After all had enjoyed the good things to their heart's content, each and all returned to their respective homes, and met again at early candle light and further enjoyed themselves in a social dance. We are in comparatively a new and thinly settled portion of the county, and consequently our Grange is growing slowly, but surely. This was our second Harvest Feast. Yours truly, J. C. PRESTON, Sec.

RUSTIC GRANGE.—J. A. Shepherd, Master of Rustic Grange, in sending us the result of the election of officers, adds as follows:—This Grange was organized in October last with 28 charter members. It now numbers about 60, all good material, and the Grange is getting along finely. We had an interesting celebration on the Anniversary day of the Order, Dec. 4th. Our officers were installed on the 3d of Jan. by J. W. A. Wright, State Lecturer, who gave an interesting and instructive address on the occasion. He spoke to the point and evidently meant business. After the completion of the ceremony the company was treated to a fine collation by the lady members, who are laboring with earnestness to help along the good work.

YOUNTVILLE GRANGE.—A. P. A. Trow writes: As Grangers we are moving slowly but surely, for our task is a hard one in this county. Bro. Wright has kindly consented to preside at a public installation of officers, at a joint meeting of Napa and Yountville Granges and favor us with one of his instructive lectures, at Grigbey's Hall, in Napa City, January 17th, at 1 o'clock p. m. Also the same day at 9 o'clock, the Committee selected by the various Granges of this county, meet to organize a County Council.

DENVERTON GRANGE.—Secretary Arnold, of this Grange, in communicating the result of the annual election, assures us that the Grange is working admirably and steadily increasing in numbers.

Installation Address.

[Address of T. H. Merry, Past Master of Healdsburg Grange, No. 18, P. of H., at the installation of officers, Jan. 3d, 1874.]

Worthy Master, Sisters and Brothers:—The year 1873, with all its incidents has passed away, and all that transpired therein belongs to history. While in other States disasters and panics have brought ruin to many; and fell pestilence has left the silent mark of its sad work in the desolate homes of the South, where the wail of the widow and orphan is heard, and our heart-strings touched with sympathy for their sorrow; and more lately, where the fire fiend has swept over the farms of our brothers in Iowa and Kansas, destroying and laying waste in its path the labor of years, exposing thousands of women and children to the rigors of a Northern winter, and spreading such a desolation around, that there is not even—

"The single rose left on the stock,
To tell where once the garden had been."

While these calamities have transpired in other States, the year 1873, has been one of more than usual prosperity to the people of California. Bountiful crops have rewarded the farmer's labor, and these have commanded remunerative prices. I need not detail the many blessings, which a kind Providence has lavished upon us, but wish more particularly to remind you that the year just passed, will ever be gratefully remembered by the Patrons of Husbandry in California, since it witnessed the introduction of our loved Order here, and bound us to each other and to our Eastern brothers in bonds as lasting, as life itself. Eight months ago it was transplanted to our genial soil; like a bright star it crowned fair Napa's brow, and its rays of light radiated to every part of our State. Within this short space of time 150 Granges have been organized in California, and many more are knocking at the door of our Order for admission. Here, in our own County of Sonoma, we have twelve Granges, composed of earnest men and women, devoted to the interests of the Order.

That you may judge how rapid has been the growth of the Order of Patrons of Husbandry. I will state that the total number of Granges organized during the year 1872, was 1,053; while during the first eleven months of 1873, no less than 7,447 Granges were organized and reported to the Secretary of the National Grange; December's work will bring the number to more than 8,000 Granges organized during the past year. How quietly, how peacefully, has all this great work been accomplished, without excitement, and without appealing to the passions and prejudices of the people. And yet it has already become a mighty power in the land, extending a helping hand to our oppressed and tax-burdened people.

In beholding this vast array, one is naturally led to ask himself, why this mighty host? Why this vast army of the tillers of the soil? What mighty power do they seek to overthrow? What is to be the result of this great revolution? Quiet your nerves, neighbor, this great revolution, as you are pleased to term it, is one of peace; agencies more powerful than arms will accomplish its purpose. The ballot in the hands of freemen, moved by united and concerted action, will tend to remove some of the evils, of which we may very justly complain. While we positively disclaim being a political organization in any sense, and do not even tolerate political or partizan discussion within the Grange, yet as American citizens, as taxpayers, and as producers, upon whose shoulders rests the prosperity of the State and Nation, and who bear the burden of taxation, it is our duty to so cast our ballots, irrespective of party, as to elect men who will work to promote the welfare of the State, men honest and faithful in the discharge of their duties, who, by economical administration will reduce taxation, and thus lighten one of our burdens.

We seek also to dispense with the vast army of middlemen, cormorants whose insatiate wants are only equalled by their rapacity and grasping ambition. Not satisfied with a fair compensation for his labor or his capital he seizes the "lion's share" of the hard-earned fruits of our industry. In other words—we mean to sell our produce as near as possible, to the consumer, and thus save money to him as well as to ourselves. We mean to buy our necessities for the home and the farm, where we can buy them the cheapest—from the manufacturer and the importer, bringing producer and consumer again within reach of each other. We only ask the privilege of doing our own business in our own way, without depriving any of our fellow-citizens of their just rights. The money thus saved will be spent in developing the resources of the country, in beautifying our homes, building better houses and barns, and improving our farm; thus giving employment to the mechanic and laborer, increasing the taxable property of the State, bringing prosperity and happiness to the masses of the people.

Our is also a social Order. Within the Grange all is harmony and good feeling. The Patrons meet each other as brothers and sisters united in one common cause. By an interchange of view, we profit by each other's experience. The sick and distressed receive prompt relief from hands guided by fraternal love. The stranger, the visitor, ever meets with a cordial welcome at the hands of all true Patrons.

In referring generally to some of the objects at which we aim, I cannot enter into the details thereof, but suffice it for me to state, that we aim only to protect ourselves from our oppressors; to promote the welfare of our members; to elevate and educate the agricultural masses,

until they shall reach the high position, which the God of the universe intended that they should occupy. To this end we ask all our brother farmers to unite with us in this good work, that they may receive their reward, and claim their share of the victory.

One word in regard to our Grange. It was organized on the 29th of May, with full charter list, composed of some of the leading farmers in the vicinity of Healdsburg. Our progress has not been as rapid as I would desire, but we have since then more than doubled our numbers, yet, it is a satisfaction to know that what we lack in numbers we more than make up in the intelligence, public spirit and zeal of our members. And it is with pride that I assert, that from the first day of our organization to this time, in all our discussions, not one single word of discord has ever been uttered to mar the perfect harmony and good feeling existing among our members. Within our gates there is no strife; peace reigns supreme.

Honored with the position of Master of this Grange, I have endeavored to discharge my duties faithfully, to preside over your deliberations without partiality, to promote the interests of our loved Order in general, and of our own Grange in particular. How well I have succeeded in this, I will leave with yourselves to determine.

And now, Brother Alexander, I greet you as Worthy Master of Healdsburg Grange. May your intercourse with our members be as pleasant in the future as it has been in the past. We know that you are worthy of the high position to which you have been assigned, and that you will honor it with your wisdom and experience. Therefore, we feel safe in entrusting to your hands the helm that shall guide our hopeful bark to a haven of success.

New Granges.

MARYSVILLE GRANGE.—Bro. J. W. A. Wright writes as follows: "We have had a 'good time' at Marysville and Yuba City. Marysville Grange was organized Jan. 9th, with 30 Charter members of the best material—C. G. Bockius, M. L. P. Walker, O. H. Sewell, L. J. Seward, S. S. Eaton, A. S. G. F. Kelsor, C. H. S. Taylor, T. Jas. M. Cutts, Sec'y; W. H. Drumm, G. K. Miss L. D. Kelsor, C. Mrs. M. E. Walker, P. Miss Mary E. Eaton, F. Miss Mollie Sewell, L. A. S.; C. G. Bockius, Agent.

This is evidently one of the best portions of the State for agriculture. They never have such failures of crops as we do in other portions of the State that are less favored with rain. I am informed that they have had already some 13 inches of rain, about the same amount that has fallen at San Francisco. Crops are certain. Hence we see every evidence of that material prosperity which we hope irrigation will accure to those parts of our State less favored with rain.

FRANKLIN GRANGE was organized by W. S. Manlove, Master of Sacramento Grange, at Georgetown, Sacramento county, on the 10th inst., with the following list of Charter members: Amos Adams, Isaac F. Freeman, Wm. Johnston, Geo. Moore, P. K. Beekley, J. W. Moore, J. M. Stevenson, Troy Dye, Thos. Anderson, Fevelia Dye, Martha Miller, Sarah C. Beekley, Amanda Moore, Eber Owen. Amos Adams was chosen Master and P. K. Beekley, Sec'y.

SAN DIEGO COUNTY.—Some of the papers have announced the organization of a Grange in San Diego—the first in that county. If such is the fact, the organization had not been reported by the State Secretary up to the time of our going to press.

Letter From Brother Garretson.

A. T. DEWEY, Esq.:—My dear brother, not a day comes and goes, but when, in the brief respite from business that my mind does not recur to my pleasant field of labor in California, and my heart goes out to my many dear friends there. God bless the Patrons of California; I cannot tell you how I love them or with what pride I point to your success. It was my want and purpose to have corresponded frequently for the Press, and I hope to yet redeem my promise in that regard. My plea for dereliction thus far is briefly this: On reaching home I found work for me already mapped out by Master Smedly. I was hurried from the field to our State Grange at its 4th Annual Session, where the brotherhood thought it best to stop my wanderings by tying me down to the Secretary's office. It is a great sacrifice to me, and was averse to my feelings, but I shall labor to do my duty. I undertake to say, Bro. D., that the labors of this office now with its 1,850 Sub-Granges is more onerous than that of our Secretary of State. In addition to this I have been prevailed on to assume the editorial supervision of the Patron's department of the *Home-Stead*. This field of labor being entirely new to me you may well imagine that my head and hands are both full. I shall continue to welcome the beautiful and instructive *RURAL PRESS*. There is none on our exchange list, nor is there one that visits my family, that is more highly prized.

My home is still at Winterset, two hours by rail from this city, where I keep my office. Please address me hereafter at this place, sending the Press here instead of to Winterset. Your brother constantly for reform.

N. W. GARRETSON,

Letter from Grayson.

The following letter, written Dec. 6th, 1873, has been in some way delayed; but though somewhat out of date we nevertheless give it a place in our columns to-day. We have no personal knowledge, with regard to the grounds of complaint in the matter of the location of the several Granges alluded to; but hope that whatever may have been the reasonable suppositions at the date of this letter, time will eventually show that a proper degree of discretion has been used.

EDITORS PRESS:—Two Granges have recently been organized above Grayson, one at Cottonwood, which is about ten miles from here, and one at Crow's Landing, about ten miles further up the valley.

It was expected there would have been a grange at Hill's Ferry, (which is eighteen or twenty miles from here), before this; and the general opinion among members of the Order is that had there been one organized there, there would have been no necessity for the two others which have been established so near that place.

Small country towns are the most desirable places for Granges, for the reason that people who live in the vicinity naturally congregate there, and would often be present at the meeting of the Grange when they would not go expressly for that purpose.

There is some dissatisfaction expressed about these two new Granges being organized so near each other, and in the immediate vicinity of Hill's Ferry, which is a town of considerable size, being much larger than Crow's Landing, while Cottonwood is only a farming settlement.

I am glad to see the question of locating Granges discussed. Much discretion should be used in the matter.

East of the San Joaquin, between here and Modesto, there are two Granges within three miles of each other. When established so near, they are weak themselves, and tend to weaken each other.

Many present, who live in the neighborhood of Cottonwood and belong to the Grayson Grange, will attend here; and others, who live between this and Hill's Ferry, are still outside the Grange waiting to join at Hill's Ferry.

We celebrated the Farmers' Fourth at this place on Thursday evening, Dec. 4th, with a feast, which was followed by music and dancing. Though the weather was stormy and cold the attendance was good, and everything passed off pleasantly. All present regretted the absence of our Worthy Master and five other Charter members. And we would have been pleased to have seen a larger representation from the neighboring Granges which had been invited to join in our festivity.

The weather, which seldom suits everybody at the same time, has come as near giving general satisfaction for some weeks past as could be expected.

There were certain reasons for wishing the rain to hold off last month, and it did hold off until the last spear of straw was stacked or in other ways disposed of, the stubble eaten bare by hungry sheep, until the last remaining flock was driven further up the valley for winter pasturage, and every acre of ground was prepared and ready for the rain, though it might come in a deluge.

November passed bringing no rain, and some uneasiness was expressed by the farmers, because it was so long in coming; but the hoped for storm set in at last and in good earnest.

Tuesday, the 2d of Dec., was the coldest day of the season, and was followed by the storm of Wednesday which covered the valley with a mantle of snow, such as has never been seen here before by the oldest inhabitants. It has rained most of the time day and night ever since, with weather still cloudy, wind strong from the south, and prospects of a continued rain.

FOOLISH OPPOSITION.—It appears that the plow manufacturers of Chicago, recently held a meeting, and "resolved" to sell no plows to Farmers' Clubs or Granges, except at retail prices. Some fifteen companies took part in this foolish proceeding.

Of course the act was aimed directly at the business programme of the Grange organization, and one of the immediate results was a resolution introduced and passed by the Illinois State Grange at its late session, recommending its members and purchasing agents to stop all business with the firms consenting to the action of the manufacturers' meeting, or any of their agents. This resolution will no doubt be strictly carried out, and the "plow manufacturers" will have to either run with a diminished number of hands or shut down altogether. The Chicago plow manufacturers are not the only ones in the country, although we should hope they were the only ones so foolish as to attempt to run such a tilt against the Granges.

Patrons do not desire to cheapen labor; on the contrary they endeavor to improve and elevate it. They believe in always paying fair rates for all they buy. They offered the manufacturers the same prices at which they were selling to the jobbers. Their only aim was to save the useless and high commission charged for moving the plows from the manufacturing to the warehouse, when the farmers could just as easily receive them from the former place.

Installation at Turlock.

The annual installation at Turlock, took place on Friday, the 2d inst. The ceremonies were conducted with open doors, the public being freely admitted. Bro. J. W. A. Wright was present and conducted the installation ceremonies. He leaves us to labor as Master of a Grange in Fresno county. His departure called forth the following resolutions, which were unanimously adopted:

Resolved, That we, the members of Turlock Grange, No. 295, extend to Bro. J. W. A. Wright, worthy Past Master, our sincere thanks for the fair and impartial manner in which he has acted during the brief time he filled the Worthy Master's chair. That we express to him personally our regret at so near a parting, and pledge that his name shall ever have a place in our grateful remembrance. That we believe him to be a prudent counsellor; and an unselfish and ardent worker in the great cause which he so ably represents as Worthy Lecturer of the State Grange. That as he goes from us we follow him with our sympathies and prayers; commending him to the wise care and protection of the Great Master above. That we hereby extend to him our full confidence as a man and brother. That these resolutions be spread in full on the minutes of this Grange.

After the ceremonies were concluded, a Harvest Feast was spread, and the Patrons attended to the remainder by having a general good time.

JOHN A. HENDERSON.

Turlock, Jan. 4th, 1874.

Election of Officers.

CACHE CREEK GRANGE.—The following are the officers elect for the ensuing year:—D. B. Hurlburt, M.; S. A. Howard, O.; R. G. Tadlock, S.; S. B. Halton, A. S.; J. H. Norton, L.; H. Salting, C.; D. Q. Adams, T.; L. D. Stephens, Sec.; E. Seabold, G. K.; Mrs. Ellen Halton, Ceres; Miss M. Fredericks, Pomona; Mrs. M. Hurlburt, Flora; Mrs. D. Mergal, L. A. S.

SONOMA GRANGE.—Officers elect: Wm. M. P. Hill, M.; Alfred V. LaMott, O.; Leonard Goss, L.; O. B. Shaw, S.; A. S. Edwards, A. S.; Obed Chart, C.; Maj. J. R. Snyder, T.; W. A. Berry, Sec.; Geo. E. Watriss, G. K.; Mrs. S. T. Craig, Ceres; Mrs. A. M. Harding, Pomona; Mrs. Maria E. Young, Flora; Mrs. Phoebe Chart, L. A. S. TRUSTEES.—Leonard Goss, Maj. J. R. Snyder and O. W. Craig.

SNELLING GRANGE.—Officers elect: D. Teiser, M.; G. C. Baker, O.; A. B. Anderson, L.; L. P. Fee, S.; E. Kelsey, A. S.; S. R. Spears, C.; W. J. Hardwick, T.; W. L. Hamlin, Sec'y; S. G. Burns, G. K.; Miss M. E. Teiser, C.; Mrs. M. Kelsey, P.; Miss Martha Spears, F. and Mrs. H. C. Hamlin, L. A. S.; re-elected.

PETALUMA GRANGE.—The following officers elect for the ensuing year were installed on the 3d inst.: L. W. Walker, M.; G. D. Green, O.; A. Symonds, L.; Stephen Payman, S.; N. Wiswell, A. S.; H. D. Sutton, C.; Geo. Campbell, T.; D. G. Heald, Sec'y; Wm. Comstock, G. K.; Mrs. E. Heald, Ceres; Mrs. L. W. Walker, P.; Miss Louisa, Skillman, F.; Mrs. R. C. Wiswell, L. A. S.

RUSTIC GRANGE.—Officers elect: J. A. Shepherd, M.; G. W. Hains, O.; Samuel Boya, L.; L. W. Whitman, O.; E. Kay, S.; O. Atwood, A. S.; H. Moore, S.; J. K. Meyers, T.; Dennis Vasher, G. K.; Mrs. S. Boya, Ceres; Mrs. D. Vasher, Pomona; Miss Nancy Hains, Flora; Miss E. Spann, L. A. S.

CAMBRIA GRANGE.—Officers elect: C. H. Ivins, M.; M. Woods, O.; Wm. Leffingwell, L.; J. L. Leffingwell, S.; Wm. Skinner, C.; J. D. Campbell, T.; H. Olmstead, Sec'y; E. A. Everette, A. S.; J. Mullen, G. K.; M. E. Ivins, Ceres; M. B. Blunt, Flora; E. M. Utley, Pomona; A. Everette, L. A. S.

DENVERTON GRANGE.—Officers elect: J. B. Carrington, M.; Samuel Stewart, O.; S. H. DePue, L.; Wm. Spencer, S.; J. P. Jones, A. S.; R. H. Barkway, C.; O. D. Arnold, T.; G. C. Arnold, S.; G. N. Daniels, G. K.; Mrs. J. P. Jones, Ceres; Miss M. E. Cook, Pomona; Mrs. J. B. Carrington, Flora; Mrs. G. C. Arnold, L. A. S.

DAIRY PRODUCE.—The Grange Dairy Agency, heretofore alluded to, is now fully established at No. 414 Sansome street in this city, although Bro. Hegeler is not yet in actual attendance. He soon will be however, and we take pleasure in recommending him as a competent and reliable man, with whom Patrons may safely entrust their interests. Consignments of dairy produce may now be made as above, and all Patrons are requested to avail themselves of the advantages of this Agency.

WINDSOR GRANGE.—INSTALLATION CEREMONIES.—J. M. McClelland, Secretary, writes us that this Grange will hold its installation ceremonies on Saturday, Jan. 24th, at 11 o'clock A. M. A harvest feast will follow the ceremonies. Patrons from other Granges are invited to be present.

MEETING OF THE NATIONAL GRANGE.—Worthy Master, J. M. Hamilton, of the California State Grange will leave about the 27th inst. for the meeting of the National Grange at St. Louis, Mo., during the first week in February.

LIVERMORE GRANGE.—A public installation of officers of this Grange will take place on Saturday, January 31st, at 1 o'clock. Patrons from other Granges have been invited.

CENTERVILLE GRANGE, ALAMEDA COUNTY.—The officers of this Grange were duly installed, January 30th, by General Deputy John Hegler of Bodega, at the request of the Deputy of Alameda County.



Carrie's Economy.

[By Mrs. ELIZA E. ANTHONY.]

"Carrie Waring, do tell me how you manage to dress so stylishly on such a small sum of money? You and I have the same allowance, and yet you look as if you had three times the amount, while I always look shabby; sit down and tell me, that's a darling?" coaxingly said Minnie Waterbury, as she took off her friends jaunty hat and basque, and drew her down on the crimson sofa, which was drawn up before a cheerful fire.

Carrie Waring was below the medium height, all curves and dimples, with large gray eyes, which could flash as well as melt; silky brown hair, a tiny mouth, and small feet and hands. She wore a blue dress with ruffles of silvery gray; a gray overskirt with blue trimming, and a stylish cloth basque, with a black velvet vest, fitted her trim form to perfection. Her hat, which Minnie was admiringly examining, was of silver gray velvet, trimmed with blue ribbon and a long blue plume. A snowy lace frill within a black velvet ruff, encircled her neck and was confined by a gray and blue velvet bow. Altogether, she was a perfect picture of taste, style, and neatness.

Minnie Waterbury was a complete contrast to her friend, both in personal appearance and dress, having jetty hair, clear, though dark complexion, and rare contrast, eyes of soft blue, a large though well formed mouth, teeth like pearls, and her hands and feet, were as she said, always in the way. Her dress of pale, green cashmere, was much too large for her, and ruffled and puffed to the extreme of the fashion, was spotted here and torn there, and a lace ruffle over a plaid tie, completed her attire. She cast a dissatisfied look at herself in the mirror, as she continued: "Carrie, just look at my dress; I have only worn it a month, and it is fit for the rag-bag. I have spent all but ten dollars of my allowance, and that won't go far towards buying a new one. But, how did you manage to get that new suit; it is complete from head to foot? Ah, it was a present, was it not?" Carrie Waring smiled as she answered. "No, but listen, and I will tell you the secret of my new attire to-day. First, my dress, which you admire so much, is made of two old ones; my blue dress and mother's gray one. I sponged and ironed them, and with the aid of my sewing machine made this suit in a short time, buying nothing but the lining, braid and cotton. Then, my basque, which I am proud of, is made out of brother Asa's broadcloth coat. I ripped it apart, sponged and turned it, and now I have a handsome basque, the pattern and buttons not costing much.

My velvet vest, which is so fashionable now, is also made of Asa's old vest, which he had thrown aside; and by raising the pile of the velvet with a hot iron, it is as good as new. I bought a hat frame for a mere nothing, and mother gave me a piece of velvet to cover it with; the ribbon is new, but the plume is my old black one dyed blue. Now my lace frills; I purchased some lace and net, and with a little trouble, made half a dozen ruffles, for the price you would have to pay for one. Pieces of Asa's vest made the ruff, and I bought the bow. So you see how little it costs to dress well, if you wish to be economical and are not afraid of the work. Now, Minnie, what are you going to buy with the ten dollars you have left? Let us see if we cannot make that go as far as twenty ordinarily would."

Minnie Waterbury who had listened to Carrie in open-eyed amazement, answered dolefully: "I don't know, Carrie, ten dollars won't buy a dress, and if I get a new hat, I will have to wear it with an old dress. Tell me what to buy please, and I will do just as you say." "Don't promise rashly," Carrie laughed; then added: "But I will tell you what you can do. Rip up that green dress you are wearing, and by getting five yards of black, and mingling the two colors judiciously, you will have a new suit; and that will take five dollars for the cashmere. Then, with the remaining five dollars, you can buy velvet and trimmings for a new hat, the frame of which, will not cost much; lace and velvet, for ruffles and frills, silk for a stylish tie, and a pair of gloves; and then you are dressed completely.

Out of your old black silk dress, you can make a handsome redingote, trimmed with lace and bugles, as I have yards to spare. Now, are you satisfied with my planning? Am I not economical?" Smilingly asked Carrie of Minnie, who answered. "You are a regular witch; I am so stupid, I never would have thought of such a thing; but many thanks for your advice, and I will take it. In exchange for your lace, here is an embroidered set; collar, cuffs and handkerchief. Now don't refuse

it, as I have more than I need, and a fair exchange is no robbery, and Carrie, how true it is, that if people would calculate and plan more than they do, they might dress just as well, and with far less outlay of money; and I for one, am always glad to hear of some new way to get along economically." San José, Jan. 5, 1874.

Graham Gems, Etc.

EDS. RURAL PRESS:—If Mr. Berwick likes his gems hot and hot (see "Mary Mountsin's Farm House Chat," in the Press of Dec 20th), he has, at least, the satisfaction of knowing that they are healthful as well as delicious.

We are all Grangers and readers of the RURAL PRESS, but have never seen any receipt in your valuable columns for making gems.

If some of your numerous readers would like a perfect receipt, here is one that hundreds of gem-eaters will vouch for.

In the first place, you must have a set of cast-iron gem pans, for in the baking lies the skill and mystery of the whole matter.

Place the pans in a hot oven before beginning to make the gems, when they are smoking hot grease them, and then pour in the "raw material," which by this time must be ready for baking, and is made thus:

Put into a mixing pan one cup of graham and one of bolted flour (or two of graham if you prefer them a little more genuine), break in two fresh eggs, add a tablespoonful of sugar, a pinch of salt and a cup of milk, or water, if milk is scarce.

Stir together quickly and thoroughly and then add slowly another cup of milk (water will do this time also), and when well mixed put into the hot pans, with a large mixing spoon, if convenient. Two spoonfuls will be sufficient for one pan, and this receipt makes just one dozen.

Have a quick fire, and bake until they are of a rich brown color, when they are ready for the table.

It is safest to have a fire that will not need replenishing while they are baking.

Lovers of good, light, wholesome bread, and dyspeptics, will especially appreciate them. They may also be made of all flour, or half corn meal and half flour, observing the same rule otherwise. They are good hot or cold, and may be warmed over like other kinds of bread. HANNAH.

Nord, Butte Co., Jan. 1st, 1874.

With pleasure we welcome to our columns our new correspondent. We place her name upon our list of contributors, which has over it the heading—Good, and Short.

The Weakness of Our Girls.

We have in this city an army of dependent, unmarried women, who, if brought up individually, would, in reply to certain questions, answer as follows:

"What can you do?"

"Oh, most anything you please."

"But tell me particularly?"

"Why, I can do all sorts of work."

"Well, there's dentistry, teaching, type-setting, watch-cleaning, engraving, and—"

"Oh, I don't mean such things, but I can do any common work."

"Can you cook?"

"Well, not much; and then I don't like cooking."

"Can you do fine needlework?"

"No, but then I can do plain sewing."

"Can you make men's shirts?"

"Oh, no, I can't do that; but then I can sew on pillow cases and sheets, if you will show me just what you want me to do."

"Can you do chamber-work?"

"A little, but thou I don't like going out to service."

"I don't see, then, that you can do anything but a little plain sewing, and for that you want a superintendent. There are at least five hundred occupations in this city which women could follow and earn an independent living thereby. You come seeking employment, and finally inform me that with superintendence you can do a little plain sewing, a thing which a young man can learn in three days."—Dio Lewis in To-Day.

In 1856, when great reform was agitating the people, Dr. G. Holland, published a little poem which we herewith reproduce as one of the topics of this time of stress and strain. It is timely now as when written:

God, give us men! a time like this demands
Strong minds, great hearts, true faith, and ready hands;
Men whom the lust of office does not kill;
Men whom the spoils of office can not buy;
Men who possess opinions and a will;
Men who have honor; men who will not lie;
Men who stand before a demagogue,
And damn his treacherous flatteries without winking.
Tall men, sun-crowned, who live above the fog
In public duty, and in private thinking.
For, while the rabble in their thumb-worn creeds
Their large professions and their little deeds—
Mingle in selfish strife, lo! Freedom weeps,
Wrong rules the land, and waiting Justice sleeps.

A PROFESSOR in physiology in explaining to a class of female students, the theory according to which the body is renewed every seven years, said: "You will in reality be no longer Miss B." I really hope I shan't, demurely responded the young lady, casting down her eyes.

The Christmas Gifts.

[Written for the RURAL PRESS.]

"Not often can such a cluster of loving hearts be seen—faithful to each other, believing in each other's goodness, and purity, in face of terrible adverse circumstances. There faithfulness is a proof of their own worth," *Furzeon.*

A room dimly lighted, and cold for the season, a group of young people around the bare embers of a fire, something in the whole aspect of place and persons, denoting refinement, and intelligence, but at the same time such sadness and perplexity upon the faces of the party; this fearful time furnishes too many parallel cases. The one great topic of conversation to-night, was the same which is heard in many homes, but here it was discussed in tones of resignation, not of defiance, or censure. "What shall we do, and how shall we live this winter?"

"George, what prospect have you of employment? says the sister, who sits beside him."

"None at present, none in the future I fear." Our working force has been reduced one-half; that half have only half the usual wages, and the employers fairly wild with efforts to meet the crisis. It's hard for us, it's hard for others too, but in this trial let us keep firm hold of the promise, "As thy day, so shall thy strength be."

"Ellen, what have you to tell?" "My report is much the same as your own, my pupils in music paid me for the half quarter and said they were obliged to give up their lessons until better times, but if nothing better offers, I will go out to service; I can do many things, but I cannot beg, and the money must be saved for darker hours." "We must keep together Ellen, that was mother's last request. If in dire poverty and living on a crust, still we must cling to each other."

"Yes, George, but I can give a day's service in some house, and still come home at night to care for you. Charlie and Mary can go to school and that will save a fire six or seven hours in a day. 'God will provide for the fatherless.'" "Oh, Ellen, you shame me by your courage, your trust, but what will that proud lover say, if you go out to service?"

"That must not enter into the settlement of our difficulties. My promise to a dying mother to watch over her little ones, is the main point to remember and act upon. If he fails me in my hour of trial, that is all I need to know of his character."

"Come little ones, its bed-time, let us not forget our evening service," and so, with reverent faces they listened to Ellen as she read the beautiful words: "The Lord is my Shepherd, I shall not want;" then the hymn, "Nearer to Thee," in which George with his manly bass, Ellen's grand soprano and the sweet tones of the younger ones were blended, and then the brother commended them to the guardianship of Our Father in heaven.

The days rolled on; Ellen found a place in a house not far away, to do the work of a small family who knew her worth. George did anything he could find to do which was honorable, and kept his brightest smiles, his fondest words for the hours at home.

Christmas was coming, "Merry Christmas," and the little ones thought of their many gifts in former years, but said nothing, for fear of troubling Ellen. It was coming to her, too, and she looked over things long laid aside, hoping to find material wherewith to fashion some dainty gift for the children. In eager haste she worked night after night, and George sided her with knife in carving wood and with dainty devices of pen and crayon. Often they went shivering to their beds, but never a word of despair or rebuke.

Letters failed to reach Ellen; she had a sad heart, but worked on faithfully, and now Christmas eve had come. They took the children to church, and heard their voices chiming in Christmas carols, saw shops filled with luxuries, people hurrying homeward with arms laden with gifts, and yet no word of despondency reached the ears of the little ones. They were only comfortably seated at their fireside; there came a ringing of the bell, and when George opened the door there was a surprise for him; a load of coal, two monstrous hampers securely fastened, then a box which had come a long ways, paid in advance. No one to be seen, but it was all for them, marked "Geo. & Ellen Marston, Merry Christmas."

Oh! Ellen, Charlie, Mimie, come! come! God has sent his angels with a gift for us. And the eager hands untied fastenings, and when the stores of rare and valuable things were revealed to sight, when every good and dainty provision for Christmas appeared, and Ellen's box furnished its abundance of warm, rich clothing for each and all, then they knelt down, and amid sobs and tears, thanked Him who "hears the young raven's cry," and remembers the lonely, and the desolate. And then there came another surprise better than all. In their haste they had forgotten to close the door securely, and before them stood their guardian angel, the lover of Ellen, prouder and fonder of her than ever. L. A. B.

A CURIOUS LIBRARY may be seen at Cassel, Germany, made from 500 European trees. The back of each volume is formed of the bark; the sides, of the perfect wood; the top, of young wood; and the bottom, of old wood. When opened, the book is found to be a box, containing the flower, seed, fruit and leaves of the tree, either dried, or imitated in wax.

How to be Beautiful.

A vacant look takes all the meaning out of the fairest face. A sensual disposition deforms the handsomest features. A cold, selfish heart shrives and distorts the best looks. A mean groveling spirit takes the dignity out of the countenance. A cherished hatred transforms the most beautiful lineaments into an image of ugliness. It is as possible to preserve good looks with a brood of bad passions feeding on the blood, a set of low loves tramping through the heart, and a selfish, disdainful spirit enthroned in the will, as to preserve the beauty of an elegant mansion with a litter of swine in the basement, a tribe of gipsies in the parlor, and owls and vultures in the upper part. Badness and beauty will no more keep company a great while than poison will consort with health, or an elegant carving survive the furnace fire. The experiment of putting them together has been tried for thousands of years, but with an unvarying result.

Stand on one of the crowded streets and note the passers by, and any one can see how a thoughtless, aimless mind has made a vacant eye and robbed the features of expression; how vanity has made everything about its victim petty; how frivolity has faded the luster of the countenance; how baby thoughts have made baby faces; how pride has cut disdain into the features, and made the face a chronic sneer; how selfishness has shriveled and wrinkled and withered up the personality; how hatred has deformed and demoralized those who yield to its power; how every bad passion has turned tell-tale, and published its disgraceful story in the lines of the face and the look of the eye; how the old man who has given himself up to every sort of wickedness is branded all over with deformity and repulsiveness—and he will get a new idea of what retribution is. This may not be all, but it is terrible—this transformation of a face full of hope and loveliness into deformity and repulsiveness—then the rose blushing on its stalk, now ashes and a brand.

Neatness.

In its essence, and purely for its own sake, neatness is found in a few. Many a man is neat for appearance sake; there is an instinctive feeling that there is a power in it. When a man consults a physician or a lawyer for the first time, or comes to rent a house or borrow money, he will come in his best dress. A lady will call in her carriage. A man that means business and honesty comes as he is, just as you will find him in his store, his shop, his counting-house. The most accomplished gamblers dress well; the most enterprising swindlers are faultlessly clothed, but countless multitudes are but whitewashed sepulchres. Too many "don't care as long as it will not be seen." Washington Allston, the great artist, the accomplished gentleman, suddenly left his friend standing at the door of a splendid Boston mansion as they were about entering for a party, because he remembered he had a hole in his stocking. It could not be seen or known, but the very knowledge of its existence made him feel that he was less a man than he ought to be; gave him a feeling of inferiority.

When you see a neat, tidy, cleanly and cheerful dwelling—there you will find a joyous, loving, happy family. But if filth and squalor and a disregard for refining delicacies of life prevail in any household, there will be found in the moral character of the inmates much that is low, degrading, unprincipled, vicious and disgusting. Therefore, as we grow in years, we ought to watch eagerly against neglect of cleanliness in person as well as tidiness in dress.—Hall's Journal of Health.

The Etiquette of Bowing.

This is so simple that one would scarcely suppose impossible that difference of opinion could exist, and yet there are some who think it a breach of politeness if one neglects to bow, although meeting half a dozen times on a promenade or in driving. Custom has made it necessary to bow only the first time in passing; after that, exchange of salutation is very properly not expected. The difference between a courteous and a familiar bow should be remembered by gentlemen who wish to make a favorable impression. A lady dislikes to receive from a man with whom she has but a slight acquaintance a bow accompanied by a broad smile, as though he were on the most familiar terms with her. It is far better to err on the other side and give one of those stiff, ungracious bows which some men indulge in. Those gentlemen who smile with their eyes instead of their mouths give the most charming bows. As for men who bow charmingly at one time, and with excessive hauteur at others, accordingly as they feel in good or bad humor, they need never be surprised if the person thus treated should cease speaking altogether. A man should also always lift his hat to a lady.

CURIOUS CALCULATION.—According to a Swiss paper, the diplomas obtained at the Vienna Exhibition bear the following proportion to the population of the several European countries: Switzerland, one per 108,000 inhabitants; Belgium, one per 260,000; Germany, one per 410,000; Austria-Hungary, one per 433,000; France, one per 462,000; Holland, one per 650,000; Sweden and Norway, one per 655,000; Denmark, one per 900,000; Great Britain, one per 1,222,000; Italy, one per 1,405,000; Russia (in Europe) one per 3,550,000.

GOOD HEALTH.

Physical Education.

Perhaps not the least advantage which is derived from muscular, active exercise, as opposed to passive exercise,—by which we refer to a ride in a carriage, or a sail in a vessel, in which latter case the abdominal muscles are the only ones actively exercised—is cleanliness. We mention this, as it has been little insisted on by the advocates of gymnastic training. It belongs rather, perhaps, to a treatise on medicinal than on athletic gymnastics; but the two are at the present day, as we have said, happily incorporated. A microscope will show the millions of drains with which the skin is perforated, for the sake of voiding effete matter. This effete matter can only be thrown off by perspiration, produced by exercise. If it is not thrown off, it is absorbed into the system, and diseases, particularly consumption, and premature death, are the result. The result is produced by the canals of the skin becoming clogged, which not only prevents the refuse matter from coming out, but also prevents oxygen, which is essential to life, from coming in.

We do not breathe with the lungs only, consuming carbon and other matter, and renewing the blood with oxygen as it passes through them. The skin also is a respiratory organ; some animals have no lungs, and breathe entirely with the skin; others with a portion of the skin modified into gills, or rudimentary lungs. In animals of a higher grade, through the lungs are the instruments principally devoted to this function, the skin retains it still to such an extent that to interfere with its pores is highly dangerous; but to arrest their operation, fatal. The breathing of the skin may be easily proved by the simple experiment of placing the hand in a basin of cold water, when it will be soon covered by minute bubbles of carbonic acid. But a more complete and scientific proof is afforded by inserting it in a vessel of oxygen, when the gas will, after a short interval of time, be replaced by carbonic acid. "We all know," says Dr. Breton, "from daily experience, the intimate sympathy which exists between the skin and lungs, and when we are walking fast, how much more easily we get along after having broken out into a perspiration; if we are riding, our horse freshens up under the same conditions." In these homely words he is indirectly proving the chief sanitary characteristic of medicinal gymnastics.

We have most of us heard of the story of the unfortunate child who, to add solemnity and symbolic happiness to the inauguration of Leo X. as Pope of Rome, was gilded over at Florence, to represent the Golden Age. The career of that child so conditioned was brilliant, but brief. It, of course, died in a few hours. One of the reasons of the greater danger of extensive burns or scalds compared with others, smaller though deeper, is the fact that the former exclude a greater surface of skin from the oxygen of the air. M. Fourcault, a distinguished French physiologist, whose admiration of science appears to have led him to care little for the infliction of torture on other animals than himself, sacrificed a great number of Guinea pigs, rabbits and cats, by varnishing over the whole of their skin, contemplating with satisfaction the invariable result—death—as a demonstrative proof that the skin breathes. One word more. It has been imagined that gymnastic exercise is exclusively profitable to the young. It is not so; it is of advantage, of great advantage, likewise to the old. Young persons—we include, of course, women, and wish that calisthenics, which we suppose to be a species of female gymnastics, were more systematized and popular—need little exhortation to exercise, since, by nature, motion is their chief desire; but they stand in need of advice and moderation, since, as they do everything immoderately, so they are accustomed to take too much exercise, and of an improper character, a course of proceedings not without danger. On the contrary, with older men, the increasing weight of the body, and the loss of the so-called "animal spirits," induces the desire of repose, and they need an increase of exercise beyond that which inclination enjoins on them. Thus they are brought within the province of the gymnastic code.—*Cornhill Magazine*.

NEW REMEDIES FOR CHOLERA.—French physicians, as a rule, hold to the fungoid theory of cholera, and one of their number has been experimenting with the carbolate of ammonia in cases of cholera, so far, we learn, with encouraging success. One physician (Dr. Déclat), looks upon carbolic acid as a prophylactic, to be used in the ordinary way of diet during epidemics. It is taken in the form of syrup. When a patient is attacked with cholera, the syrup should be administered, and a dilute solution of the acid injected. In severe cases, the doctor employs a syrup of carbolate of ammonia, with subcutaneous injections of the same; and he is so confident as to the efficacy of his remedy that, in cases where dissolution is impending, he injects a solution of the carbolate of ammonia directly into the veins.

ELECTRICITY AND YELLOW FEVER.—A correspondent writing from Fayette, Mississippi, to the *Scientific American*, says, that prior to the breaking out of the fever, and during the prevalence of the epidemic, the rains are unaccompanied by lightning and thunder, which in

other seasons are common. There was only one peal of thunder heard in his county between the middle of September and the latter part of October. In 1855, at a school celebration, a sufficient amount of electricity could not be generated to perform the simplest experiment with the electrical apparatus, and shortly thereafter the yellow fever broke out and raged terribly.

GLYCERINE AND CASTOR OIL.—The *Philadelphia Medical Times* has an article on this subject. It is stated that if castor-oil be mixed with an equal part of glycerine and one or two drops of oil of cinnamon to the dose, it can scarcely be recognized. The writer affirms that he has used this mixture a great number of times, and can confirm all that has been said of it. Children take it out of the spoon without difficulty, and it has been given to doctors without their discovering that they were taking castor-oil. This hint may be well worth acting upon, considering the nauseous character of castor-oil to most persons.

NUTRITIVE PROPERTIES OF APPLES.—It is stated that by a careful analysis it has been found that apples contain a larger amount of phosphorus, or brain food, than any other fruit or vegetable, and on this account they are very important to sedentary men who work their brains rather than their muscles. They also contain the acids which are needed especially for sedentary men, the action of whose liver is sluggish, to eliminate effete matters, which, if retained in the system, produce inaction of the brain, and indeed of the whole system, causing jaundice, sleepiness, scurvy, and troublesome diseases of the skin.

USEFUL INFORMATION.

Wax Flower Making.

The best white wax is required for the art—pure, and free from granulation. The consistency may need to be modified, according to the state of the weather, and the part of the flower to be imitated; it may be made firmer and more translucent by the addition of a little spermaceti, while Venice turpentine will give it ductility. In preparing the wax for use, it is melted with Canada balsam, or some kind of fine turpentine, and poured into flat tin moulds; these give it the form of quadrangular blocks or slabs about an inch thick. These blocks are cut into thin sheets or films, in one or other of several different ways—by fixing them down flat, with a screw and a stop, and slicing off layers with a kind of a spoke-shave; or holding a block in the hand, and passing it along a carpenter's plane, having the face uppermost; or causing the block to rise gradually over the edge of the mould, and cutting off successive slices with a smooth-edged knife.

The coloring of the wax is an important matter, seeing that in some instances the tint must penetrate the whole substance; whereas in others it is better when laid on the surface as a kind of paint. The choice of colors is nearly the same as for other kinds of artificial flowers, but not in all instances. The white colors are produced by white lead, silver white and one or two other kinds; for red, vermillion, minium, lake and carmine; for rose color, carmine, following an application of dead white (to avert yellowish tints); for blue, ultramarine, cobalt, indigo, and Prussian blue; for yellow, chrome yellow, massicot, Naples yellow, orpiment, yellow ochre, and gamboge; for green, verdigris, Schweinfurth green, arsenic green, (the less of this the better), and various mixtures of blue and yellow. For violet, salmon, flesh, copper, lilac, and numerous intermediate tints, various mixtures of some or other of the colors already named. Most of these coloring substances are employed in the form of powder, worked up on a muller and stone with essential oil of citron or lavender, and mixed with the wax in a melted state; the mixture is strained through muslin, and then cast into the flat moulds already mentioned. Or else a muslin bag filled with colors is steeped for a time in the melted wax. The material dealers sell these slabs of wax ready dyed, to save the flower-maker from a kind of work which is chemical rather than manipulative. Some flowers require that the wax shall be used in a purely white bleached state, colors being afterwards applied to the surface at selected spots.

The wax is, of course, the chief material employed in wax-flower making; but it is by no means the only one. Wire bound round with green silk, tinting brushes and pencils, shapes or stencil patterns, moulds and stampers, flock or ground-up woolen rag, and many other implements and materials, are needed.

The building-up of a wax-flower is a work of patient detail. The patterns of leaves and petals are made of paper or of thin sheet-tin, copied from the natural object; and the wax sheets are cut out in conformity with them. Only the smaller and lighter leaves are, however, made in this way; those of firmer texture and fixity of shape are made in plaster moulds. The patterns are laid on a flat, smooth service of damp sand; a ring is built up round them, and liquid plaster is poured into the cell thus formed. Generally two such moulds are necessary, one for the upper and one for the lower surface of the leaf. Sometimes wooden moulds are employed, into which (when moistened to prevent adhesion) the wax is poured in a melted but not very hot state. The stems are made by working wax dexterously around wires, with or without an inter-

vening layer of silken thread. By the use of flock, down, varnishes, &c., the leaves are made to present a glossy surface on one side and a velvety surface on the other. A singular mode of preparing films of unusual thinness is by the aid of a small wooden cylinder, like a common cotton reel, or rather, ribbon-reel; this is dipped and rotated in melted wax until it takes up a thin layer, which layer, when cold, is cut and uncoiled; the difference of smoothness which the two surfaces present fits them to represent the upper and lower surfaces of a leaf or petal. The combination of all these materials into a built-up flower is a kind of work not differing much from that exercised in regard to textile flowers.—*British Trade Journal*.

Copying Medals.

Copies of medals or other similar articles may be readily made by a very simple piece of apparatus. A cast of the medal is first taken in wax. This is done by moistening the medal or coin slightly, and then pouring the melted wax over it. The object of the moistening is to prevent the wax sticking to the surface of the metal. While the wax is still warm, a piece of copper wire should be imbedded in it to serve as a support, and to connect with the zinc in the decomposing cell. After removing the medal from the mold, the surface of the mold is dusted over with fine plumbago until it appears quite black; all excess of the carbon is then carefully removed with a soft brush. If fine iron filings can be had, a few of them are sifted over the face of the mold, and a solution of sulphate of copper is poured on it. It is then carefully washed; this serves to give a very thin coating of copper, and facilitates further operations, but may be omitted if not convenient. Care must be taken, in putting on the plumbago coating, that it comes in contact with the copper wire. A very convenient way of applying this wire is to bend it into a ring slightly larger than the medal to be copied, lay it on the table around the medal, and pour the wax over both at the same time. Scraping with a knife exposes it completely. The mold being prepared, take an ordinary glazed earthenware basin four or five inches deep, and in it set a small flower pot, having previously plugged up the hole in the bottom of the pot with a piece of wood, a little wax, or other suitable material. The flower pot is to be filled with a weak solution of common salt. The outer basin is then filled with a strong solution of sulphate of copper, and a little bag holding crystals of sulphate of copper is hung in it to keep it saturated. Add a few drops of sulphuric acid to both solutions, place a piece of zinc in the flower pot, and connect it with the wire of the mold. The mold being now put in the outer solution, a coating of copper soon shows itself. The mold may be left in the solution two or three days, if a thick coating is desired.—*Boston Journal of Chemistry*.

Polishing Wood With Charcoal.

We extract from the *Cabinet-Maker* the following description of the method of polishing wood with charcoal, now much employed by French cabinet-makers:

All the world knows of those articles of furniture of a beautiful dead black color, with sharp, clear cut edges, and a smooth surface, the wood of which seems to have the density of ebony; viewing them side by side with furniture rendered black by paint and varnish, the difference is so sensible that the considerable margin of price separating the two kinds explains itself without need of any commentary. The operations are much longer and much more minute in this mode of charcoal polishing, which respects every detail of the carving, while paint and varnish would clog up the holes and widen the ridges. In the first process they employ only carefully selected woods of a close and compact grain; they cover them with a coat of camphor dissolved in water, and almost immediately afterward with another coat composed chiefly of sulphate of iron and nut-gall. The two compositions in blending penetrate the wood and give it an indelible tinge, and at the same time render it impervious to the attacks of insects.

When these two coats are sufficiently dry, they rub the surface of the wood at first with a very hard brush of couch-grass (*chiendent*), and then with charcoal of substances as light and friable as possible, because if a single hard grain remained in the charcoal this alone would scratch the surface, which they wish, on the contrary, to render perfectly smooth. The flat parts are rubbed with natural stick charcoal, the indented portions and crevices with charcoal powder. At once, almost simultaneously, and alternately with the charcoal, the workman also rubs his piece of furniture with flannel soaked in linseed oil and the essence of turpentine. These pouncings, repeated several times, cause the charcoal powder and the oil to penetrate into the wood, giving the article of furniture a beautiful color and perfect polish, which has none of the flaws of ordinary varnish. Black-wood, polished with charcoal, is coming day by day to be in greater demand; it is most serviceable; it does not tarnish like gilding, nor grow yellow like white wood, and in furnishing a drawing-room it agrees very happily with gilt bronzes and rich stuffs. In the dining room, too, it is thoroughly in its place to show off the plate to the greatest advantage, and in the library it supplies a capital framework for handsomely bound books.

DOMESTIC ECONOMY.

Roast Turkey.

After drawing the turkey, rinse out with several waters, and in next to the last mix a teaspoonful of soda. The inside of a fowl, especially if purchased in the market, is sometimes very sour, and imparts an unpleasant taste to the stuffing, if not to the inner part of the legs and side bones. The soda will act as a corrective, and is moreover very cleansing. Fill the body with this water, shake well, empty it out, and rinse with fair water. Then prepare a dressing of bread crumbs, mixed with butter, pepper, salt, thyme or sweet marjoram, and wet with hot water or milk. You may, if you like, add the beaten yolks of two eggs. A little chopped sausage is esteemed an improvement when well incorporated with the other ingredients. Or, mince a dozen oysters and stir into the dressing; and, if you are partial to the taste, wet the bread crumbs with oyster liquor. The effect upon the turkey-meat, particularly that of the breast, is very pleasant.

Stuff the craw with this, and tie a string tightly about the neck, to prevent the escape of the stuffing. Then fill the body of the turkey, and sew it up with strong thread. This and the neck-string are to be removed when the fowl is dished. In roasting, if your fire is brisk, allow about ten minutes to a pound; but it will depend very much upon the turkey's age whether this rule holds good. Dredge it with flour before roasting, and baste often; at first with butter and water, afterwards with the gravy in the dripping-pan. If you roast in an oven, and lay the turkey in the pan, put in with it a teacup of hot water. Many roast always upon a grating placed on the top of the pan. In that case the boiling water steams the under part of the fowl, and prevents the skin from drying to fast, or cracking. Roast to a fine brown, and if it threaten to darken too rapidly, lay a sheet of white paper over it until the lower part is also done.

Stew the chopped giblets in just enough water to cover them, and when the turkey is lifted from the pan, add these, with the water in which they were boiled, to the drippings; thicken with a spoonful of browned flour, wet with cold water to prevent lumping, boil up once, and pour into the gravy-boat. If the turkey is very fat, skim the drippings well before putting in the giblets.

Serve with cranberry sauce. Some lay fried oysters in the dish around the turkey.—*Ex.*

Boiling Potatoes.

The lady authoress of "Uncle Tom," and divers other popular publications, has been writing a homily on cooking potatoes. I should like to know if Mrs. Stowe does really boil potatoes herself? I do, and I have long since known better than to pare my potatoes raw and then douse them naked into water red-hot—boiling at two hundred and ninety horse-power. That is one way to boil potatoes certainly, but not the proper one, by a very long way. Philosophy, common sense, and a month or two of practical experience over the dinner pot, teach us great deal better than that.

My dear madam, don't you know fifteen sixteenths of all the starch that a potato affords is deposited so near the surface, that however carefully we may pare the tubers in a raw state, we are sure to throw away the greater portion of that very material that we eat potatoes for? Then, if we toss our potatoes into boiling water, unprotected by their overcoats, we have set in a second, and hopelessly incorporated with the mass, that semi-volatile principle which gives the ill-cooked potato its slightly acrid, something insipid, and always objectionable flavor.

Any thoroughly potato-bred Irish woman would as soon think of committing regicide, as boiling her potatoes undressed, in the manner recommended by our literary lady cook. And there are no better potatoes, or potato cooks, any where in this world than there are in Ireland.

I tell you, fellow-housekeepers everywhere, that the correct way to cook a potato in any country, provided boiling is the determination, is to wash it clean, first—let it lie in clean cold water two hours—ten is all the better—place it in cold water in the pot, without paring, boil moderately until the test forges smoothly through the potato without encountering a mite of core. Then drain off the water, set the pot over the fire uncovered, for five minutes, after which whip off Mr. Potato's jacket in a hurry, and souse him to the table in a close cover, piping hot—or if you are not over-fashionable and fastidious, it is preferable to serve "murfy" in his coat.

Please follow this formula a few times, and if you shall find it a pernicious practice, you shall be at liberty to consider Madeline as competent to write a readable romance, as she is to cook a potato.—*Saturday Evening Post*.

BEAN PORRIDGE.—Boil a fresh beef bone (I think salt beef would answer if sufficiently freshened, though I never tried it,) in a large quantity of water, and use the meat for anything you choose. Let the liquor become cool, and remove all the grease. Boil a teacupful of beans in three quarts of this liquor until thoroughly soft and in pieces; add a little rice, the necessary amount of salt, and just before taking from the stove, a little thickening of some kind of meal. We use it about the thickness of gruel or gravies and add a little milk when we eat.



PUBLISHED BY

DEWEY & CO.

T. DEWEY. W. B. EWER. G. H. STONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, Jan. 17, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Alfilerilla, or Filere, and its Kindred Plants, 33. The Silk Worm Egg Trade; Dove-Tail Mode of Grafting the Grape; Farmers' Homes; Important, 40. Continental Correspondence, 41. Patents and Inventions, 44.
ILLUSTRATIONS.—Alfilerilla, or Filere, 33. Dove-Tail Grafting, 40. Snow-Shoe Racing in the Mountains of California, 41.
CORRESPONDENCE.—Silk Culture in California—Concluded; Winter Supply of Butter; Scuppernong Grape; Green or Dry Feeding; The Stock Raising Business; Inquiry, 34. Winter Feeding; Hog Disease; Perhaps; Potato Crop of 1873, 35. Snow-Shoeing in the Sierras, 43.
PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 36-37.
AGRICULTURAL NOTES from various counties in California and Washington Territory, 44.
HOME CIRCLE.—Carri's Economy; Graham Gems, Etc.; The Weakness of Our Girls; The Christmas Gift; How to be Beautiful; Neatness; The Etiquette of Bowing; Curious Calculation, 38.
GOOD HEALTH.—Physical Education; New Remedies for Cholera; Electricity and Yellow Fever; Glycerine and Castor Oil; Nutritive Properties of Apples, 39.
USEFUL INFORMATION.—Wax Flower Making; Copying Medals; Polishing Wood With Charcoal, 39.
DOMESTIC ECONOMY.—Roast Turkey; Boiling Potatoes; Bean Porridge, 39.
POULTRY YARD.—Game Fowls; Management of Ducks; Buckwheat for Fowls; Late Chickens for Summer Eggs; Charcoal for Poultry, 42.
THE SWINE YARD.—Fattening Pigs; Sugar Beet for Swine, 42.
WHEAT, ETC.—The Future Wheat Supply, 42.
MISCELLANEOUS.—Apparatus for Drying Grain; Increase in Population; Type-Setting Machines; New Car Starter; Recent Experiments with Diamonds; On the Preparation of Chloralhydrate; Frame Buildings; Professor Agassiz; Steam to Australia; Watch Springs; The Spectrograph; Cement for Pipes, Etc., 35. Improved Fireplace; How to Treat Burns, 43.

MOORE'S RURAL NEW YORKER.—This sterling agricultural journal, which for twenty-four years has been like a polar star to the agriculturalists of the United States, enters on its twenty fifth year under the most favorable auspices, and on the part of its manager with a determination to make it for 1874 a brighter and better paper than ever. The office of Moore's Rural is at No. 5 Beekman street, New York.

THE annual advertisement of J. J. H. Gregory, the well known seedman, will be found in our columns. The fact that Mr. Gregory was the original introducer of some of our most valuable vegetables, that he grows a large proportion of the varieties of seed he sells, and warrants everything to be both fresh and true to name, will have its weight with shrewd farmers.

A TRUE SENTIMENT.—We welcome a new contributor, a matron, to the RURAL, who gives the following paragraph in an off-hand note to us: "In my view too much cannot be done, to elevate the producing classes, and inspire them with a sense of their importance in the community, in order that they may learn and practice the principles of thrift, industry and economy."

ON FILE.—Peanut Raising; Notes by E. M. D.; Letter from Kalamazoo; Scenes in the High Sierras; A many sided question; Ideas; Birthday Garlands, etc.; From Sherman Island; Eggs vs. Riches; Roots, Pumpkins and Brown-bread; Letter from Reno; Oakland Jottings. Graham Pie-crust; Irrigation and Summer Fallow by W. N. G.; Plum Growing by J. M.

The Silk Worm Egg Trade.

Several weeks since a car load of silk worm eggs, on the way from Japan to Italy, left this city by the Pacific Railroad, showing that such freight may come by San Francisco; and in this article we propose to consider the possibility of inducing the European purchasers of bombyx eggs to send them all this was, instead of by Suez.

The cost, in Japan, of the eggs sent to Europe, annually, is about \$4,500,000, Italy taking two-thirds of the amount. The weight may be 2,000,000 "ounces," according to the accepted phraseology, though the eggs are never weighed, nor are they ever separated from the pasteboard on which they are laid by the butterfly and to which they are immediately glued fast. Counting the pasteboard and package, the entire freight, as prepared for shipment, probably weighs 250 tons. This is a comparatively small matter in bulk, but in direct value and in indirect influence, it is not very small.

The Suez route is at present preferred, because the agents who accompany the freight can make the trip in the French steamers, on which they find themselves among people from southern Europe, with whom they can converse and have a pleasant time; whereas on the American route they find people who do not speak any language known to them, and are, perhaps, less sociable than their own countrymen. Again, the time is fifteen days shorter to Italy by Suez than by San Francisco, even for the mail; and for ordinary freight several months shorter. By the Red Sea the freight goes as fast as the mail; but not this way. The freight is handled only once on the Suez route—at Hongkong; whereas on this route it is handled at San Francisco, Ogden, Omaha, Chicago, New York and Havre—six times; and the repeated handlings are injurious to the eggs.

The charge differs but little by the two routes. By Suez, from Yokohama to Venice, it is \$600 per short ton; to Milan by San Francisco, it is \$600, for fast freight. That was the price paid for the last shipment passing this way, and it was to go through with the mail. A special agreement was, however, requisite for the avoidance of delay, by this route, but by Suez no special contract is needed.

The San Francisco route has a decided advantage in the matter of temperature. Between Hongkong and Jidda, in the Red Sea, the steamers are in the torrid zone for 5,000 miles and fifteen days; and more than half the distance is within ten degrees of the Equator. The temperature is uncomfortably hot at all seasons, but is not injurious to the eggs, if they be shipped in August, September or October.

It happens, however, that eggs are usually much cheaper in November and December, the decline being sometimes as much as 60 per cent., and we are assured by Mr. Agrati, now in this city, who is familiar with the business, that the average decline is not less than 40 per cent.; so that the eggs bought for \$4,500,000 before November, could be bought about the beginning of December, for \$2,700,000. The saving would be \$1,800,000 annually—a nice little sum for one year's business. Half the amount might be struck off to allow for contingencies, and it would still deserve attention. As our route from Yokohama to Milan in no place passes south of latitude 35°, the eggs can be safely shipped this way at any time between August and March, thus giving a much longer period for making the purchases, and managing the business in every way.

It is desirable not only that the freight should come this way, but also that purchases should be made through San Francisco houses, who should have agencies in the cities of Italy. The enterprise might begin in a small way one year with the transmission of samples, to be sold at the various sericultural centers, and at the close of the season, the owners of mulberry plantations could receive notice to send in their orders. They select a sample, order a certain number of ounces, and pay half the price in advance and the remainder on delivery. By this method the amount of capital required is not very large, and the profit on the business, if properly conducted, may be considerable.

The business of sending men from Italy to Japan to buy bombyx eggs began about ten years ago, when four agents made all the purchases, but in 1873 the number had increased to sixty-five Italians, besides Frenchmen, and there will be a considerable increase next fall. San Franciscans, however, would have decided advantages over any Europeans. They would find many Japanese who speak English; their proximity and connection with Japanese would give them more familiarity with the business of the islands; and the political influence of the American Ambassador and Consuls might obtain permission for them to travel through the interior and get much better bargains than can be had in the seaports. American merchants might likewise be better able to obtain greater facilities and lower freights from the transportation companies. Those of our business men who wish to examine the matter in detail are referred to Hon. C. E. DeLong and G. Agrati, Esq., both of whom are now in San Francisco.—*Alla.*

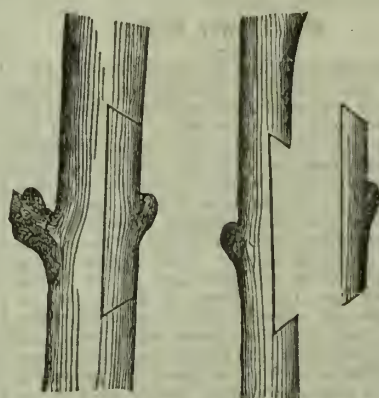
Why not raise the eggs in California and receive the millions of dollars paid to the people of Japan? Is it because our climate is unfavorable to their production, or do we lack ex-

perience, or is it that we have not sufficient enterprise to find a market for what we do raise? There seems to have been a fatality attending our attempts at silk growing, and even the production of eggs for the European market, has not been attended with profit.

Last week we commenced an excellent article on silk culture by Felix Gillet, which will be continued next week, and which we hope will enlighten us on the subject, and help to establish the growing of silk and silk-worm eggs upon a permanent and profitable basis.

Dove-Tail Mode of Grafting the Grape.

Mr. Johnston, a zealous British cultivator of the vine, of long and extensive experience, who has tried every method of grafting known, and has come to the conclusion that for vines there is no better method than that which he practiced for a number of years with every success, and which he has very properly termed "dove-tail grafting." It is simple, as well as sure, and fruit can be obtained from the first year after its insertion. The grafting is performed in the following manner, and before the sap is in motion: The stock may be of one year's growth, or more; but young wood, from one to four years' old, is preferable. The places selected for inserting the graft should be opposite a bud, or spur, with one or more buds to draw the flow of sap to the scion, which also prevents bleeding. Having selected the stock, the wood should be cut out of it from 2 to 2½ inches in length, to a depth corresponding to the thickness of the scion, in the same manner as dove-tailing in carpentry is performed. The scion is then prepared by being



DOVE-TAIL GRAFTING.

cut into the pith, leaving the bud in the middle, and made to fit neatly into the stock, after which it is firmly tied with matting and clayed over, leaving a small hole opposite the bud, so as not to obstruct its growth. A little moss is then tied over all, and kept moist for some time till the bud begins to grow. After it has grown some length, the opposite shoots are shortened, and eventually taken off altogether.

We clip the above from the *Rural Carolinian*, showing how the amateur grape-grower with a few choice vines, or those he would like to have choice, can have them grafted anywhere above ground on a branch of suitable size, with a fair assurance of success. But for grafting the grape on a large scale, expeditiously and in or near the root, we greatly prefer the methods illustrated and described in Vol. 5, pages 57 and 89 of RURAL PRESS.

TEACHINGS OF THE AGES.—We have received from A. L. Bancroft & Company, a book of 399 pages, bearing the above title.

The work is of a religio-philosophical character. Its plan is broad and comprehensive, embracing in its grand sweep of the ages, the past, present and future of humanity. In the treatment of the subject matter the author is suggestive rather than argumentative, and introduces the reader to vast unexplored fields of thought. Send for the work, that you may learn something from the "Teachings of the Ages." Price in Cloth Binding, Three Dollars, sent by mail, postage paid, upon receipt of price. Published by A. L. Bancroft & Co., 721 Market St., San Francisco.

INQUIRY FROM IDAHO.—"Will not the vine bleed too much if allowed to remain late in the spring before being pruned?"

Vines bleed freely from the first flow of sap in the spring, until the buds begin to start; after that time, but very little, and never to their injury. If they should bleed after that time, it serves only to retard the early development of the leaf, which is just what we want in a climate liable to late frosts.

BRONZE TURKEYS.—The advertisement of M. Eyre, in this week's RURAL, is well worthy of notice, as showing the variety of choice fancy stock, which at large cost he is introducing to our poultry fanciers.

Farmers' Homes.

We claim to know a good deal about farmers' homes, we have been among them all our life; we have seen and felt their comforts and discomforts, and we know well the sources from whence these conditions spring. And yet among all their innumerable diversity of causes, there is no one more fruitful of discontent to the household than a neglect to make home and its surroundings pleasant.

There is nothing else that can secure contentment to those of the family who must stay at home, equal to a neat and tasteful house in the midst of shade and ornamental trees. Of course, if the owner has these, he has good sense, and that makes the garden a necessity. Who ever heard complaint from a family with these surroundings? The boys take a pride in keeping everything tidy, from the lawn in front, back to and around all the farm buildings. They like to have their friends who call, observe the condition of their home, because they know it will bear scrutiny; in a word, they are proud of their home.

Examples are reedful in all communities, and a beautiful, well kept homestead not only confers a pleasure on the passer-by, but is very certain to prompt a man of any spirit to try and improve his own grounds. Let children have books and papers, let them be surrounded with tasteful natural objects and they will as certainly become more refined in thought from their early familiarity with the beautiful in art and nature.

With such surroundings as we have named very few young men would be found eager to throw off the attachments of such a home, for the allurements of city life, its hollow gayities and dissipations. Farmers, try and make home pleasant, for he who does this, is a public benefactor.

Important.

Our heading would seem to indicate that we were about to present something of importance to our readers in what follows; but it is simply to direct their attention to an article in our columns this week under the head of "Continental Correspondence."

In that article will be found quite a different view, from the general American opinion, on the subject of summer fallows. We want our small farmers, who can or do adopt rotation, and have not so much land as to despair of manuring all that they till, at least once in the course of a rotation, to carefully digest the subject as presented, and then see if the fallow is in all cases, just what, in our own country is claimed for it.

Next, we want your attention to the wages paid for farm labor in France, and who of the people are willing to work, and who turn out on two special days of the year to be hired. And here we would remark that as the prices are given in francs, by simply allowing twenty cents to the franc and five francs to the dollar, there will be no difficulty in getting at the dollars and cents.

Then we would particularly ask your attention to the account given of one of the best sugar factories in France; its enormous capacity of working up the tons of beets per day, viz: 360 tons, and comparing it with our best factory which only works 80 tons per day, with the strangest of all facts glaring at us, that even at 80 tons a day the company is not able to grow beets enough in all California to keep their sugar in operation but four months out of six, the latter being the usual length of the sugar campaign in France.

See also the yield of sugar, only 5 to 5½ per cent. whilst ours yield 8 per cent. Notice what is said of the use of manure on beet land, the tons of beets per acre, rent of land, etc., and what is said about the use of salt on the farm and the raising of beef and mutton. Altogether it is an excellent article to set our farmers to thinking, not only as to what they had better try and produce, but also the best way of doing it.

NOVEL CONCERT.—There is to be a promenade concert at Brayton Hall, Oakland, on the 22d inst., in aid of the First Baptist Church. A \$250 set of parlor furniture has been donated by Schreiber & Co., and is now on exhibition in their window on Broadway, near Twelfth street. It is to be presented to the clergyman who shall receive the largest number of votes at the entertainment. Ticket-holders may vote, for any clergyman on the coast.

Continental Correspondence.

PARIS, FRANCE, Nov. 29, 1873.

It may seem strange to many to be informed that the agricultural world in France is organizing a crusade against the reprehensible practice of allowing lands to lie in fallow. The evil is more general than might be supposed, and is limited to no particular district. If it does not progress, neither does it retrograde. Perhaps we are about where Young found us. This state of things is not creditable. The system does not enrich the soil, but impoverishes the farmer, and yet it exists despite the lessons of science, conclusive examples, and against even the good sense of those who adopt it. In other respects the agriculture of France has made rapid strides in the way of progress. The obstinate adherence to the triennial rotation, two grain crops succeeding a year's fallow, is attributed to deficiency of capital, which does not allow of the farmer maintaining stock, that is, to have a supply of manure; to the proprietors who consider their interest to lie in the cultivator's not taking as

farmers to practice economy, but rendering manufacturing operations so insecure that no work can be found in the towns. In the center of France, where the farm-laborer is best paid, his wages during the winter, or "short months," are about 48 francs, or equal to one and three-quarter francs per day. Supposing he has a wife and two children, the consumption of bread for the family may be estimated at six pounds daily, which, at the price of one franc per four pounds, nearly absorbs all he earns. Farm servants in France are engaged at two seasons of the year—St. John's day and All Saints. The former is the more important, as the wages paid for the period of four months are about the same as are given for the remaining eight. On the two holidays in question, the boys and girls assemble in the market squares of the various towns to be hired. The young women carry a bouquet in their corsage, and the lads a ribbon in the button-hole of their coats, to indicate that they are open to every eligible offer. Now, the first of this month the offers were exceptionally superior to the demands. Fathers, suspecting hard times to be coming, recommended those of

of his estate to what are called as many "colonies" or groupings of families. In this case each family consisted of four able-bodied intelligent men, their wives, and children. A deed was drawn up wherein he guaranteed fixed remuneration in money or in kind, and a share in net profits. He supplied them with the capital to purchase their share of the stock, charging them five per cent. interest. The advance has been rapid during the fourth year in cash, and the value of the live and dead stock enhanced for mutual benefit. Where formerly such families but vegetated, they now live. Having experienced the attraction of acquired property, the taste to add to it has been developed. Where there was want, plenty now reigns, and if the families so desire, they can realize the wish of Henri IV, to see a fowl in the pot every Sunday. Instead of dreaming of immigration to the town, the families have become attached to the country. Marriages have been contracted as prosperity increased, and happiness was only augmented the more they became fruitful.

One of the oldest and most important beet factories in France is that of Bourdon, at Mont-

ornamental kind. The additional tax on salt vexes farmers, who employ a good deal of it rather as an appetizer for stock than as a tonic for the soil, and although a philosopher considers salt detrimental to vegetation because it killed off some of his kidney beans in a flower pot, agriculturists accustomed to employ it as a stimulant will not be easily frightened into giving it up.—*Western Farm Journal*.

SQUIRREL EXTERMINATOR.—We do not know how many plans there are for killing squirrels, but there are a good many, and the best one will be extensively adopted if the new "Squirrel Law" is passed. The trouble with some of the poisons in use is that they are dangerous to handle, are apt to take fire, and, moreover, are pretty expensive. Mr. Jed. T. Hoyt has set himself to work to remedy these defects and has been around the country for some little time experimenting with various kinds of poisons, under the direction of H. P. Wakelee, a well-known druggist of this city. The result



SNOW-SHOE RACING IN THE MOUNTAINS OF CALIFORNIA.—SEE PAGE 43 FOR DESCRIPTIVE ARTICLE.

much as he can judiciously from the soil, but in his not using out the land; to leases which stipulate that a fallow shall be adopted. But perhaps the principal cause may be traced to routine. According to reliable calculations, the fallow system entails a loss of 75 francs per acre, and per contra, were this sum expended on manures alone, there would be a net gain of 90 francs per acre instead of a loss. Market gardening is the essence of the rotation principle. Plants there are alternated with judgment, and are all well manured. What would such a cultivator think if he were advised to leave a plot untilled for a twelve month? Naturally he would laugh, and why? Because he is aware manure repairs all breaches made in the fertility of his allotment. A copious feast secures more true repose from the soil than a year's sleep. However, since farmers feel that foreign competition excludes them from the wool and grain markets, and that the price of meat is chronically on the increase, the necessity of cultivating forage and root crops is producing converts, by that most eloquent and mildest of reasons to which we all submit—self-interest.

The political agitations which ebb and flow with the tide, and unhappily nearly as regularly, are telling on the position of the agricultural laborers, not only by compelling the

their children who were suitable, to relieve the hive by seeking employment. Unfortunately, on the other side, the farmer had made his calculations in a similar spirit. For simple John Hodge, the worst of governments is that under which he suffers from hunger and can get no work. Why cannot capital be as easily invested in working a farm as in carrying on a factory? It is said the inability to clearly draft a deed of partnership, the impossibility of conducting a simple and intelligent system of book-keeping, by which the capitalist can comprehend at a glance how the money goes, are the chief obstacles.

The success after six years' trial, obtained by M. de Saint Project, in his plan of applying the principle of co-operation to the *mitayage* system, merits attentive consideration. In the south, the west, and the centre of France, is comprised the *mitayage* region; that is to say where the landed proprietor contributes more or less of the stock and shares the produce with the cultivator. For proprietors whose occupations or tastes prevent their living near their lands, the *mitayage* plan possesses serious drawbacks. To ameliorate it would include a social as well as an agricultural benefit. Co-operation, so far as farming is concerned, is but a new name for an old custom. M. de Saint Project allotted three different portions

ferrand. It works up 360 tons of beets in the day, which are purchased at the rate of 16 francs per ton, the pulp being sold at 12 francs. The yield of sugar varies from 5 to 5½ per cent. Upwards of 22 tons of molasses are daily distilled, 200 pounds of which yield 25 quarts of alcohol, and the residue, when evaporated, produces from 10 to 17 per cent. of potash. The country round is very rich, more fertile than the "black lands" of Russia. Manure is rarely employed, the farmers alleging that it makes no difference in the yield. Wheat and beet is the rotation followed. The wheat is peculiarly rich in gluten, and is in request for making macaroni. The return of beet is 20 tons to the acre, and the rent of the latter varies from 70 to 120 francs. The factory only employs oxen for draft purposes, of which 500 are in request, half that number being annually fattened for the market.

Much attention is being directed to guano and chemical manures, with the view of escaping imposition. Intermediary dealers in commercial manures are rapidly disappearing, as farmers are purchasing directly at the genuine depots. The feeling is spreading, that the production of beef and mutton must be the sheet anchors henceforth for French farmers. There is an increase in efforts for the breeding and rearing of horses of a useful, rather than of an

is that he has made a poisonous substance in the shape of small tablets which are eagerly eaten by the squirrels. Mr. Hoyt tells us that there is no danger of fire in the use of this material, which is put up in tin cans with proper directions for use. He is now soliciting orders for the poison, as will be seen by advertisement in our columns. We wish those who test this poison to send us their experience with it for the benefit of many readers.

BROOM CORN.—We have received a postal card from Ventura, asking the proper quantity of broom corn seed for an acre; also the price.

From 15 to 18 pounds of seed to the acre; and will cost ten cents a pound in the city. We would have answered by card, but we could not make out the signature.

CRANBERRY CULTURE.—We have received an interesting letter from "Sage Brush," Reno, Nevada, which will appear next week. His inquiry in regard to cranberry culture, will also then receive attention.

POULTRY YARD.

Game Fowls.

The Game fowl is generally conceded to bear the same relation to other fowls that the high-bred racer does to the equine species. It is the highest type of grace, beauty and courage of the race. For many years, during which other breeds have waxed and waned in popularity, the Games have held steadily on in public estimation, not in the least affected by the storms which have raged outside their own little world. Filling their own peculiar niche, they having numbered their fanciers among all classes, from the clergy down to the stable boy; and although no longer bred for the pit, as in days gone by, they seem to have lost none of the favor in which they have always been held by those who admire the graceful and beautiful in nature.

Where they can have ample range, there are probably no fowls which rival them. They combine hardiness, eggs and flesh producing qualities, grace and beauty, combined with an ability to take care of themselves in a greater degree than any other. For the table they have long been considered without rival by those who were familiar with their peculiar excellence, although they have had to dispute the honors with the white, juicy-meated Dorkings and Houdans.

The cocks are very handsomely colored, having bright red necks and backs, with black breasts and tails, bright red eyes, and clean shapely heads. The shanks are willow blue, yellow or white; willow being the most popular with fanciers.

The hen is of a rich brown, beautifully and delicately pencilled with black. She should be close and hard feathered, and shows the peculiar heart, or flat-iron shaped body characteristic of the breed. Her tail should be long and narrow when folded, but when expanded, large and fan-like.—*National Live Stock Journal.*

Management of Ducks.

A correspondent of the *Ohio Farmer* says:—Having raised nearly all the leading varieties of ducks for the last six or eight years, and in every limited accommodations, perhaps I can make plain my method to all interested. A great deal has been written about the importance of a large pond or stream in raising ducks, and the folly of keeping them with such water. In my own case I have proved by experience that a tub or pail kept full is all that is necessary to rear ducks with perfect success. I have won numberless prizes upon ducks which have never been in the water since they were hatched. With regard to the duck house. Many standard works on poultry advise a ground or brick floor in preference to one of plank. I have tried all three plans and find that the ground or a brick floor in a duck house will bring on paralysis, rheumatism and many other complaints.

I have the floor of my house made of inch plank, raised a foot or more from the ground on stone piers, thus avoiding all dampness. This plan also enables a terrier to "clean out" the rats which would otherwise burrow under the building. Large windows are placed on the south the doors opening under such windows opening to a small "run" or "waddle." In winter the floor is covered with a thin bedding of hay, in summer with saw-dust, which being an excellent absorbent renders the air at all times, sweet and pure. When the bedding becomes foul, it is swept out and the floor washed with hot water. I raise the Rouen, Crested Cuban, Musk and common breeds, each of course having a separate apartment, that of the Musk being provided with roosting poles. The best egg-producing food is another important point in raising any variety of ducks. After buying every kind of grain I have found that oats will produce larger numbers of eggs where all other food has failed. The best way to feed oats is in a pail of water, the exercise given the ducks by feeding in this way will keep them in perfect health. With this treatment my Musk ducks weigh when grown, viz., males, twelve and one-half to fourteen pounds, females nine pounds. My prize ducks at the Conn. show in 1869, 1870 and 1872, weighed a trifle over the above estimate. Different breeds of ducks vary in the time of incubation, Rouen, Cayanga, Ayelsbury, and common duck eggs hatching in four weeks, while those of Musk (improperly called Muscovy) take five weeks. Their eggs should generally be set under hens, and Brahmas are best for this purpose, being

more steady setters and better mothers. The first food for ducklings when hatched should be the yolk of a hard boiled egg and when a week old, oatmeal is excellent for them. When young they should be cooped up until sun is up on account of the wet grass which chills and ruins more young fowls of all kinds than any other cause. When three or four weeks old they may be liberated with the mother and they will soon learn to go with the old ducks. Ducklings should never be housed at night with the old ducks as they are liable to persecution from them. With this care I have had great success, and doubt not that others will have the same.

Buckwheat for Fowls.

L. Wright has recently published the following on this topic:—I am quite puzzled to tell why it is so constantly affirmed that it is not good food, and that the birds do not like it, for my experience is the direct contrary; and not only so, but I have during the last few years recommended it to many scores of persons, and in no one case have I found their experience different from my own. I always find that fowls prefer it to any grain they can have, and if a mixture be thrown down containing all grains, the buckwheat will always be picked up first, maize next, and then other corn. Fowls that have never had it will sometime stare at it the first time, but they quickly begin to pick it up. I cannot see that it is at all a stimulating or forcing diet, and the mere fact that it is the common poultry food in France, and even here for pheasants, should be enough to dispel such an idea. It requires, however, to be given with common sense, not owing to its qualities, but simply on account of its color. If it is thrown upon grass the fowls cannot thrive, for the simple reason that the buckwheat is so nearly the color of the ground that it can hardly be found by the birds, and they are really starved. It has sometimes struck me that perhaps this may be the reason of our poultry editor's ill success with it. But if it be thrown on a bare place where it can be seen, there is no difficulty, and I have constantly given it to fowls which have never seen it before. Buckwheat is also capital food for chickens. They will eat it at three weeks old, when other grain must be cracked for them, and they, too, will eat more of it than any other grain except whole grits. Some years ago I fed on buckwheat meal ground up with husk and all for one season, and the chickens did well, and grew very large. I should have repeated the experiment but for the difficulty of getting the buckwheat ground. Of late, indeed, the grain itself has been very scarce and dear, owing, no doubt, to the late war; hence it is not at present so relatively cheap a food as formerly, but even now I think it as cheap as barley being a heavier grain.

LATE CHICKENS FOR SUMMER EGGS.—It is quite usual for many poultry raisers to save the earliest broods for layers the next season. This is all right so far as late winter, and early spring eggs are concerned. One of the principal reasons, however, why farmers do not have a continuance of eggs during the summer is that they do not save late broods of chickens for successive laying of eggs. We always save some, both from the earliest clutches and also from the late ones, even so late as August, by which we have eggs all through the hot weather. Try it and note the results. You will not be disappointed. Young hens do not make so good mothers as older ones and we should not allow them to sit until they had laid eggs one season. If not allowed to sit, they will soon recommence laying, and by having some two year old pullets for sitting you will find your profits largely increased thereby.—*Western Rural.*

CHARCOAL FOR POULTRY.—The benefit which fowls derive from eating charcoal is, I believe, acknowledged. The method of putting it before them is, however, not well understood. Pounded charcoal is not in the shape in which fowls usually find their food, and consequently is not very enticing to them. I have found that corn burnt on the cob, and the refuse—which consists almost entirely of the grains reduced to charcoal, and still retaining their perfect shape—placed before them, is greedily eaten by them, with a marked improvement in their health, as is shown by the brighter color of their combs, and their sooner producing a greater average of eggs to the flock than before.—*Poultry World.*

THE SWINE YARD.

Fattening Pigs.

The Michigan Farmer says:—One of the best pig breeders we know is W. Smith, the well-known master of the Marine Meat Market in Detroit. He has a taste for keeping the best hogs that are to be had. Few can excel him in the fineness of pure-bred Suffolks, Essex, Berkshires and Poland which he breeds. He has the faculty of making the most out of the pig that can be made. One of his points of fattening a pig is the use of the pen stock to wash it clean, and the curry-comb to keep its skin in a perfectly healthy condition; he is also particular to have it fed regularly every day, always at the same time to a minute. He changes the food from time to time, and when once the pig has started to get fat it is never allowed to go back.

One of the best kinds of food to start pigs with consists of peas or beans mixed with the offal of the dairy or the butchery, with a little fine corn-meal thrown in. Barley-meal is excellent, or crushed oats, but no food is equal to peas for a food to start on. Both peas and corn should be steeped in water, the hotter the better, and allowed to stand and soak up all they will. We notice this is the treatment that makes Smith so successful.

Some of his pigs when started will gain three pounds a day; and we have seen in his stalls Essex and Suffolk crosses that would dress 330 pounds at ten or eleven months old. But one of the fattening processes was a bath, with a flexible hose, at least twice a week. The hogs get so used to this that they like it, and seem to know when they are to enjoy this luxury, for they will come out and lie down as quick as the water begins to play upon them.

It is the quick fattening that pays, and hogs thus treated make as profitable a return, even with pork at 5 to 6 cents, as any part of the farm produce.

Then again a hog should have a dry place to lie; in fact a good, well sheltered pen, with a dry plank under him, where he can sleep without disturbance, somewhat dark and shady, with no drafts of wind penetrating through it, rather low in the roof, so that the animal heat he generates will surround him with a temperature that is pleasant; and when accustomed to be fed regularly there is no animal more punctual in its appearance at the trough. Then he should be fed all he will eat—not an ounce more. No food should remain in the trough after he gets through, and then it should be thoroughly cleaned out.

When put up to feed in this wise the hog does not need any exercise, nor does he require space for it. His whole comfort is in returning to his lair, and have a good opportunity, undisturbed by outside affairs, to increase in weight, and to make an ample return to his owner for the food he has enjoyed.

SUGAR BEET FOR SWINE.—Jonathan Talcott gives a statement in the *Boston Cultivator* of an experiment performed on a Suffolk pig where sugar beets were largely employed for fattening. The animal was about a year old, and the feeding on boiled sugar beets, tops and root, began on the 16th of August, and was continued three times a day until the 1st of October, after which ground feed was given, consisting of two parts of corn and one of oats, three times a day, until the animal was slaughtered, the meal being mixed with cold water. The result was, on August, 16th, when the sugar beet feeding was begun, that the weight was 360 lbs.; September 1st, 390 lbs.; October 1st, 450 lbs.; November 1st, 520 lbs. This is the substance of the statement given, by which we perceive that the increase the last of August, when fed on boiled sugar beets, was at the rate of two pounds per day; the same rate of increase on the same food continued through September. When fed on ground corn and oats, made into cold slop, the gain for the next fifty days was less than a pound and a half per day.

The *Stock Journal*, after giving a number of experiments in feeding corn to pigs, remarks that these experiments show that there is within a fraction of twenty-four pounds of pork in a bushel of corn; and the effort of every farmer should be to endeavor to get out as much as he can of it. And to do this he must have the right kind of hogs; they must be placed in the right condition, and fed in the right manner, with a view to profit.

WHEAT, ETC.

The Future Wheat Supply.

The use of wheat bread is constantly increasing over the whole world. Rye and Indian, oatmeal, and rice are gradually losing ground, and for the reason, as has been stated, that there are great improvements in the manufacture of flour. This reason is probably not the true one. Wealth is increasing, and people dress better and live in more comfortable houses than formerly. Wheat bread is the food of a civilized man, while corn, oats and other coarse grain are deficient in qualities which make fine muscles, and which enter into the composition of a well organized brain. When Indians beg, they ask first for biscuit, "bisgit," and when an Arab is given corn bread, he looks on it with contempt. The Chinese prefer wheat flour to rice, and the South American ranchman gladly exchanges wool for Baltimore flour. The people of the Southern States always pretended to like corn bread best, but on Sunday morning biscuits were on the table, and the negro, being now free, thinks so much of flour that he will pay out his last dime for it, even if he has to go without whisky. In the slavery days flour was a most acceptable gift from a young colored man to his girl when he went to see her; it was more choice than candy, or "honey in the honeycomb." The demand for flour by the Asiatics and the Pacific Islanders is constantly increasing, notwithstanding they have trees which bear bread, milk and tallow, and so also is butter coming into request. It is tolerably certain that neither ancient nor modern Asiatics ever made butter as an article of food, and it would seem that wheat bread and butter must go together. With this great demand for wheat, it is somewhat alarming to consider that the whole United States east of the Mississippi does not raise enough for the people, and that it is becoming an important question how they are to be supplied in the near future, saying nothing about Europeans and Asiatics. At present, Minnesota, Wisconsin, Kansas, Iowa and Nebraska mainly furnish the surplus required, but if we are to judge by the past, the soil of these sections will in a few years become so impoverished that wheat growing will cease to be profitable. The only regions remaining are California and the interior embraced by the several Territories, and unless some new methods of cultivation shall be introduced, the surplus, if we have any, must come from countries where rain seldom falls, and which most Eastern farmers think wholly unfit for habitation. The truth really is, these arid countries have an almost incalculable capacity for wheat growing; and it is likely that Montana surpasses all others, though at present it is so remote and inaccessible that no more than what is needed at home is grown. The great Missouri and many large tributaries flow through Montana, giving vast volumes of water that can be used for irrigation, and with good farming the yield per acre is marvelous. Colorado can grow an immense surplus, so can New Mexico, Arizona, Utah, Idaho and Nevada, while we all know that California bears the palm through all the world; nor is Oregon much behind. The future surplus of wheat then must, at a no distant day, come from the mountain regions in the heart of the continent; and it is worth while to add that the average quality is so high that Eastern farmers have no conception how high it is.

If, then, the increased use of wheat bread is indicative of an advancing civilization, it is natural to conclude that the superior quality of the surplus for the future will be still more favorable for the human race, and especially to the people living where this fine wheat is grown; and in addition, another important fact is to be mentioned—which is, the purity of the atmosphere of all this trans-Missouri region, where fevers, agues, and all malarious diseases are unknown. Everywhere snow-capped mountains are in sight, the streams are always cold and clear, and the sun shines with undiminished splendor 300 days in the year.—*N. Y. Tribune.*

The editor of *Moore's Rural* speaks of meadows which have not been plowed in 20 years, and yet they yield not only heavy but first quality hay; they having always been pastured in early Fall, never fed close, and occasionally horrowed and top-dressed with fine, well-rotted manure.

Snow-Shoeing in the Sierras.

[Written for the Press by C. W. HENDEL.]

Near the summit of the Sierra Nevada Mountains, on the borders of the counties of Sierra and Plumas, are the towns of La Porte, Howland Flat, St. Louis, noted during the "flush times" of California for their enormous yield of gold dust, and still retaining fixed characteristics of the typical honest miner of '49.

The climate is very salubrious; most deaths occur from great intemperance, exposure, accidents and violence. The spring, summer and autumn months will compare favorably with the climate of northern Italy. The excessive heat prevailing in the valleys lasts for a few days, and only for a few hours during each afternoon. The winter months are often very severe, but even during the prevalence of the great storms, the cold is not so severe as in the Eastern States in the same latitude at a less altitude, while the snow falls to a great depth in these high altitudes. It falls as much as 50 to 125 feet during one season in some places; though generally there is but little in the lower valleys.

When the snow attains a considerable depth in the Sierras, locomotion can only be accomplished by means of the celebrated "Norwegian snow-shoes," or "Norway skates," without which travel would be nearly impracticable, and it becomes almost impossible to break roads or trails, where the snow often covers buildings even two stories high, so that people can only make their exit from their houses through the upper windows. It sometimes happens that a resident has to climb out through his chimney, after punching a hole through the snow above it.

Snow-shoes for traveling are from 8 to 12 feet long, $3\frac{1}{4}$ to 4 inches wide, and $1\frac{1}{4}$ inches thick in the center. They are tapered at the top from near the middle to one-fourth of an inch in thickness at the toes, and nearly flat. The toes are turned up like sleigh runners. They are nearly of uniform width from end to end—a little wider, if any, on the front—and a spring is worked in, so that without weights they rest on the heels and points; but when the rider stands on them, the weight is somewhat evenly distributed, and a concave groove is made at the bottom, beginning near the toes and running to the heels, similar to the bottom of the skates. The bottoms are highly polished, and tar is burned and rubbed in until a full, mahogany-like finish is obtained, which hardens the wood, makes a smooth surface, and attracts heat when exposed to the sun—the latter being a desideratum in putting on the "dope" when traveling.

Shoes made for racing are from $10\frac{1}{2}$ to $13\frac{1}{2}$ feet in length, from $3\frac{3}{4}$ to $4\frac{1}{4}$ inches in width, wider on the front part than on the back. Where the turn commences to the heel, or back end of the shoe, there is a fluted or concave groove about $\frac{3}{4}$ of an inch deep at the heel and tapering in depth from the turn at the point. This groove is about $1\frac{1}{2}$ inch wide, narrower at back end than in front. On top of the shoes, a little back from the center, there is about 18 inches of wood left flat, and toward the front they are shaved and planed, tapering sufficiently to leave the point springy. There is considerable wood left behind from the center to the end, which makes the proper balance—little or no spring being required on the back part—the most essential being the front. The object of this is, that in running over rough places, there will be no sudden jerk endangering the equilibrium of the rider, who often attains a speed of 60 to 80 miles an hour on these shoes. They have a tendency to "buck" when going over uneven snow, and the rider often finds that they are as uncertain as all other things are here below. So great have been the improvements made in racing shoes, during the past few years, from the original style, first introduced 20 years ago, that they now appear to have reached perfection.

The rider stands a little back of the center, his feet being held by toe-straps of strong sole leather or india-rubber belting, fastened to either side of the shoe, and laced, where they meet over the foot. The toe of the foot is put into the straps back to the ball, and in the hollow of the foot there is a small block inserted crosswise to prevent the foot slipping back; but this does not prevent the foot, when the heel is raised, from being slipped out of the straps. The bottom of the shoe resembles a skate with a groove, but instead of being con-

vex, it is concave. This is necessary to balance the weight of the rider as equally as possible from end to end. They are constructed on the principle of skates, and to some extent the same evolutions are practicable, such as allowing the points and curves to describe a circle. Of course they cannot be turned so easily or quickly as skates, but still they are easily managed by experts.

The *sine qua non* of snow-shoe racing is "dope." This is the material used to lubricate the bottom of the shoes and cause them to glide swiftly over the snow, as an axle is lubricated, to cause the wheel to revolve easily, the object being to counteract friction as near as practicable. To such a perfection has the manufacture of this article attained that friction has to a great extent been overcome.

The temperature of the snow is as variable as that of the atmosphere, and for every temperature of snow a different kind of dope is required. Every racer has at least half a dozen recipes for compounding the "dope," sometimes termed "greased lightning"—one for cold snow and one for warm(?) or damp snow, as it is called by experts, as when the snow is heated by the rays of the sun; one for dry snow and one for wet, one for hard and one for soft; one for forenoon and one for afternoon; for extreme cold or frozen snow; and for new dry snow there is still another kind required. Some go so far as to have a different kind for every hour of the day. For moist snow the dope is soft, and is made harder for increase of temperature, up to the frozen, when a hard dope is required. The manufacturer requires considerable skill and ingenuity. A great deal depends upon the boiling of the dope; some requires but a light simmer, enough to melt the parts together, while another requires a good deal of boiling—gum, beeswax, rosin, sperm candle, and some other materials make an inferior quality of dope, only used for traveling purposes, but modern "lightning dope" is manufactured from spermaceti, Burgundy pitch, Canada pitch, balsam of fir, spruce, cedar, Venice turpentine, oil of cedar, pine, hemlock, fir, spruce and tar, glycerine, Barbary tallow, camphor and castor oil and many costly drugs known only to those who make it a specialty, and its manufacture a secret. Oil, grease and such material one might naturally suppose would cause a shoe to slip easily over the snow;—varnish or any other polished material is useless—nothing but the scientific preparation will do. It may seem that a "snow-shoeist," who enters the arena for a hard contested race, to meet all the changes of snow must have a commissary and necessary varieties of dope, for it is a common saying amongst snow-shoers, that "Dope is King."

The dope, in order to be good, must possess two qualities: First, it must be sticky, so that it will adhere to the shoe; second, slippery, so that it will glide over the snow. And, strange as it may seem, they have attained such a degree of perfection in making this compound, that a snow shoe prepared with it and placed by the side of one with the bottom finished with polished steel, would so far outrun it as to make it no race at all. In riding for the first time down a steep hill on shoes so prepared, the great requisite is confidence. Timidity is fatal, and for one, on starting down a hill to be afraid of falling, will never do; he might with as much success try to stem the current of the Niagara river as to keep from falling when he thinks he may, or has not confidence in himself. In racing it is advisable to ride very low upon the shoes, in what is called the "squatting" position, and to hold the pole in the right hand, and in going over any obstruction, occasioned at times by a tree lying across the track under the snow, or by the wind drifting and forming a depression and elevation, which will, when a snow-shoeist is going down very fast, make a considerable lift; both shoes and rider, and sometimes the shoes go on their course alone, while the rider is making a strange gyratory motion in the air, a thing not uncommon with beginners upon these quick and uncertain carriers.

The following fast time has been made at different races, as per authentic record, kept by the different snow-shoe clubs:

At La Porte, Plumas county—"Alturas Snowshoe Club"—1,400 feet in 21 seconds, or one mile in 1 minute 19.2 seconds; 1,200 feet in 15 seconds, or one mile in 1 minute 6 seconds; 1,230 feet in 14 seconds, or a mile in 1 minute .09 seconds. This last distance, of 1,230 feet, was also made by a young Miss of 14 summers in 21 seconds, or a mile in 1 minute 30.14 seconds.

At Port Wine, Sierra county—"Port Wine Snowshoe Club"—1,030 feet in 12 seconds, or a mile in 1 minute 1.51 seconds; 1,025 feet in 12 seconds, or a mile in 1 minute 1.75 seconds.

At Howland Flat, Sierra county—"Table Rock Snowshoe Club"—1,400 feet in 22 seconds, or a mile in 1 minute 22.97 seconds; 1,250 feet in 21 seconds, or a mile in 1 minute 28.71 seconds; 1,265 feet in 25 seconds, or a mile in 1 minute 44.34 seconds; 1,135 feet in 20 seconds, or a mile in 1 minute 33.04 seconds; 1,380 feet in 19 seconds, or a mile in 1 minute 12.63 seconds; 1,185 feet in 20 seconds, or a mile in 1 minute 29.11 seconds.

At St. Louis, Sierra county, a 9-year old girl went over snow drifts and holes, 300 feet distance, in 7 seconds, making her mile in 2 minutes 3.2 seconds.

Great steadiness is required in riding, and very perfect control over the shoes; but still with all, the best riders some times, plough

the snow and bound in the air at a fearful rate. Serious injury is seldom sustained from falling. The greatest danger lies in other riders coming in contact with one falling. I will venture the assertion that in no place but in California can so many men meet, contesting for prizes and the reputation of so many towns, and part in the utmost friendship.

If skating is healthy, graceful and delightful snow-shoeing is equally so, and viewed in a gymnastic light it has everything to recommend it, especially in those portions where our long and tedious winters are met with, which are thereby made seasons of jollity and sport. Within a few years even our horses and mules have had to learn to travel on snow-shoes. The mail contractor on the mail route from La Porte invented some kind of a snow-shoe, by which his animals are enabled to travel over deep and soft snows, which they hardly could do before. It is made of heavy India rubber belting about three-fourths of an inch thick, flat, and in the shape of an octagon, about 6 to 9 inches in diameter and fastened with screws by means of iron bands made to fit over their hoops.

NOTE.—The illustration of the foregoing article will be found on page 41.

IMPROVED FIREPLACE.—Fredrick Proudfoot, Toronto, Canada, has an invention which consists of a fireplace, provided with an open front and back and a single fuel or fire chamber to enable it to be inserted into partition walls of rooms for heating two adjacent compartments, and so arranged that it can be readily converted into a single or one-front fireplace. The invention further consists in the provision of a suspended fire or fuel basket located in the chamber of the fireplace, and possessing a tubular shank adjustable on a stationary tubular post, said basket being also provided with counter-balance weights to cause the same to be elevated into the chimney when the fuel is removed. The invention also consists in the use or combination with such a fireplace of a steam generating boiler or tank, and pipes to convey steam to the fire-basket for aiding the combustion of the fuel, while the surplus steam is conveyed to the dome of radiation, and finally to the chimney.

HOW TO TREAT BURNS.—The less that simple cuts, bruises and burns are meddled with, the better. If they are kept clean and excluded from the air, nature will take care of the healing process. The salves and lotions so commonly used are generally irritating rather than beneficial, and hinder rather than hasten the cure. For cuts, a little court-plaster to keep the edges of the skin together; for bruises, wet cloths; for burns, a covering of dry wheaten flour are usually all the treatment, and the very best, that can be used. If from an unhealthy state of the body or from external irritation, inflammation is produced, something more may be required, the remedy varying with the special case.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874. Write for Catalogue to ELWOOD COOPER, President Board of Directors. 226-1v

New and Rare Plants for Spring of 1874.

John Saul's catalogue of new and beautiful plants will be ready in February, with a colored plate. Mailed free to all my customers; to others, price 10 cts. A plain copy to all applicants FREE. JOHN SAUL, ja3-oww-3t Washington City, D. C.

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street, San Francisco.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO., Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO. 21v2-1y

OUR SPECIALTY: "BEYOND THE MISSISSIPPI" GO WEST, YOUNG MAN! GO WEST! Gold by the Bushel! Silver by the Ton! Capital required: Nerve and Honest Industry. THE FAR WEST, The Great Treasure Chamber of America. All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in CROFUTT'S WESTERN WORLD, for \$1.50 a year. With 90c Premium Chromo, "AMERICAN PROGRESS," free to each subscriber. Two sample WORKS sent for 10 cents. Agents wanted.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street, (Russ House Block) San Francisco. Wholesale and retail dealer in Mens', Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods; also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission St., S. F. C. H. Gruenhausen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Ohermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warrel street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily operated Sewing Machine in the market.

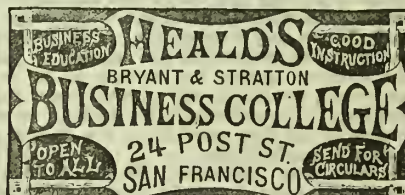
Always in order and ready for work. In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

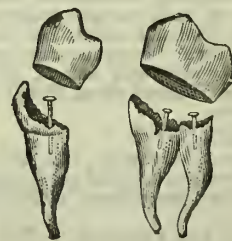
25v6-4m

Grand Hotel Building, S. F.



The object of this school is to impart a thorough education in business affairs. It is open to persons of both sexes and of all ages. There is an English Department for those not sufficiently advanced for the Business Course. Sessions continue day and evening throughout the year. Students can enter at any time. All wishing to be successful should secure a practical education at this College. Send for "Heald's College Journal," and learn full particulars. Sent free to all by addressing E. P. HEALD, Pres. Business College, San Francisco, Cal. 2v27-1y

Don't Have Your Teeth Extracted.



DR. BEERS' PATENT ENAMELED GOLD CROWNS, for Covering Teeth broken down by Decay, have been thoroughly tested, and when properly applied will surely restore them again to usefulness and beauty. Call and see them. Office, 230 Kearny street. 1v7-oww-hp-3m

San Francisco Cordage Company.

Established 1856.

We have just added a large amount of new machinery of the latest and most improved kind, and are again prepared to fill orders for Rope of any special lengths and sizes. Constantly on hand a large stock of Manila Rope, all sizes; Tanned Manila Rope; Hay Rope; Whale Line, etc., etc.

TUBBS & CO.,

de20 611 and 613 Front street, San Francisco.

Dividend Notice.

SAN FRANCISCO SAVINGS UNION.

No. 532 California Street, Cor. Webb.

For the half year ending with the 31st of December, 1873, a dividend has been declared, at the rate of nine (9) per cent. per annum on Term Deposits, and seven and one-half (7½) per cent. per annum on Ordinary Deposits—free of Federal Tax—payable on and after the twelfth of January, 1874. By order, ja10-1w LOVELL WHITE, Cashier.

AGRICULTURAL NOTES.

CALIFORNIA.

AMADOR.

PROFITABLE FARMING.—*Ledger*, Jan. 3: William Avala has twenty-five acres in cultivation, principally in vines and fruit trees, as follows: 17,000 grape vines, principally foreign varieties; 1,000 bearing peach trees, 500 apple trees, 150 pear, 125 plum, 100 nectarine, apricot and quince trees. These vines and trees cover a space of twenty-two acres, the remaining three acres being cultivated in melons, corn, pumpkins and table vegetables. From the grapes Avala has realized annually \$2,000; from the fruit trees, \$4,000; and from the melons, vegetables, etc., \$350, amounting in the aggregate to an income of \$6,350 per annum from the twenty-five acres of land, or at the rate of \$254 per acre. This is certainly a very satisfactory return from a small mountain ranch, and will compare favorably with the profits of fruit raising in any portion of the State.

BUTE.

Record, Jan. 10: The late storm raised the waters of Bear river to a high stage, and the velocity of the stream was so great that large quantities of sand from the mines above are swept over valuable farming lands.

CALAVERAS.

PROSPECTS OF THE SEASON.—*Chronicle*, Jan. 10: Without exception the present season bids fair to prove the most productive and prosperous one this county has seen for years. For each of the three leading industries of the county—agriculture, mining and stock raising—the outlook is most favorable, and the prospects for the successful prosecution of all those branches of business are flattering in the extreme. The season thus far has been unusually propitious for the pursuance of agricultural pursuits, especially. Early rains—just enough moisture falling to render the earth susceptible of easy cultivation—gave farmers an opportunity for seeding their land early, a circumstance we are gratified to know has been generally taken advantage of. Since that time we have been favored with occasional showers, and the weather, with the exception of a few days, has been warm and pleasant. So far we have escaped anything like a flood, although a plenty of rain has fallen, and we have not been visited by those withering northwest winds that absorb the moisture and bake the surface of the ground more quickly than the scorching rays of the sun. In fact, nothing could be added to the favorableness of the season, even if the wishes of the farmers governed such matters, and unless the result greatly belies present indications double the quantity of cereals grown any previous year will be produced this.

EL DORADO.

Republican, Jan. 10: The rains thus far have been so graduated that the ground has absorbed nearly the whole of it and left miners, generally, with a very short supply. The ground must be pretty well soaked now, so that if the rains continue during the present as in the past month, the miners will have no cause for complaint. The only complaint we hear from farmers, is that they would like a few days dry weather to finish plowing in.

A FOOT HILL VINEYARD.—*Weekly Tidings*: One of the most successful viniculturists of California, is Robert Chalmers of Coloma, El Dorado county. His wines have an established reputation and are favorably known in almost every town on this Coast. There is also a demand for several brands of his wines in the Atlantic cities. Chalmers' vineyard consists of about 110 acres, and he has now in bearing condition 100,000 vines. According to the *Truckee Republican*, he has made from this year's vintage, about 40,000 gallons of wine. His principal wines are Catawba, Isabella, Port, Angelica, Burgundy, Hungarian, and various lighter brands manufactured from the native grape. Mr. Chalmers adds to his vineyard annually from ten to twelve thousand vines. Besides the wine made this season, he has also sold from his vineyard about 70,000 pounds of choice grapes.

MONTEREY.

FINE SHEEP.—*Enterprise*, Jan. 10: One hundred and forty fine blooded sheep arrived at the Depot Monday, the property of Flint, Bixby & Co.

HAY FOR SAN FRANCISCO.—The Hollister ranchers and dealers have been shipping for the past few days, large quantities of hay to San Francisco. Four car loads went out from Lathrop's warehouse yesterday.

THE WEATHER.—The weather during the past week, in day-time has been clear, bright and pleasant, but the nights have been unusually cold, characterized by very heavy white frosts, which, strange to say, appear to affect vegetation but little.

LOS PAJAROS.—*Pajaronian*, Jan. 8th: Years ago, before the hand of time had creased our physiognomy, and weight of care did not roost upon our shoulders, we frequently wondered to what beautiful place the birds went to pass the winter months. We have just discovered the locality—the Pajaro Valley. Early during these pleasant mornings, myriads of birds,—crows, hawks, blackbirds, California canaries and other varieties too numerous to mention, can be seen circling to or from the lakes, or ocean, and it is interesting to watch them in their erratic performances. The crows especially seem endowed with reason. With a great deal of preparation and noise they flock in to a certain point from all quarters, and seem to hold a

convention for about fifteen minutes, when they all rise gracefully into the air, and in an orderly manner follow their leader coastward or toward the lakes for their morning drink. "Pajaro" or bird valley is a very appropriate name, for this beautiful spot.

NAPA.

A STRANGE FREAK.—*Reporter*, Jan. 10: Mr. Franklin Grigsby, of Wooden Valley, brought us in some young apples taken this week from a tree that is full of them, on the Crowley farm in Wooden Valley. These apples are of two sizes, one about half grown, and the others about the size of pigeon eggs. This tree has kept on blossoming and bearing apples since last Summer, and were it not that the frost nipped the blossoms, would now be forming fruit. As it is, the tree is laden with two different sizes of apples which are perfectly fresh and green, and the largest sized apples are almost fit to eat.

NEVADA.

FAVORED VALLEY.—*Union*, Jan. 7th: Grass Valley is, of course, the most favored valley in the world. It has the gold bearing quartz veins, and produces gold all the time. But it snows here sometimes. An exchange gives an account of another valley which for climate alone rivals Grass Valley. The exchange says: "A valley, 5,000 feet above sea level, and north of latitude 46 degrees, where snow never falls, is in Montana. Indians, trappers and old settlers say snow was never yet seen on the ground in 'Valley Eden.' While snow falls to the depth of seven inches on the surrounding mountains and valley, never an inch falls on this favored spot."

SACRAMENTO.

Record, Jan. 5: The receipts of grain and flour during the past six months are given in the annexed table, in which, for the sake of comparison, we have incorporated the receipts of the first six months of every year for the past nine years, from June 30th to December 31st, inclusive, in each year:

Year.	Wheat, 100-lbsks.	Barley, 100-lbsks.	Oats, 100 lbsks.	Flour, bbls.
1865.....	1,236,705	682,903	198,547	86,866
1866.....	2,935,055	375,697	235,334	126,490
1867.....	4,042,992	440,085	174,022	283,387
1868.....	4,770,857	408,189	201,655	145,891
1869.....	5,126,060	510,705	236,992	104,876
1870.....	3,897,667	493,306	221,777	76,921
1871.....	1,509,320	475,040	274,870	76,403
1872.....	7,142,020	685,910	189,410	1,084,7
1873.....	6,030,640	740,800	175,530	259,912

By this it appears that whereas our receipts of wheat, as compared with those of 1872, shows a decline of over a million of cents, those of flour show a gain of 140,000 barrels, which, when reduced to wheat, show a total falling off of only 700,000 cents, certainly, considering the character of the two seasons, a most remarkable exhibit. Our exports during the same comparative periods show a falling off (reducing in both cases flour to wheat) of only 49,600 cents; and as we have certainly 2,500,000 cents left in the State available for export, it is evident that the crop of 1872-73 was much larger than was estimated, and that with the balance carried over from last season, and the amount received from Oregon, we had a surplus of certainly 400,000 tons for export.

MERCED.

CROP PROSPECTS.—*Argus*, Jan. 10: Thus far the season has been unusually favorable for the planting and growth of crops throughout the valley of the San Joaquin, and farmers everywhere are busily engaged in putting their lands in grain. During the summer and fall a large area of summer-fallow, dry-plowed and volunteer was put in, which sprung up with the first rain and now covers the ground with a beautiful coat of green, and the farmers have had some four weeks in which to plow and sow new lands. Though a large amount of rain has fallen, yet there has been sufficient open weather to permit farmers to work fully two-thirds of the time, and they have made the most of the advantages afforded by the propitious season. The increased amount of land put in cultivation in the cereals this year will be very great in all parts of the country. In addition to the large number of new settlers who have located in the valley, the farmers of preceding years have many of them doubled the amount of land heretofore cultivated by them and will still further increase the amount between now and the close of the planting season.

A COTTON ENTERPRISE.—*Tribune*: Messrs. P. Carroll, I. H. Jacobs, James Morton, P. D. Wigginton, A. J. Meany, Chas. Peck, M. Goldman, R. S. Clay, and others, will next April plant 600 acres in cotton on land owned by Mr. P. Carroll, in the vicinity of the Rablar, about four miles from this place. Among the gentlemen above named are some of the most experienced cotton growers in the State, and the enterprise will beyond doubt prove a paying investment and prove conclusively that our river bottom-lands are not alone adapted to the culture of cotton. The company have built a substantial dam on Bear Creek, which at the proper time will enable them to irrigate the land. Judging by what we learn from parties who are posted, a large area of land will be planted in cotton the coming season.

KERN.

Courier, Jan. 10: In this part of the country alfalfa will easily sustain twenty sheep to the acre by grazing, but many more if cut and fed to them. It seems to bear grazing by sheep as well as any grass known. The open ranges in Kern and Los Angeles counties are becoming overstocked with sheep, and for a time it was a question with many of the owners whether to

try alfalfa or emigrate to New Mexico, but now the question has been pretty generally decided in favor of alfalfa.

SOLANO.

Chronicle, Jan. 10: The farmers are very active now, taking advantage of every minute of the present "spell" of fine weather. The crop prospects, so far, are very flattering.

FARMING.—From what we can learn of farming operations in various parts of the county, we are led to believe that a much greater area of land will be put under cultivation this year than ever before. We are informed that nearly the entire country in Denver and Montezuma townships has been summer-fallowed, and a few days of fair weather is all that is needed to enable farmers to do their seeding in better time than for several years past.

AN OLD SNAKE.—A son of G. W. Thissell, of Pleasant Valley, while hunting in that neighborhood, a few days ago, came across a large rattlesnake which had been driven from his hole by the late heavy rains. He was dispatched on the spot, and upon counting his rattles he was found to be twenty-five years old—a small snake, two years old, when J. M. and W. J. Pleasants settled in the valley bearing their name.

CALIFORNIA WINES IN ST. LOUIS.—We mentioned in a former letter that J. R. Wolfskill had forwarded to St. Louis four hundred and fifty gallons of Angelica wine. He recently received a letter from his commission merchant, stating that it would sell readily at from \$3 to \$4 per gallon, but that he proposed holding it a short time for a higher price. The same wine can be purchased here for thirty-five cents per gallon. It will thus be seen, that, notwithstanding the high freight, a handsome profit will be realized upon the shipment.

GRAPE CUTTINGS FOR TEXAS.—Milton Wolfskill, who recently emigrated from this State to Texas, is experimenting with the grape vine in his new home. Yesterday the following varieties of cuttings were forwarded to him by express: 600 Muscat of Alexandria; 600 Tokays, 200 Black Morrocos, 25 White Sweetwaters, 25 Black Hamburgs, and 25 Black St. Peters. Mr. John R. Wolfskill has sent to that State for a few slips of the almond tree, which will be set out on his ranch near Putah Creek. A few trees planted there a short time ago are growing finely, but are not yet large enough to bear fruit.

The soil of Yolo county is now receiving a turning-up in many parts such as it has never before experienced. Every farmer who lives on the plains is busily engaged in plowing and preparing the ground for seeding, and if the weather will only keep dry for a week or two longer those living in the lower lands will be at it with full force. The wheat in Yolo already sown is making its appearance, and the fear that much of it was rotting under the late rains has been dissipated.

SONOMA.

Democrat, Jan. 10: H. Weatherington sold on foot 100 bogs, on the 3d inst. The average weight of the 100 head was 235 pounds—the heaviest average on record for the same number in this section.

A GRAY wolf, which had been raiding on flocks and herds in the vicinity of Duncan's Mill, was killed at Moore's ranch on Monday, by James McCowan, after a severe struggle with the dogs, which had brought it to bay. It whipped all that were bold enough to make the attack before yielding to the bullet of McCowan's rifle.

A VERY intelligent and practical farmer from Russian River Township made a suggestion in our office this week, which we commend to the consideration of persons who own land with timber on it. He says the cutting of trees should cease, and instead simply lop off the limbs, and in a few years the trees are again in foliage and new timber is made. In this way you get now within one-third as much wood as if you felled the tree, as there is always considerable loss on account of the difficulty of working up these low trees. We think the suggestion a most wise one, and one which is valuable principally on account of the wood growing on it, is well deserving serious consideration.

SANTA CLARA.

An old hunter informs us that deer are more plentiful this season in the vicinity of the Calaveras valley, in this county, than they have been known for fifteen years.

COMPLETENESS.—Some time ago we noticed that Henry Miller, of the firm of Miller & Lux, was having constructed a large canal for the purpose of draining the water from Soap Lake into the Pajaro river. The *Gilroy Advocate* of Saturday says that the canal is now completed, and gives the following brief description of it: "The canal is nearly three miles in length, and reclaims some 6,000 or 7,000 acres of very fine land. At the bottom it is fourteen feet wide, at the top it is 26 feet wide, with a depth ranging from 3 to 7 feet. There is at present about three feet of water in the ditch. It was quite an immense undertaking, but the work has been finely performed, and the benefit to be derived will doubtless justify the expenditure.

The weather is now clear and the plows are running on the uplands with natural drainage. A few days more and much of the bottom land will be dry enough to plow. From present indications a larger area will be seeded than ever before in this county.

We have some farmers in the vicinity of Santa Rosa who appreciate the benefits of underdrainage, and are availing themselves of its great advantages as fast as they can lay down

the tile, which is a tedious and expensive operation. Were the Santa Rosa bottom land underdrained, so that it could be seeded in good season, it would be difficult to estimate its productive capacity. It is claimed, and we believe it is true, that ten acres thoroughly underdrained will pay, in a single season, over and above the ordinary product, a sum sufficient to underdrain an equal amount of adjoining land.

SONOMA ORANGES.—A twig containing six fine large oranges taken from a tree on the farm of Caleb Carriger, Sonoma valley, was brought to this office to-day. Mr. Carriger has three trees loaded with fruit, besides a large number of smaller ones recently planted. Now that the culture in Sonoma valley is no longer an experiment, many farmers are planting trees, and in a few years that locality will furnish a considerable supply of oranges for the San Francisco market.—*Call*.

WASHINGTON.

CONDITION OF STOCK.—*Walla Walla Union*, Dec. 27: So far as we have heard, the stock in this section of the country is doing well. In most instances there is some feed prepared for them, and where this is done there is no loss. Horses have been able to make their living thus far without feed if there was none provided for them. But cattle that were not fed have not done well, and some have already died, and many others are liable to do so before spring unless the weather should turn out very favorable for the remainder of the winter. In some localities the loss thus far sustained may be attributed as much to a lack of water as for want of food, for in many places there is nothing but the creeks to depend on, and when they freeze up, the animals stand round their old watering places and suffer, and in some instances die.

STATE BOARD OF AGRICULTURE.—The State Board of Agriculture met at 7 p. m. yesterday. President Cary in the chair. Present—Directors Chamberlain, Younger, C. Green, Biggs, Cox, Hamilton, J. J. Green, Boruck and Ross. On motion, the Board proceeded to elect a Secretary. Boruck nominated Robert Beck, and he was unanimously elected. Boruck called the attention of the Board to the fact that the Treasurer had large amounts of money belonging to the society in his hands at one time—especially during the State Fair—and that in case of accident to that officer, death for instance, the money being deposited in bank in his own name, and not directly to the credit of the society, the latter would have no redress and would be greatly embarrassed by reason of it. He moved that the Treasurer give good and approved bonds in the sum of \$25,000, as the law requires, and the motion prevailed unanimously. The Board proceeded to elect a Treasurer. Younger nominated R. T. Brown, and he was unanimously elected.

On motion of Boruck, the time for the commencement of the State Fair for 1874 was fixed for Monday, September 21st, to continue to and including Saturday, September 26th—being six days. Entries will be received on Thursday, September 17th, Friday, the 18th, Saturday, the 19th, and up to ten a. m. on Monday, the 21st, and no entries will be received thereafter in any case. On motion of Biggs, a committee of three were appointed on the matters pertaining to the new stand at the Park. The chair appointed C. Green, Hanilton and Cox. The committee were empowered to have plans and specifications made for the stand. It will be 420 feet long by 46 feet wide, and will be fitted up with committee rooms, retiring rooms for ladies, telegraph office, and all the modern conveniences. It will cost about \$25,000. Adjourned till Tuesday, March 3d.—*Union*, Jan. 14.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Jan. 13, 1874.

FOR WEEK ENDING Dec. 30th, 1873.

COMBINATION PLANE.—Andrew Johnson, S. F., Cal.

MALT DRIER.—John G. Schiffer, S. F., Cal.

FILLING FOR DECAYED TEETH.—Chas. E. Blake, S. F., Cal.

ROTARY WINNOWER.—James H. Adamson, S. F., Cal.

PROCESS FOR THE REDUCTION OF COPPER AND OTHER ORES.—Henry Stull, Ione City, Cal.

LANNER.—Anthony P. Smith, Sacramento, Cal.

WOOD PAVEMENT.—Edwin W. Perrin, Portland, Oregon.

CAR COUPLING.—Thomas R. Laud, Grass Valley, Cal.

TRADEMARK.

GROUND COFFEE.—Hawley, Bowen & Co., S. F., Cal.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with greater security and in much less time than by any other agency.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

San Francisco, January 14, 1874.

The general produce market in this city has been unusually free from change for some time past. While no startling advances have been made, everything, with the exception of Dairy Produce and Eggs, has remained firm. From all sources the news is encouraging, not only to direct producers, but to the State at large. That money is coming into the State is sufficiently shown by the large increase in real estate transactions, at better rates for holders, and by increased activity in manufacturers. Money appears to be obtainable on comparatively easy terms, for California at least. Naturally at this time of the year, thoughts turn backward to the results of last year's harvests, and forward to the prospective yield, rather than to the present state of the markets. We have already given reviews of several articles of Produce for the past year, and nothing is more useful for future calculations than such records of the course of any article in the market; its receipts and exports; its comparative quality, and the sources from whence it comes.

Receipts

Of Bay Produce for the week ending on the 10th, were as follows: Flour, 10,350 barrels; Wheat, 134,844 centals; Barley, 12,389 centals; Oats, 715 centals; Corn, 481 centals; Rye, 370 centals; Buckwheat, 120 centals; Beans, 1,143 sacks; Castor Beans, 19 sacks; Potatoes, 6,430 sacks; Sweet Potatoes, 219 sacks; Onions, 589 sacks; Hides, 1,891; Wool, 232 bales; Hops, 4 bales; Salt, 63 tons; Hay, 611 tons; Straw, 68 tons; Wine, 8,055 gallons; Brandy, 560 gallons; Oranges, 92,500; Lemons, 5,500. Receipts from July 1st, 1873, to date, have been as follows: Flour, 1,033,842 quarter sacks; Wheat, 6,280,039 sacks; Barley, 716,277 sacks; Oats, 156,086; Potatoes, 446,358 sacks; Corn, 56,754 sacks; Rye, 11,420 sacks; Buckwheat, 699 sacks; Beans, 48,909 sacks; Bran, 57,421 sacks; Hay, 30,725 tons; Salt, 4,577 tons; Wool, 50,352 bales; Hides, 60,070. In general a large increase is shown. In Wheat a falling off of 1,169,541 centals is shown; Potatoes, of 32,650 sacks; Buckwheat, of 2,824 and Hay, of 1,139 tons.

Wheat.

The committee appointed by the Exchange, to take stock of grain now in the State, and that there are still on hand 153,250 tons, or about 3,500,000 centals of wheat, show equal in amount to what has already been forwarded. As prices can hardly be lower than now, until this vast quantity has been disposed of, it is easy to understand how much our farmers will receive from this one staple. Yesterday's telegraphic advices to the Associated Press from Liverpool, gave quotations as follows: Average, 13s. 10d. @ 14s. 1d., and Club, 14s. 8d. @ 15s. 1d. Here \$2.27½ is perhaps as low as prime samples will sell for; \$2.30 was the usual rate yesterday and this morning.

Flour.

There are some 54,000 barrels of Flour at present in the State, while our mills are steadily turning out full supplies. The increased demand for shipment renders this quantity variable. Trade with England has by no means closed as yet, and cargoes go forward to Central America as usual.

Wool.

From Walter Brown, Son & Co.'s New York Wool circular, we learn that the month of December opened in the Wool trade with the feeling that the great financial crisis has passed over, and that with the return of confidence a healthy demand for the staple would be re-established. As the money market became easier, many of the mills which had been stopped during the panic, resumed operations. Some of them had been stopped for the reason that their supplies of Wool had become exhausted, and the manufacturers did not care to enter the market as buyers at a time when holders of Wool would accept no settlement but cash. When, therefore, they again started their machinery, they were obliged to come from other large consumers, who appreciated the fact that the available supply of Fleeces was small, created quite an advance early in the month, and thus the values which prevailed before the panic, recovered. As the holiday season drew near, the customary "taking" account of stock kept most manufacturers at home, and for the remainder of the month transactions were not so numerous nor so large, although sufficient to maintain fully the advanced prices, and to enhance still further the value of choice parcels. California, Texas and Foreign Wools have sympathized with the general improvement, and where they could be advantageously used as a substitute for Fleeces, have commanded proportionate prices. Good lots of these Wools are not plenty, and it is probable that full rates will be maintained throughout the season. This is especially the case with Foreign Wools. During the summer they were neglected by manufacturers, and prices gradually settled to a point comparatively lower than the market prices for Domestic. At the beginning of the financial troubles, the importers, feeling that they had no good prospects in the American markets, sent many of their most desirable Wools abroad, thus very considerably reducing our supplies. From present appearances it would seem that the amount of Wool which can be brought on the market from our home resources will be inadequate for the requirements of the machinery in operation, and that within the next few months this deficiency will have to be supplied by importations. The European markets continue strong in tone, and it is not likely that the Wools suitable for our manufactures can be brought into competition until Domestic Fleeces have obtained still higher prices. Our deductions from these facts and considerations are: that the prospects for the next few months favor a good demand, with a continuance of present values and the possibility, if not probability, of some further improvement later in the season.

From the same source we obtain the following list of average prices of Domestic Fleece Wool in the United States, from 1857 to 1861, viz: for fine, 50 8-10; for Medium, 42 8-10; and for Coarse, 35 5-10. Average prices for four years, from 1861 to 1866 (during the war), for Fleeces, 63c to 83c; for Pulled 56c to 61c. Range of prices for the year 1866: Fleeces, 45c to 72c; Pulled, 29c to 64c. Range of prices for the year 1872: Fleeces, 40c to 70c; Pulled, 26c to 57c. Range of prices for the year 1873: Fleeces, 40c to 67c; Pulled, 26c to 49c. Range of prices for the year 1869: Fleeces, 43c to 67c; Pulled, 26c to 50c. Range of prices for the year 1870: Fleeces, 39c to 47c; Pulled 24c to 47c. Range of prices for the year 1871: Fleeces, 44c to 71c; Pulled, 27c to 70c. Range of prices for the year 1872: Fleeces, 45c to 80c; Pulled, 40c to 90c. Range of prices for the year 1873: Fleeces, 27c to 80c; Pulled, 34c to 68c. Telegraphic quotations last night were: Spring, fine, 25c to 37c; Burry, 18c to 27c; Pulled, 37c to 45c; Fall, California, 20c to 25c; do, Burry, 16c to 20c. With the market quiet. A large amount of Wool recently changed hands in this city at private rates. Otherwise quotations here are almost nominal. But from all the Eastern cities the news is favorable. In Boston, the Wool center, the market is looking up and prices are stiffening.

DOMESTIC PRODUCE.

WEDNESDAY M., Jan. 14, 1874.

Beans, small white, 3 1/2 @ 3 3/4	Chick Walnuts, 12 @ 12 1/2
do, butter, 1 @ 1 1/2	Hickory, 12 @ 18
do, large, 2 @ 2 1/2	Brazil, 15 @ 16
do, bayo, 2 1/2 @ 2 3/4	Cocanuts, 100 @ 20 00
do, pink, 2 1/2 @ 2 3/4	Almonds, 100 @ 12 1/2
do, pea, 2 1/2 @ 2 3/4	do, soft, 20 @ 22 1/2
do, lima, 2 1/2 @ 2 3/4	Filberts, 20 @ 25
do, Eastern, 2 1/2 @ 2 3/4	East'n Chestnuts, 20 @ 25

Per ton, \$10.00 @ 10.25	POTATOES.
Butter, Cal. fish, 3 1/2 @ 3 3/4	Sweet, per 100 lbs, 1 @ 1
do, ordinary, 2 1/2 @ 2 3/4	New Coffee, 1 @ 1
do, new, 2 1/2 @ 2 3/4	do, M. B. 25 @ 10
do, Western, 2 1/2 @ 2 3/4	do, P. 10 @ 20
do, picked, 2 1/2 @ 2 3/4	do, Humboldt, 1 @ 20
do, Western, 2 1/2 @ 2 3/4	do, Petaluma, 90 @ 05
do, Cal. new, 12 @ 17	do, Tomales, 90 @ 10
do, Eastern, 12 @ 18	do, Salinas, 90 @ 10
Eggs, Cal. fresh, 40 @ 42 1/2	do, Salinas, 90 @ 10
do, Oregon, 40 @ 42 1/2	do, Salinas, 90 @ 10
do, Eastern, 25 @ 30	do, Salinas, 90 @ 10

FEED.	POULTRY & GAME.
Bran, per doz., 20 @ 20	Hens Turkey, 16 @ 17
Middlings, 25 @ 25	Livers, per doz., 6 @ 17
Hay, 14 @ 14	Roosters, 6 @ 17
Straw, 9 @ 9	Spr's Chickens, 4 @ 25
Oil cake meal, 23 @ 23	Ducks, tame, doz., 10 @ 10
Corn Meal, 27 @ 27	Geese, per pair, 25 @ 25
Flour, 10 @ 10	Hare, per doz., 2 @ 25
Flour, 10 @ 10	Quail, per doz., 2 @ 25

Alvino Mills, 50 @ 70	PROVISIONS.
California, 50 @ 70	Cal. Bacon, 12 @ 12 1/2
City Mills, 50 @ 70	do, Heavy, 10 @ 9
Connell's, 50 @ 70	do, Eastern, 10 @ 13
Golden Gate, 50 @ 70	Cal. Hams, 12 @ 13 1/2
Golden Age, 50 @ 70	do, Whitakers, 12 @ 16
National Mills, 50 @ 70	do, Humboldt, 12 @ 14 1/2
San Jose Mills, 50 @ 70	do, Plankton & Co., 12 @ 15
Oregon, 50 @ 70	do, Eastern, 12 @ 15
Vallejo Star, 50 @ 70	do, Eastern, 12 @ 15
Venus, Oakland, 50 @ 70	do, Eastern, 12 @ 15
Stockton City, 50 @ 70	do, Eastern, 12 @ 15
Lambard, 50 @ 70	do, Eastern, 12 @ 15

Beef, fr quality, 7 @ 8	SEEDS.
do, second, 6 @ 7	Alfalfa, 21 @ 22
do, third, 4 @ 5	do, shipping, 21 @ 22
Veal, 6 @ 8	Flaxseed, 4 @ 5
Mutton, 6 @ 8	Ky. Blue Grass, 4 @ 5
Lamb, 6 @ 8	Mustard, white, 2 @ 3
Pork, dressed, 5 1/2 @ 5 3/4	do, Brown, 3 @ 4
do, dressed, 5 @ 5 1/2	do, Kentucky, 25 @ 35
do, dressed, 5 @ 5 1/2	do, Pennsylvania, 14 @ 15
do, dressed, 5 @ 5 1/2	do, Sweet V. Grass, 6 @ 7
do, dressed, 5 @ 5 1/2	do, Orchard, 30 @ 35
do, dressed, 5 @ 5 1/2	do, Red Top, 30 @ 35
do, dressed, 5 @ 5 1/2	do, Red Top, 30 @ 35

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

Whit. Cal. 12 @ 15	Wool, ETC.
do, shipping, 12 @ 15	Spring, short, 16 @ 18
do, milling, 12 @ 15	do, choice, 16 @ 18
Barley, Feed, 10 @ 15	do, choice, 16 @ 18
do, Brewing, 10 @ 15	do, choice, 16 @ 18
Oats, 10 @ 15	do, choice, 16 @ 18
do, Choice, 10 @ 15	do, choice, 16 @ 18
do, Oregon, 10 @ 15	do, choice, 16 @ 18
Corn, 10 @ 15	do, choice, 16 @ 18
do, Yellow, 10 @ 15	do, choice, 16 @ 18
Buckwheat, 10 @ 15	do, choice, 16 @ 18
Rye, 10 @ 15	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

Beeswax, per lb., 25 @ 30	Wool, ETC.
Honey, choice, 17 @ 20	Spring, short, 16 @ 18
do, ex. choice, 17 @ 20	do, choice, 16 @ 18
do, Los Ang., 20 @ 25	do, choice, 16 @ 18
do, choice, 20 @ 25	do, choice, 16 @ 18
do, choice, 20 @ 25	do, choice, 16 @ 18
do, choice, 20 @ 25	do, choice, 16 @ 18
do, choice, 20 @ 25	do, choice, 16 @ 18
do, choice, 20 @ 25	do, choice, 16 @ 18
do, choice, 20 @ 25	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

California, 1872, 40 @ 45	Wool, ETC.
Eastern, 1873, 55 @ 60	Spring, short, 16 @ 18
do, New York, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18
do, do, 60 @ 65	do, choice, 16 @ 18

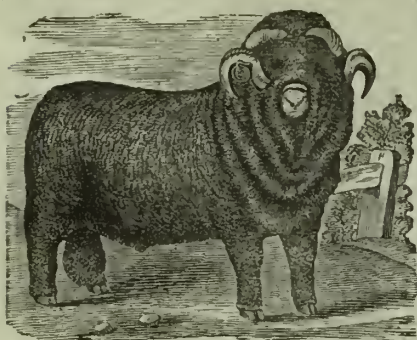
FRUITS AND VEGETABLES.

WEDNESDAY M., Jan. 14, 1874.

There are no important changes to note in the retail Fruit and Vegetable market. The range for Oranges is large, as the quality varies widely.

FRUIT MARKET.		
Tahiti, Or. 100	—	—
Mexican do.	2 00	@ 3 50
Orl. do.	1 50	@ 4 00
Limes, M.	8 00	@ 10 00
Cal. Lemons, 100.	2 50	@ 3 00
Messina do.	6	@ 7
do per box.	12 @	14 00
Bananas, bunch	—	—
do Mission	—	@ —
do Rose of Peru	—	@ —
do Tokay.	—	@ —
do Morocco.	—	@ —
DRIED FRUIT.		
Apples, M.	6	@ 8
Pears, M.	8	@ 9
Peaches, M.	8	@ 9
Apricots, M.	—	@ —

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.

12v5-3m



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.

Address N. GILMORE, El Dorado, El Dorado County, Cal.

THOS. BUTTERFIELD & SON,

Breeders and Importers of the Cotswold, Lincoln, Leicester, Texel and South Down SHEEP.

—ALSO— THE ANGORA GOAT.

Now offer for sale the Pure Bred and High Grades. We have a good lot of Bucks of crosses between the Cotswold and South Down, between the Lincoln and Leicester, and the Lincoln and Merino.

THOS. BUTTERFIELD & SON, Hollister, Monterey County, Cal.

19v4-1f

CYRUS JONES. GEN. GILES A. SMITH. L. H. HICKS.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Duchesses, Rose of Sharon, Booths, Miss Willys, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara avenue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO., San Jose, Cal.

2v7-3m

Fine Grade SPANISH MERINO SHEEP.



25,000 head are now owned by this association, and we are in constant communication with parties all over this State, who buy and sell SHEEP and SHEEP RANGES. Parties wishing to purchase or sell are invited to call at the office of the San Joaquin Valley Wool Growers' Association, 15 Stevenson's building, 331 Montgomery street, San Francisco. ja10-1m

H. K. CUMMINGS. 1858. H. H. RALETON. 1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

Removed to 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer.

4v23-1y

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts. S. F.

de27-1f

100 AGENTS WANTED.

\$5 to \$25 per day, selling the attractive little "Colyby's Washers." Great inducements offered. Send for Circulars. Address, G. B. CODDING, Petaluma, Cal.



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the

THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

9v6-3m

SEVERANCE & PEET, Importers and Breeders of Spanish Merino Sheep.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO OAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST, 152 New Montgomery Street, SAN FRANCISCO. 2v7-6m

LANDS & HOMES FOR SALE

MOUNTAIN RANCH FOR SALE.

A valuable and productive ranch is offered for sale, located on the public road, between Grass Valley and Colfax. The ranch contains 500 acres of land—320 paid for, and patent received for 100—containing all the best meadow land, and 400 apple trees 16 and 18 years old. There are six lots of 40 acres each, railroad land, which will make the title good to any buyer. The dwelling house is not furnished yet; it contains ten rooms, lathed and plastered; 6 on the upper floor and 4 on the lower, with hall; a good stone cellar and one good barn. Last year 1,000 boxes of winter apples were shipped. There are 200 pear trees, and plums and peaches enough for family use. The owner cuts from 30 to 40 tons of meadow hay per year. There are from 5,000 to 7,000 cords of wood, worth \$1 per cord, now standing upon the ranch. Terms liberal. Apply to

P. H. SUMNER,

No. 311 Montgomery st., San Francisco. September, 15, 1873.

Valuable Farm for Sale or Exchange.

1,000 ACRES OF THE BEST FARM LAND IN THE STATE OF MICHIGAN, a portion of which is well timbered. Rapidly increasing in value. Title perfect. Will be sold or exchanged, in lots to suit, for REAL ESTATE IN CALIFORNIA.

Apply to G. D. CROCKER, Room 16, No. 315 California street, San Francisco. 15v6-3m

Valuable Dairy and Grain Ranch FOR SALE.

In San Mateo County, comprising 900 acres, 400 acres under cultivation, and all well watered and substantially improved. Inquire of

JOS. W. JORDAN, N. E. cor. Clay and Front sts., San Francisco.

BIBBINS & CO., LAND EXCHANGE, 402 Kearny street, San Francisco. (SUCCESSORS TO BRANDON & BIBBINS.)

Deal extensively in Country Property.

WANTED—FARMS TO SELL AND LEASE.

FOR SALE:

Farms, Grazing Lands and Tule Lands Throughout the Coast.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco, Or Pacific Rural Press Office.

CALIFORNIA LAND AGENCY.

Will attend to the Location, Purchase and Sale of Lands and Farms, the Examination of Titles, and the Payment of Taxes.

1,000,000 Acres of well selected Lands in California, Oregon, and Washington Territory for sale. Also, buy and sell property in the city and vicinity.

W. M. BRANDON,

20v6-1y-16p 535 California street, San Francisco.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP, On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bpf

A RANCH OF 160 ACRES.

With Barn and House, thirty or forty tons of hay, and with all the necessary farming implements, to be let for a term of years, either by the acre or on shares, situated between Medway Station and Moore's Landing, 2½ miles from either place. For particulars, enquire of CHAS. ALPERS, 238 Bush street, at 1 P. M. 1v7-2m

PROTECT YOUR BUILDINGS,

Which may be done for one-fourth the usual expense

BY USING

GLINE'S PATENT

SLATE ROOFING PAINT.

Agents Wanted in Every Town.

A roof may be covered with a very cheap shingle, and by application of this Slate Paint made to last from 20 to 25 years. Old Roofs can be patched and coated, looking much better and lasting longer than New Shingles without the Slate, for

One-Third the Cost of Re-Shingling.

The expense of Slatting New Shingles is only about the cost of simply laying them. The Slate is Fire-Proof against Sparks or Flying Embers, as may be easily tested by any one, and appears from the fact that Insurance Companies make the same Tariff as for slated Roofs. For Tin and Iron it has no equal, as it expands by heat and contracts by cold, and never cracks or scales. For Cemetery Fences it is particularly adapted, as it will not Corrode in the Most Exposed Places. Roofs covered with Tar Sheathing Felt Can be Made Water-Tight at a Small Expense.

The Slate Paint is EXTREMELY CHEAP. Two Gallons will Cover a Hundred Square Feet of Shingle Roof, or over 400 of Tin or Iron. Price on this Coast, Ready for Use, is \$4 per Gallon, with a Liberal Discount to the Trade.

No Tar is Used in this Composition; therefore it does not affect the Water from the Roof, if turned off from the Eisters for the first one or two rains. The Paint has a very heavy body, but is easily applied with a four or six-inch Paste Brush.

On Decayed Shingles it fills up the holes and pores, hardens them and gives a New and Substantial Roof that will last for years. Curled or Warped Shingles it brings to their places and keeps them there; it fills up all holes in Tin or Felt Roofs, and stops the Leaks. One Coat being Equal to Five of Ordinary Paint. The Color of the Slate when first applied is Dark Purple, changing in about a month to a light Uniform Slate Color, and is

To all Intents and Purposes, Slate.

Although a Slow Dryer, Rain will not affect in the least one hour after applying.

Packages sent to any part of the country by Express, C. O. D., at the following Prices. If less than five gallons, or if ordered to be sent as freight, the Money Must Accompany the Order:

Ten pounds Cement for Large Holes or Cracks, \$3; One gallon and can, \$4; two gallons and can, \$7.75; five gallons and can, \$18.75; ten gallons and can, \$36.50; fifteen gallons and can, \$52.50; twenty gallons, one-half barrel, \$65; one barrel, \$123.

Roofs Examined, Estimates Given, and When Required will be Thoroughly Repaired and Warranted. Orders Respectfully Solicited for full Information, Recommendations from Insurance Companies, and other Editorials from the leading Newspapers, or a Sample Shingle Coated with Slate.

Address for this Coast for the Present,

A. W. JENKINS,

General Agent for the Pacific Coast, Care of Brooklyn Hotel, Box 2372 Post Office, San Francisco, Cal.

New York Slate Roofing Co.,

GEORGE E. GLINES, Proprietor,

NO. 6 CEDAR STREET,

2v28-cow-bp-1f NEW YORK CITY.

SAN FRANCISCO

Pioneer Screen Works,

John W. Quick, Manufacturer,

203 FREMONT ST., (near Howard) SAN FRANCISCO.

Screen Punching of all kinds and quantities for

QUARTZ AND FLOUR MILLS, AT EASTERN RATES.

I would call special attention to my slot cut and slot punched screens, which are attracting much attention and giving universal satisfaction. I was the first manufacturer who introduced these Screens to the Millmen on this Coast. This is the only establishment on the Coast devoted entirely to the manufacture of Screens. Mill Owners using battery Screens extensively can contract for large supplies at favorable rates. Orders solicited and promptly attended to.

2v28-cow-ly

AGRICULTURAL ARTICLES.

THE "VICTOR" GANG PLOWS IS THE BEST.

Hule's Patent, with all improvements to '73, and with "JONES" Plow Bottoms, the "VICTOR" is the best GANG PLOW in the world. It is simple, strong and durable, and does its work effectually. Don't fail to see it before buying. Price, \$75. Sold only by TREADWELL & CO., San Francisco. Send for circulars. We have also a large stock of Single Plows, including the "JONES," COLLINS, Boston Clipper, Peoria, etc., etc. Cultivators, Harrows, Seed Sowers, Drills, etc., etc. Send for our new Illustrated Price List. TREADWELL & CO., San Francisco. 16v6-3m

MATTESON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over or under knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

MATTESON & WILLIAMSON, Stockton, Cal.

C. CREGO. S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockways, Jump-seat Buggies, Track and Road Bulkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey; Hefield & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:

O. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingles, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, San Francisco.

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS.

PIECE MILK-PANS.

STRAINER PAILS,

CREAM PAILS,

MILK PAILS,

ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St., SAN FRANCISCO.

SQUIRRELS.

For Game Traps, none are better than the

"Newhouse Traps,"

Nos. 1 and 1½ being the best sizes for Squirrels.

For sale by CONROY, O'CONNOR & CO.,

Nos. 167 and 169 Front street, San Francisco.

Horse Clipping—Price, \$6 per Horse.

Our friends and patrons are hereby notified that we are prepared with the Best HORSE CLIPPING MACHINE in the country to do and guarantee first-class work.

20v6-3m PRINCE & CHANTREY,

Norfolk Stables, Cor. Ellis and Mason, S. F.

NURSERY NOTICES.

ESTABLISHED 1853.

Stock for Nurserymen and Florists.

TERMS CASH.

Cherry Seedlings—Mazzard.....	\$12 per 1000
" "—Mahaleb.....	20 per 1000
Apple Seedlings.....	12 per 1000
Pear Seedlings.....	15 per 1000
Walnuts, English, 4 to 6 ft.....	15 per 100
" " California bl'k, 4 to 6 ft.....	15 per 100
Spanish Chestnuts, 6 to 12 in.....	15 per 100
Cork Elm, 4 to 6 ft.....	15 per 100
" " 6 to 8 ft.....	20 per 100
Blue Gums, or Eucalyptus, in variety..	\$3 to 10 per 100
Magnolia, Grandiflora, 3 to 5 in.....	3 per doz.
" " 6 to 12 in.....	6 per doz.
" " 12 to 18 in.....	12 per doz.
Golden Arborvitae.....	8 to 12 in..... 6 per doz.
" " 12 to 18 in.....	6 per doz.
Heath-leaved Arborvitae, 12 to 18 in.....	6 per doz.
Crataegus Arbutifolia, 12 to 18 in.....	2.50 per doz.
" " 2 to 4 ft.....	6.00 per doz.
Enonymus Reptans, Variegata.....	2.50 per doz.
" Pulchella.....	2.50 per doz.
" Argentea Marginata.....	3.00 per doz.
" Japonica.....	3.00 per doz.
" Aurea.....	3.00 per doz.
Swedish Juniper, 12 to 18 in.....	3.00 per doz.
Heath, Mediterranean "Hardy".....	2.50 per doz.

Will only sell in quantity specified at these prices. If less, 10 per cent. added; if more, 10 per ct. discount.

BERNARD S. FOX,
18v6-tf San Jose, Cal.

Fruit Trees! Fruit Trees!

AND WHERE TO PURCHASE THEM.

The Santa Clara Valley Agricultural Society has awarded:

Largest collection of Pears, first premium... B. S. Fox.
Best twelve varieties of Pears..... B. S. Fox.
Largest collection of Apples..... B. S. Fox.
Best twelve varieties of Apples..... B. S. Fox.
Best collection of Plums..... B. S. Fox.
Largest collection of Nuts..... B. S. Fox.
Best soft-shelled Almonds (Languedoc)..... B. S. Fox.

Forest Trees, Shade Trees, large and small, in quantity.
BERNARD S. FOX, San Jose, Cal.

Agent, Mr. THOS. MEHERIN, Battery street, San Francisco. oc18

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices. Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care. Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE
Address THOMAS MEHERIN,
516 Battery Street,
SAN FRANCISCO.
P. O. Box 722. 24v6-3m

FRUIT AND ORNAMENTAL TREES.

GLEN GARDENS,

ONE MILE EAST FROM SACRAMENTO.

My stock embraces all the most desirable varieties known, including several new Peaches, among which are the Beatrice, Louise, Early Rivers, Rivers' Early York, Stanwix Early York, Victoria, Prince of Wales, and several others, (all hybridized by S. Rivers of England) and fruited on my grounds this year for the first time in California.

The Louise and Beatrice are 15 and 20 days Earlier than the Hale's Early.

Being the first to import these new fruits, including many sorts not mentioned, purchasers may rely upon getting trees true to name. Also, the FREEMASON and SALWAY, the most valuable late peaches in cultivation.

Blackberry, Raspberry and Strawberry Plants; fresh Locust Seed—CHEAP FOR CASH.

E. F. AIKEN,
de27-1m Proprietor.

AUSTRALIAN GUM TREES.

250,000 on hand for this season, at rates to encourage forest culture. Also, 50,000 Cypress, in shipping order. Nursery on 12th street, one block north of Tubbs' Hotel, East Oakland, Cal. Or address, Box 80, Oakland.

BAILEY & CO., Proprietors.
Beautiful fresh Cypress Seed, \$3 per pound, sent by mail, warranted pure and of the finest quality.
25v6-3m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway, Oakland, Cal.

GREEN HOUSE PLANTS,
EVERGREEN TREES,
SHRUBS, ROSES, ETC.
100,000 MONTEREY
CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM TREES, including:—EUCALYPTUS GLOBULUS (Blue Gum)—extra fine street and shade trees. EUCALYPTUS VIMENALIS—both sorts very popular. ACACIAS in variety. Monterey Pines, Lawson's Cypress, etc., etc. Orders attended to. Address:

M. KING, Nurseryman,
25v6-3m OAKLAND, CAL.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;
ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

TREES FOR SALE.

The undersigned offer for sale at their Nurseries,

Near Niles Station, Central Pacific Railroad, Alameda county, Cal., a fine stock of STANDARD FRUIT TREES of the orchard varieties, best adapted for California. Our Trees are one and two years old, and all well grown and well rooted, and true to the label.

We invite Planters and Dealers to examine our stock before purchasing. Send for a Descriptive Catalogue and Price List. Trees can be sent by regular freight routes or by Express, as directed. Careful attention given to packing for shipment. Local Agents wanted, to whom a liberal commission will be paid. Address the undersigned, either at Centerville, Alameda Co., Cal., or at 418 California St. San Francisco, Cal.
18v6-4m SHINN & CO., Proprietors.

ALMOND TREES.

The subscriber has a large lot of young Almond Trees, one, two and three years old, in a thrifty condition, of the celebrated Languedoc variety, which will be disposed of at reasonable rates.

Orders may be sent to the undersigned, and the trees will be properly packed and delivered at Niles Station.

B. D. T. CLOUGH,

(By Express) Niles Station, Alameda Co., Cal.

P. O. Address, Centerville, Alameda Co., Cal.
14v6-1f

ALMOND TREES.

40,000 Brier's Languedoc Almond Trees,

One year old from the bud—CHEAP FOR CASH.

Liberal deductions to the trade and to those planting large numbers. The tree grows rapidly, bears young and constantly, blooms late, is hardy. The almond is large and sweet, with a soft shell.

Send your orders for these and all kinds of fruit and nut trees, to

W. W. BRIER,

24v6-2m Alvarado, Alameda Co., Cal.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER,
21v6-1y Petaluma, Sonoma Co., Cal.

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy BLACKBERRY SETS, for sale at LOWEST RATES. Orders may be addressed through DEWEY & Co., of the Rural Press, San Francisco; ROBT. WILLIAMSON, Capital Nurseries, Sacramento; or to me,

CALVERT T. BIRD,
25v6-3m San Jose, Cal.

Brooklyn Nursery,

13th AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cypress, (\$3 to \$15 per hundred), 10,000 Australian Blue Gums, and about 3,000 assorted Roses. Also a choice selection of the various kinds of ornamental shrubbery, etc. Special attention given to the laying out of landscape Gardens. Orders received at the Nursery, or at the office of J. P. SWEENEY & CO., Seedsmen, Nos. 409 and 411 Davis St., S. F.
24v6-3m JOHN CAREY, Proprietor.

FRUIT AND ORNAMENTAL TREES.

Small Fruits, Evergreens, Shrubs, Roses, Etc., Etc.

Dealers and Nurserymen supplied at Low Rates. Catalogues furnished on application.

JOHN ROCK,
15v6-1f San Jose, Cal.

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,

(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.

Nurseries on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.

Letters by Mail or express will reach us.

ja10

MILLER & SIEVERS.

PRYAL'S NURSERIES.

Fruit, Ornamental and Evergreen Trees, SHRUBS AND PLANTS,

Vegetable and Flower Seeds, Greenhouse and Bedding Plants, embracing all of the most desirable kinds, are now ready and for sale.

BLUEGUM & OTHER VARIETIES OF EUCALYPTUS.

Boxwood Plants for Garden Walks.

Roses of all the New and Old Varieties.

Correspond with me, and, if possible, come and see my trees, etc. All orders will receive prompt attention.

Address: A. D. PRYAL,

Oakland, Alameda Co., Cal.

DEPOT AND SEED STORE—Broadway, opposite the City Hall; Nursery and Greenhouse, 3 1/2 miles north of Oakland, and one mile from Oakland Horse Railroad depot at Temescal.

Botanical collectors in all parts of the world are requested to correspond. 25v6-1f

TREES, TREES, TREES —AND— PLANTS.

In any quantity from one tree to 10,000, both wholesale and retail, at lowest market rates. Fruits guaranteed true to name. I have many new varieties of fruit in my collection which are far superior to the old standard varieties. Among them is the celebrated Beatrice Peach, guaranteed true; this Peach is 20 days earlier than the Hale's Early, and in every respect a fine peach.

My stock of Shade Trees and Grape Vines is the largest in the State, and a fine assortment.

Send stamp for printed Catalogue, Price List and directions for planting and training, or come and see the stock, at the CAPITAL NURSERIES. Office and tree depot U street, between 15th and 16th streets, Sacramento, Cal.

ROBT. WILLIAMSON, Prop'r.

Special rates to Patrons of Husbandry. 24v6-3m

BAY NURSERY,

OAKLAND, CAL. (Established in 1832.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESAL AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Daphnes, Arancarius, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Eucalyptus Acacias, Peppers, Cypress, Pines, Junipers, Cedars of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tube Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine.
2v7-3m

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green house Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Reeds, and especially Cedrus Peodare, or Peavine Cedar Reeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubbs' Hotel.

Send for Catalogue. ja10

NEW IMPORTATION.

50 ALMOND TREES (soft shells, largest fruit.)

30 CHESTNUT TREES (grsfied, largest fruit.)

25 OLIVE TREES (largest fruit.)

60 HAZELNUT TREES (three kinds, the best.)

50 BLACK CURRANT TREES.

25 JUJUBE TREES.

25 PISTACHIO TREES.

25 CAPER TREES.

Choice plants, adapted to this climate, and warranted, will arrive in San Francisco by the Pacific Mail steamer, due January 24, 1874, and are from the best nursery in France. For sale by

E. GAUTHIER,

ja10-1t 258 Third St., S. F.

THOS. A. GAREY'S

Semi-Tropical Nurseries,
San Pedro street, two miles below the Court House,
LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit Trees in Southern California.

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

McLAREN, JAMES & CO.,

DEALERS, MANUFACTURERS AND INTRODUCERS OF NEW INVENTIONS

FOR THE PACIFIC COAST.

Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.

—AND—

Real Estate and General Business Agency.

NO. 605 CLAY STREET, SAN FRANCISCO, CAL.
ja10-bp-3m

Our SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California. My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnicke & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass, Red Clover, White Clover, Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,

Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the Interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk. My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who raise

Vegetable, Flower and Tree Seeds of all kinds.

Long experience, extensive practice, and the abundant production of this year's seed crop, enables us to offer a selection of Superior Seeds for California and Foreign Soils, and also places us in a position to maintain the lead in the market for Pure Seeds, and much cheaper than those sold by other seedsmen.

A large assortment of Imported DUTCH BULBS and GLASSES just arrived.

ALFALFA, CLOVER, TIMOTHY, KENTUCKY BLUE GRASS,

ORCHARD GRASS, and all other varieties.

FRUIT TREES, SHADE TREES, HARDY SHRUBS, and a general assortment of all kinds of VEGETABLE PLANTS.

NOTICE.—We will send, free of postage, on receipt of order, 25 varieties of garden seeds in small packages price, \$1.25; or the larger size packages—price, \$2.50.

Send for Catalogue and Price List.

SEVIN VINCENT & CO.,
607 Sansome st., San Francisco.

18v6-4m

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, at rates that, with proper cultivation on suitable land, will make them among the most profitable crops grown. For further particulars address

PACIFIC OIL AND LEAD WORKS,

3 and 5 Front street, San Francisco.

12v6-3m P. O. Box 1448.

WESTERN GROWN

SEEDS.

Save Time and Money. Buy direct of the GROWER.

Vegetable, Field and Flower, fresh and true to name.

Catalogue for 1874 sent FREE, by

GEO. S. HASKELL & CO., Seed Growers,

25v6-2m Rockford, Ill.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.

19v6-1f

WHITE LEGH

GRANGE DIRECTORY.

See page 36 for Department of P. of H. and List of New Granges.

California Subordinate Granges.

[This list contains the names of Masters and Secretaries, so far as reported to us, elected to serve during the year 1874. Secretaries and others will greatly oblige us by making needful corrections.]

ALAMEDA COUNTY.

CENTERVILLE GRANGE, Centerville, Alameda Co.: JAMES SHINN, Master; J. L. BEARD, Sec'y.
EDEN GRANGE, Hayward, Alameda Co.: THOS. HELLMAN, Master; WM. OWEN, Sec'y.
LIVERMORE GRANGE, Livermore Valley, Alameda Co.: DANIEL INMAN, Master; F. R. FASSETT, Sec'y.
TEMESCAL GRANGE, Oakland, Alameda Co.: E. S. CARR, Master; JOHN COLLINS, Sec'y.

BUTTE COUNTY.

CHICO GRANGE, Chico, Butte Co.: W. M. THORP, Master; J. W. SCOTT, Sec'y.
NORD GRANGE, P. O. Nord, Butte Co.: G. W. COLBY, Master; ALBERT CARMEN, Sec'y.

COLUSA COUNTY.

ANTELOPE GRANGE, Colusa, Colusa Co.: H. A. LOGAN, Master; A. T. WELTON, Sec'y.
CENTER GRANGE, P. O. Colusa, Colusa Co.: J. P. KIMBERL, Master; W. G. SAUNDERS, Sec'y.
COLUSA GRANGE, Colusa, Colusa Co.: W. K. ESTELL, Master; R. JONES, Sec'y.
FRKSHWATER GRANGE, P. O. Colusa, Colusa Co.: I. H. DUNHAM, Master; R. A. WILKEY, Sec'y.
GRAND ISLAND GRANGE, Sycamore P. O., Colusa Co.: J. J. HOOK, Master; J. C. GILKINS, Sec'y.
PLAZA GRANGE, Olinda, Colusa Co.: F. C. GRAVES, Master; W. F. GREEN, Sec'y.
PRINCETON GRANGE, Princeton, Colusa Co.: A. D. LOGAN, Master; H. JAMESON, Sec'y.
FUNK SLOUGH GRANGE, Colusa, Colusa Co.: E. C. HUNTER, Master; G. B. HARDEN, Sec'y.
SPRING VALLEY GRANGE, Spring Valley, Colusa Co.: D. H. ARNOLD, Master; L. T. HAYMAN, Sec'y.
UNION GRANGE, P. O. Princeton, Colusa Co.: M. DAVIS, Master; ISAAC L. MC DANIEL, Sec'y.
WILLOWS GRANGE, P. O. Princeton, Colusa Co.: J. W. ZUMWALT, Master; GEO. T. HICKLIN, Sec'y.

CONTRA COSTA COUNTY.

DANVILLE GRANGE, Danville, Contra Costa Co.: CHAS. WOOD, Master; J. S. SYLVESTER, Sec'y.
POINT OF TIMBER GRANGE, Antioch P. O., Contra Costa Co.: R. G. DEAN, Master; J. E. W. CAREY, Sec'y.
WALNUT CREEK GRANGE, Walnut Creek, Contra Costa Co.: NATHANIEL JONES, Master; WM. K. DALY, Sec'y.

EL DORADO COUNTY.

PILOT HILL GRANGE, Pilot Hill, El Dorado Co.: P. D. BROWN, Master; A. J. BAYLEY, Sec'y.

FRESNO COUNTY.

FRANKLIN GRANGE, Kingston, F. W. RUCK, Master; A. B. CROWELL, Sec'y.
FRESNO GRANGE, Fresno City, H. W. FASSETT, Master; F. DUNN, Sec'y.
GARRETSVILLE GRANGE, Kings River, W. J. HUTCHINSON, Master; W. W. PHILLIPS, Sec'y.
LAKE GRANGE, Kingston, M. S. BARCOCK, Master; J. E. J. BENEDICT, Sec'y.

HUMBOLDT COUNTY.

KIWELATTI GRANGE, Arcata, Humboldt Co.: LEWIS R. WOOD, Master; D. D. AYER, Sec'y.
TABLE BLUFF GRANGE, Table Bluff, Humboldt Co.: JACKSON SAWYER, Master; B. H. C. POLLARD, Sec'y.
FERNDALE GRANGE, Ferndale, Humboldt Co.: F. L. BOYTON, Master; T. O. ORMOND, Sec'y.
ELK RIVER GRANGE, Eureka, Humboldt Co.: THEODORE MEYER, Master; D. A. DEMERRITT, Sec'y.
ROHNERTVILLE GRANGE, Rohnertville, Humboldt Co.: B. T. JAMESON, Master; H. S. CASE, Secretary.

LAKE COUNTY.

GUENOC GRANGE, Guenoc, Lake Co.: H. A. OLIVER, Master; MRS. A. A. RITCHIE, Sec'y.
KELSEYVILLE GRANGE, Kelseyville, Lake Co.: D. P. SHATTUCK, Master; T. O. ORMOND, Sec'y.
LAKEPORT GRANGE, Lakeport, Lake Co.: C. CUTTER, Master; N. PHELAN, Sec'y.
LOWER LAKE GRANGE, Lower Lake, Lake Co.: A. E. NOEL, Master; HORACE STOW, Sec'y.
UPPER LAKE GRANGE, Upper Lake, Lake Co.: D. V. THOMPSON, Master; G. O. MCCARTY, Sec'y.

LOS ANGELES COUNTY.

ALLIANCE GRANGE, El Monte, Los Angeles Co.: S. S. REEVES, Master; J. W. MARSHALL, Sec'y.
LOS ANGELES GRANGE, Los Angeles Co.: T. A. GAREY, Master; T. D. HANCOCK, Sec'y.
AZUSA GRANGE, El Monte, Los Angeles Co.: W. W. MAXEY, Master; J. C. PRESTON, Sec'y.
COMPTON GRANGE, Compton, Los Angeles Co.: C. W. COLTRIN, Master; T. A. VALLEY, Sec'y.
EL MONTE GRANGE, Los Angeles Co.: G. C. GIBBS, Master; P. O., Los Angeles, J. H. GRAY, Sec'y.
ENTERPRISE GRANGE, Los Angeles, Los Angeles Co.: A. M. SOUTHWORTH, Master; W. H. HENDERSON, Sec'y.
EUREKA GRANGE, Spadra, Los Angeles Co.: T. O. TANNER, Master; JOSEPH WRIGHT, Sec'y.
FAIRVIEW GRANGE, Anaheim, Los Angeles Co.: EDWARD EVERETT, Master; J. D. TAYLOR, Sec'y.
FLORENCE GRANGE, Los Angeles, Los Angeles Co.: JOSEPH RUSSELL, Master; WILLIAM PORTER, Sec'y.
FRUIT LAND GRANGE, Tustin City, Los Angeles Co.: A. B. HAYWARD, Master; E. R. NICHOLS, Sec'y.
LOS NEITOS GRANGE, Los Angeles Co.: E. B. GRANDON, Master; P. O., Los Angeles, J. F. MARQUIS, Sec'y.
NEW RIVER GRANGE, Los Neitos P. O., Los Angeles Co.: R. B. GOTHRIE, Master; D. S. WARDLOW, Sec'y.
ORANGE GRANGE, Orange, Los Angeles Co.: JOSEPH BEACH, Master; W. P. ANDERSON, Sec'y.
SILVER GRANGE, Los Neitos, Los Angeles Co.: H. L. MONTGOMERY, Master; W. P. McDONALD, Sec'y.
WESTMINSTER GRANGE, Anaheim, P. O. M. B. CRAIG, Master; HENRY STEPHENS, Sec'y.

MARIN COUNTY.

NICASIO GRANGE, Nicasio, Marin Co.: H. T. TAFT, Master; J. W. NOBLE, Sec'y.
POINT ARENAS GRANGE, Point Arenas, Marin Co.: A. H. STENSON, Master; JOHN A. UPTON, Sec'y.
TOMALES GRANGE, Tomales, Marin Co.: WM. VANDEBILT, Master; R. H. PRINCE, Sec'y.

MENDOCINO COUNTY.

POTTER VALLEY GRANGE, Pomo, Mendocino Co.: J. MEWHINNEY, Master; T. MCCOWAN, Sec'y.
UKIAH GRANGE, Ukiah City, Mendocino Co.: W. D. WHITE, Master; A. O. CARPENTER, Sec'y.

MERCED COUNTY.

BADGER FLAT GRANGE, Kravenhagen's P. O., Merced Co.: W. GILROY, Master; W. PARLIN, Master; ALFRED F. MERRITT, Sec'y.
COTTONWOOD GRANGE, Hill's Ferry, Merced Co.: J. L. CRITTENDEN, Master; J. J. DOYLE, Sec'y.
HOPETON GRANGE, Hopeton, Merced Co.: JOHN RUDOLPH, Master; T. EAGLESON, Sec'y.
LOS BANOS GRANGE, Keyesden's P. O., Merced Co.: W. GILROY, Master; WM. VINEY, Master; H. C. WAINWRIGHT, Sec'y.
MERCEDES GRANGE, Merced Co.: W. E. ELLIOT, Master; F. T. NOBLE, Sec'y.
SNEILING GRANGE, Snelling, Merced Co.: DANIEL VEIZER, Master; W. L. HAMLIN, Sec'y.

MONTEREY COUNTY.

HOLLISTER GRANGE, Hollister, Monterey Co.: J. D. FOWLER, Master; S. F. COWAN, Sec'y.
SALINAS GRANGE, Salinas, Monterey Co.: N. L. ALLEN, Master; SAMUEL CASSIDY, Sec'y.
NAPA COUNTY.

CALISTOGA GRANGE, Calistoga, J. N. BENNETT, Master; L. HOPKINS, Sec'y.
NAPA GRANGE, Napa City, Napa Co.: W. H. BAXTER, Master; J. W. WALTER, Sec'y.
ST. HELENA GRANGE, St. Helena, Napa Co.: J. H. ALLISON, Master; J. L. EDWARDS, Sec'y.
YOUNTVILLE GRANGE, Yountville, Napa Co.: J. M. MAYFIELD, Master; FRANK GRIFFIN, Sec'y.
J. M. MAYFIELD.

SACRAMENTO COUNTY.

BRIGHTON GRANGE, Brighton, Sacramento Co.: J. M. BELL, Master; MAURICE TOMMY, Sec'y.
ELK GROVE GRANGE, Elk Grove, Sacramento Co.: OBADIAH S. FREEMAN, Master; DELOS GAGE, Sec'y.
FLORIN GRANGE, San Joaquin Township, Sacramento Co.: CALER ARNOLD, Master; WILLIAM SCHOFIELD, Sec'y.
SACRAMENTO GRANGE, No. 12, Sacramento, Sacramento Co.: W. S. MANLOVE, Master; A. S. GREENLAND, Sec'y.

SAN BERNARDINO COUNTY.

SAN BERNARDINO GRANGE, P. O., Riverside, San Bernardino Co.: E. G. BROWN, Master; J. F. GOULD, Sec'y.
SAN BERNARDINO.

SAN JOAQUIN COUNTY.

ATLANTA GRANGE, Morano, San Joaquin Co.: W. T. CAMPBELL, Master; PUTMAN VISHES, Sec'y.
CASTORIA GRANGE, Lathrop, San Joaquin Co.: SEWALL GOWER, Master; J. STRAHAN, Sec'y.
LINDEN GRANGE, Linden, San Joaquin Co.: JOHN WATLEY, Master; JAMES WATLEY, Sec'y.
LIBERTY GRANGE, Acampo, San Joaquin Co.: JUSTUS SCHOMP, Master; J. J. EMSTIE, Sec'y.
LODI GRANGE, Lodi, San Joaquin Co.: J. W. KEARNEY, Master; MRS. NELLIE GROUCH, Sec'y.
RUSTIC GRANGE, Lathrop, San Joaquin Co.: J. A. SHEPHERD, Master; HENRY MOORE, Sec'y.
STOCKTON GRANGE, Stockton, San Joaquin Co.: WM. L. OVERHURST, Master; W. M. PHELPS, Sec'y.
WEST SAN JOAQUIN GRANGE, Ellis, San Joaquin Co.: M. LAMBERS, Master; GEO. E. MCSTAY, Sec'y.
WILLOW GRANGE, Willowood School House, San Joaquin Co.: JOS. LEIGHTON, Master; A. B. MUNSON, Sec'y.
WOODBRIDGE GRANGE, Woodbridge, San Joaquin Co.: J. L. HUTTON, Master; A. S. THOMAS, Sec'y.

SAN LUIS OBISPO COUNTY.

ARROYO GRANDE GRANGE, Arroyo Grande, San Luis Obispo Co.: W. H. NELSON, Master; D. F. NEWSON, Sec'y.
CARMITA GRANGE, Cambrisa, San Luis Obispo Co.: C. H. IRVING, Master; Herbert Olmstead, Sec'y.
MORO CITY GRANGE, Moro, San Luis Obispo Co.: A. J. MOTHERHEAD, Master; H. V. STANLEY, Sec'y.
OLD CREEK GRANGE, Old Creek, San Luis Obispo Co.: ISAAC FLOOD, Master; R. M. PRESTON, Sec'y.
SAN LUIS OBISPO GRANGE, San Luis Obispo, San Luis Obispo Co.: WM. JACKSON, Master; E. L. REED, Sec'y.

SAN MATEO COUNTY.

PESADERO GRANGE, Pescadero, San Mateo Co.: B. V. WEEKS, Master; H. B. SPRAGUE, Sec'y.

SANTA BARBARA COUNTY.

CARPENTERIA GRANGE, Carpinteria, Santa Barbara Co.: O. N. CADWELL, Master; C. E. TIERHARD, Sec'y.
CONFIDENCE GRANGE, Guadalupe, Santa Barbara Co.: A. COPELAND, Master; J. T. AUSTIN, Sec'y.
SANTA BARBARA GRANGE, Santa Barbara, S. B. Co.: O. L. ARBUTT, Master; O. KENNEY, Sec'y.
SANTA MARIA GRANGE, Santa Barbara Co.: P. O., Sney Station, San Luis Obispo Co.: JOEL MILLER, Master; M. D. MILLER, Sec'y.

SAN BERNARDINO COUNTY.

RIVERSIDE GRANGE, Riverside, P. O. E. G. BROWN, Master; W. W. Kimball, Sec'y.

SANTA CLARA COUNTY.

SAN JOSE GRANGE, No. 10, San Jose, Santa Clara Co.: G. W. HENNING, Master; MISS JETTIE WATKINS, Sec'y.
SANTA CLARA GRANGE, Santa Clara P. O., Santa Clara Co.: H. M. LEONARD, Master; I. A. WILCOX, Sec'y.
SARATOGA GRANGE, Saratoga, Santa Clara Co.: FRANCIS DRESHER, Master; MISS JERRY FARWELL, Sec'y.

SANTA CRUZ COUNTY.

GEORGIANA GRANGE, Georgiana, Solano Co.: E. M. KITTRELL, Master; GEO. A. KNOTT, Sec'y.
PAJARO GRANGE, P. O., Watsonville, Santa Cruz Co.: D. M. CLOUGH, Master; G. W. ROADHOUSE, Sec'y.
SANTA CRUZ GRANGE, Santa Cruz, Santa Cruz Co.: J. W. MORGAN, Sec'y.
WATSONVILLE GRANGE, Watsonville, J. McALLAN, Master; A. F. RICHARDSON, Sec'y.

SOLANO COUNTY.

DENVERTON GRANGE, Denverton, Solano Co.: J. B. CARINGTON, Master; C. ARNOLD, Sec'y.
DIXON GRANGE, Dixon, Solano Co.: J. C. MERRYFIELD, Master; JAMES A. ELLIS, Sec'y.
ELMIRA GRANGE, Vacca Station, Solano Co.: J. A. CLARK, Master; M. D. COOPER, Sec'y.
ROCKVILLE GRANGE, Rockville, Solano Co.: W. A. LATTY, Master; J. R. MORRIS, Sec'y.
SUISUN VALLEY GRANGE, Suisun, Solano Co.: R. C. HALL, Master; A. T. HATCH, Sec'y.
VACAVILLE GRANGE, Vacaville, Solano Co.: E. R. TREBURN, Master; OSAR CORBIN, Sec'y.
VALLEJO GRANGE, Vallejo, Solano Co.: G. C. PEARSON, Master; CHAS. B. DEMING, Sec'y.

SONOMA COUNTY.

BENNETT VALLEY GRANGE, Santa Rosa, Sonoma Co.: J. DE TREK, Master; J. H. PLANK, Sec'y.
BLOOMFIELD GRANGE, Santa Rosa, Sonoma Co.: WM. H. WHITE, Master; D. DRNER, Sec'y.
BODEGA GRANGE, Bodega, Sonoma Co.: J. H. HEOLER, Master; W. SMITH, Sec'y.
CLOVERDALE GRANGE, Cloverdale, Sonoma Co.: OMAS H. COOLEY, Master; J. B. COOLEY, Sec'y.
GEYSERVILLE GRANGE, Geyserville, Sonoma Co.: CALVIN M. FOSWORTH, Master; R. R. LEIGH, Sec'y.
HEALDSBURG GRANGE, Healdsburg, Sonoma Co.: CHARLES ALEXANDER, Master; MRS. S. A. PECK, Sec'y.
PETALUMA GRANGE, Petaluma, Sonoma Co.: L. W. WALKER, Master; D. G. HEALD, Sec'y.
SANTA ROSA GRANGE, Santa Rosa, Sonoma Co.: GEO. W. DAVIS, Master; J. A. OBBEN, Sec'y.
SONOMA GRANGE, Sonoma Co.: P. O., Sonoma, Sonoma Co.: WM. MCP. HILL, Master; W. A. BERRY, Sec'y.
SEABOARD GRANGE, Seaboard, Sonoma Co.: M. C. HICKS, Master; JOSEPH PURINGTON, Sec'y.
TWO ROCK GRANGE, Two Rock, Sonoma Co.: JOHN R. DODS, Master; JOHN H. FREEMAN, Sec'y.
WINDSOR GRANGE, Windsor, Sonoma Co.: A. B. NATE, Master; J. M. MCCLAND, Sec'y.

STANISLAUS COUNTY.

BONITA GRANGE, Crow's Landing, Stanislaus Co.: J. W. TREADWELL, Master; A. B. GAGE, Sec'y.
CERES GRANGE, Westport Precinct, Stanislaus Co.: W. B. HARP, Master; C. N. WHITMORE, Sec'y.
GRAYSON GRANGE, Grayson, Stanislaus Co.: I. G. Gardner, Master; MISS H. J. PHELPS, Sec'y.
ORISTIMA GRANGE, Hill's Ferry, Stanislaus Co.: W. J. MILLER, Master; THOS. A. CHAMMAN, Sec'y.
SALIDA GRANGE, No. 8, Modesto P. O., Stanislaus Co.: R. F. PARKES, Master; A. H. ELMORE, Sec'y.
STANISLAUS GRANGE, Modesto, Stanislaus Co.: J. D. SPENCER, Master; VITAL E. BANOS, Sec'y.
TULE RIVER GRANGE, Tule River, Stanislaus Co.: A. S. FULKERTH, Master; JOHN HENDERSON, Sec'y.
WATERFORD GRANGE, Waterford, Stanislaus Co.: R. R. WARDER, Master; W. O. COLLINS, Sec'y.

SUTTER COUNTY.

SUTTER GRANGE, Sutter, Sutter Co.: W. C. SMITH, Master; M. C. HUNTERFORD, Sec'y.
YUBA CITY GRANGE, Yuba City, Sutter Co.: T. B. HULL, Master; S. R. CHANDLER, Sec'y.

TEHAMA COUNTY.

RED BLUFF GRANGE, Red Bluff, R. H. BLOSSOM, Master; JOHN CURTIS, Sec'y.

TULARE COUNTY.

DEEP CREEK GRANGE, Farmersville, W. G. PENNEBAKER, Master; F. G. JEFFERDS, Sec'y.
TULE RIVER GRANGE, Porterville, Tulare Co.: G. A. WILLIAMSON, Master; N. T. BLATT, Sec'y.

VENTURA COUNTY.

SATICOY GRANGE, P. O., San Buenaventura, Ventura Co.: MILTON WASSON, Master; E. A. DUVAL, Sec'y.

YOLO COUNTY.

ANTELOPE GRANGE, W. J. CLARK, Master; C. L. N. VARGEN, Sec'y.
BUCKEYE GRANGE, Yolo Co.: P. O., Buckeye, Yolo Co.: WM. SIMS, Master; J. G. ALLEN, Sec'y.
CACHE CREEK GRANGE, Cache Creek, Yolo Co.: D. B. HURLBURT, Master; L. D. STEPHENS, Sec'y.
CAPA VALLEY GRANGE, Capa, Yolo Co.: R. R. DABRY, Master; P. M. SAVAGE, Sec'y.
DAVISVILLE GRANGE, Davisville, Yolo Co.: CHAS. E. GREEN, Master; JOHN KIMBERLY, Sec'y.
HUNGRY HOLLOW GRANGE, P. O., Yolo Co.: G. L. PARKER, Master; C. O. PEKINS, Sec'y.
WEST GRAFTON GRANGE, Yolo Co.: A. W. MORRIS, Master; GEO. W. PARKS, Sec'y.
YULO GRANGE, Yolo Co.: W. M. JACKSON, Master; D. SCHINDLER, Sec'y.

Deputies who organize new Granges are requested to send the list of officers, and the names of all charter members, with other facts of interest, for free publication in the RURAL PRESS, as early as possible.

THE NATIONAL GRANGE.

OFFICERS:

Master—DUDLEY W. ADAMS, Waukon, Iowa.
Overseer—THOMAS TAYLOR, Columbia, South Carolina.
Lecturer—T. A. THOMPSON, Plainview, Wabash Co., Minn.
Steward—A. J. VAUGHAN, Early Grove, Marshall Co., Miss.
Assistant Steward—O. W. THOMPSON, New Brunswick, N. J.
Chaplain—REV. A. B. GROSS, Washington, D. C.
Treasurer—F. M. McDOWELL, Carling, N. Y.
Secretary—O. H. KELLEY, Washington, D. C.
Gatekeeper—O. DINWIDDIE, Orchard Grove, Lake Co., Ind.
Farmers—Mrs. D. W. ADAMS, Waukon, Iowa.
Pomona—Mrs. O. H. KELLEY, Washington, D. C.
Flora—Mrs. J. CABBOTT, Clarksville, Butler Co., Iowa.
Lily Assistant Steward—Miss C. A. HALL, Washington, D. C.

Executive Committee:

WILLIAM SAUNDERS, Washington, D. C.
D. C. WYATT AIKEN, Coke-hury, Abbeville Co., S. C.
E. R. SHANKLAND, Dubuque, Iowa.

CALIFORNIA STATE GRANGE.

OFFICERS:

Master—J. M. HAMILTON, Guenoc, Lake Co.
Overseer—O. L. ABBOTT, Santa Rosa, Cal.
Lecturer—J. W. A. WRIGHT, Borden, Fresno Co.
Steward—N. L. ALLEN, Salinas, Monterey Co.
Assistant Steward—W. M. JACKSON, Woodland, Yolo Co.
Chaplain—I. G. GARDNER, Grayson, Stanislaus Co.
Treasurer—W. A. FISHER, Napa City, Napa Co.
Secretary—W. H. BAXTER, 320 California street, S. F.
Gatekeeper—R. R. WARDER, Waterford, Stanislaus Co.
Farmers—Mrs. G. W. DAVIS, Santa Rosa, Sonoma Co.
Pomona—Mrs. S. C. BAXTER, Napa City, Napa Co.
Flora—Mrs. S. H. HIGGINS, Bodega, Sonoma Co.
Lily Assistant Steward—Mrs. S. M. GARDNER, Grayson, Stanislaus Co.

Executive Committee:

J. M. HAMILTON, W. M., Chairman, of Guenoc, Lake Co.
I. G. GARDNER, Grayson, Stanislaus Co.
J. C. MEKRYFIELD, Dixon, Solano Co.
H. B. JOLLY, Merced, Merced Co.
THOS. A. GAREY, Los Angeles, Los Angeles Co.
G. W. COLBY, Nord, Butte Co.
A. B. NALLY, Windsor, Sonoma Co.

State Agency:

Room 9, No. 320 California street, San Francisco.—G. P. KELLOGG, General Agent.

List of Deputies.

COUNTY.	DEPUTY.	POST OFFICE.
Alameda.	A. T. Dewey.	Oakland or San Fco.
Butte.	Wm. M. Thorp.	Chico.
Colusa.	J. J. Hickok.	Grand Island.
Contra Costa.	R. G. Dean.	Antioch.
San Francisco.	John Heigler.	General Deputy.
Merced.	J. M. Hamilton.	Guenoc.
Monterey.	H. B. Jolly.	Merced City.
Napa is supplied.	J. D. Fowler.	Hollister.
Sacramento.	By worthy Secretary, W. H. Baxter.	
San Joaquin.	W. S. Manlove.	Sacramento.
San Luis Obispo.	E. S. Weeks.	San Luis Obispo.
San Mateo.	A. J. Motherhead.	Moro.
Santa Clara.	B. V. Weeks.	Pescadero.
Solano.	W. G. Henning.	San Jose.
Sonoma.	J. A. Clark.	Santa Station.
Stanislaus.	G. W. Harris.	Santa Rosa.
Yolo.	J. D. Spencer.	Modesto.
Los Angeles.	Wm. M. Jackson.	Woodland.
Santa Barbara.	Thos. A. Garey.	Los Angeles.
	C. L. Abbott.	Santa Barbara.
	Milton Wasson.	San Buenaventura.

Farmers desiring to organize Granges, can apply to J. M. Hamilton, (W. Master), Guenoc, Lake Co.; W. H. Baxter, (W. Sec'y), 320 California St., S. F.; J. W. A. Wright, (W. Lecturer), Borden, Fresno Co.; or to the nearest Deputy to their locality. Thos. H. Merry, (W. Ex-Lecturer) of Healdsburg, is also deputized to organize Granges.

Constitutions and By-laws.

Blank Subordinate Grange Constitutions and By-Laws (form recommended officially by Cal. Ex. Committee) with the National and California State Grange Constitution, By-Laws and Rules of Order, in neat pamphlet form, sent postpaid, at 5 cts. per copy. By express at \$4 per 100, coin.

For Subordinate Granges

Special By-Laws for Subordinate Granges printed to order and substituted in place of the blank form above mentioned, at reasonable cost at the office of the PACIFIC RURAL PRESS.

DEWEY & CO., Publishers,
Jan. 1874. No. 338 Montgomery at, S. F.

ARTICLES FOR GRANGES.

Gent's regalia, sash and pouch (first quality).....	\$ 85
Lady's regalia, sash and apron.....	1 00
Application for membership, per 100.....	1 00
Withdrawal Cards, per 100.....	1 00
Receipt Books for Secretaries.....	50
Receipt Books for Treasurers.....	50
Blank Order Books for Officers' Regalia (10).....	50
Full sets of Jewels for Officers' Regalia (10).....	10 00
Full sets of working tools, in muslin case (7).....	1 00
Spud, pruning hook and shepherd's crook (unmounted).....	7 00
Seals, with monogram P. of H. in center.....	6 00

Furnished by W. H. BAXTER, State Secretary, No. 320 California Street, San Francisco.

The Mining & Scientific Press

Started in 1860, is one of the oldest weekly journals now published in San Francisco. It has been conducted by its present proprietors for ten years, during which period it has been repeatedly enlarged and constantly improved. The active and steadfast efforts of its publishers have secured for it a large and increasing circulation, greater than any other publishers have accumulated on this coast, of a weekly journal.

The sum paid by us for the best editorial talent obtainable for our special class journal; for engravings, for interesting news and correspondence, and for printing a large-sized, handsome sheet, is unequalled by that of any other American weekly west of the Mississippi. As a PRACTICAL MINING JOURNAL it has no rival on this Continent.

It is the only MECHANICAL, and the only SCIENTIFIC journal of the Pacific States.

Every Miner, Assayer, Millman, and Metallurgist in the United States should take it.

Every Pacific Coast Mechanic, Engineer, Inventor, Manufacturer, Professional Man, and Progressive and Industrial Student should patronize its columns.

Every Mining Engineer, Superintendent, Metallurgist, Mine Owner and Mine Worker in the world should profit by its illustrations and descriptions of New Machinery, Processes, Discoveries and Record of Mining Events.

Every Intelligent thinker in the land, in high or humble situation, who would avoid literary trash for genuine information, should SUBSCRIBE AT ONCE.

DEWEY & CO.,

No. 338 Montgomery street, S. F.

HINTS FOR

We will send on receipt of stamp for postage, FREE, our 52-page Circulars containing 112 Illustrated Mechanical Movements; a digest of PATENT LAWS; information how to obtain patents, and about the rights and privileges of inventors and patentees; list of Government fees, practical hints, etc., etc. Address DEWEY & CO., Publishers and Patent Agents, San Francisco.

Fourth Year of the Pacific Rural Press.

The publishers of this journal design making its weekly issues during its fourth year (1874) still more acceptable and valuable than those of the past.

A Farmer's Paper Always.

The RURAL PRESS—established Jan. 1870, has been thoroughly a farmer's paper—"first, last, and always." Its success in popularity and rapidly increasing circulation has exceeded that of any other weekly on the coast.

Neither Politics or Creeds.

We refer with satisfaction to the independent, chaste and useful character of our reading matter and the absence from our columns of questionable and demoralizing advertisements.

We shall strive to make it an ever welcome visitor to those who desire to constantly

Improve the Heart and Mind.

And shall give a larger space to our HOME CIRCLE department, which from the first has been a popular feature of the JOURNAL.

Our aim is to gather information from all reliable sources, in the varied forms in which it is to be obtained. Our work is to divert our glances from all superfluities; condense such information as is of most importance to our special class of readers—give it to them in the plainest and fewest words possible—saving their time by our labor.

Our Leading Departments

Will be continued under the following heads:
The Home Circle, The Horses



Volume VII.]

SAN FRANCISCO, SATURDAY, JANUARY, 24, 1874.

[Number 4.

A Floral Koh-i-Noor.

EDITORS RURAL PRESS:—The fact that the avowed mission of your excellent rather utilitarian than æsthetic, will vent you from taking an interest in a short description of a marvellous rose-tree at Santa Rosa. I saw it on a calm bright Sunday morning—and it was preacher, sermon, altar, all in one. Making it the text for a little talk to a children's gathering, I could but faintly shadow forth the lessons of truth and love suggested by that "sweet-scented picture" painted by the Divine Artist.

"Your voiceless lips, O flowers! are living preachers,
Each cup a pulpit, every leaf a book,
Supplying to my fancy numerous teachers
From loneliest nook.

In the sweet-scented pictures, heavenly artist!
With which thou paintest Nature's wide-spread hall,
What a delightful lesson thou impartest
Of love to all.

Not useless are ye, flowers! though made for pleasure
Blooming o'er field and wave, by day and night,
From every source your sanction bids me treasure
Harmless delight."

This rose adorns the cottage of my friend S. A. Rendall, the photographer of Santa Rosa. It was planted in 1858, and is of the Lamarque variety, the most beautiful of the white roses. But how describe that which is essentially indescribable? Imagine an immense bouquet of white roses, twenty-five feet high, twenty-two feet across, beautifully rounded, with a blossoming surface of four hundred square feet, with four thousand and full-blown roses and twenty thousand buds!

There is the truthful statement, but not the picture—my pen cannot describe it. I could as easily write a poem of the first order. The stem, near the ground, measures twenty-four inches in circumference; just above the ground it separates into three principal stems that grow over twelve feet to the cottage-eaves without lateral branches. These main stems pass between the eaves and a strong support attached to the house. Enough!—my pen is impatient of these dry details, and would leap into poetry—if it could. I have seen many of the finest paintings and statues of the great masters; I have seen the tropical flora in all its gorgeousness; but this rose-tree was the most beautiful work of Nature (with a little aid from man) my eyes ever beheld. Santa Rosa! appropriately and sweetly named! It is at this season a city of roses. They bloom in almost every yard, and shed their sweet perfume all around. Flowers are a luxury enjoyed by the poor as well as the rich. They cost nothing but a little labor, and that labor a delight to every healthy mind. That wonderful rose over friend Rendall's cottage door and roof, as a ministrant of the beautiful, is of more value than any painting to be found in the halls of our money-kings—yet it has never cost the price of a bad cigar. With our climate and

soil, our California homes should be the pleasantest on earth, and nothing but laziness or lack of taste will prevent them from being so. Mr. Rendall has photographed this Koh-i-noor of the roses. It makes a beautiful pic-

men of rosebush had been as full of roses throughout as in the thickest portion represented; but when the photograph was taken, portions of the bush had been reft of many of them, and therefore are not represented.—En.

State Fair Election of Officers.

We would like to learn whether the late annual meeting of the State Agricultural Society for the election of officers was either advertised in the agricultural papers of the State or any kind of notice or information given to the farmers, of the day on which the meeting was to have been held. The constitution of the society doubtless appoints the day and place of meeting, but farmers are not expected to always carry a constitution in their pockets, or have the subject of the annual meeting constantly on their minds; but they do expect to be notified of the coming event and through the proper channels, their agricultural papers, and duty or common courtesy at least, should have prompted the proper officer of the Board to have given timely notice.

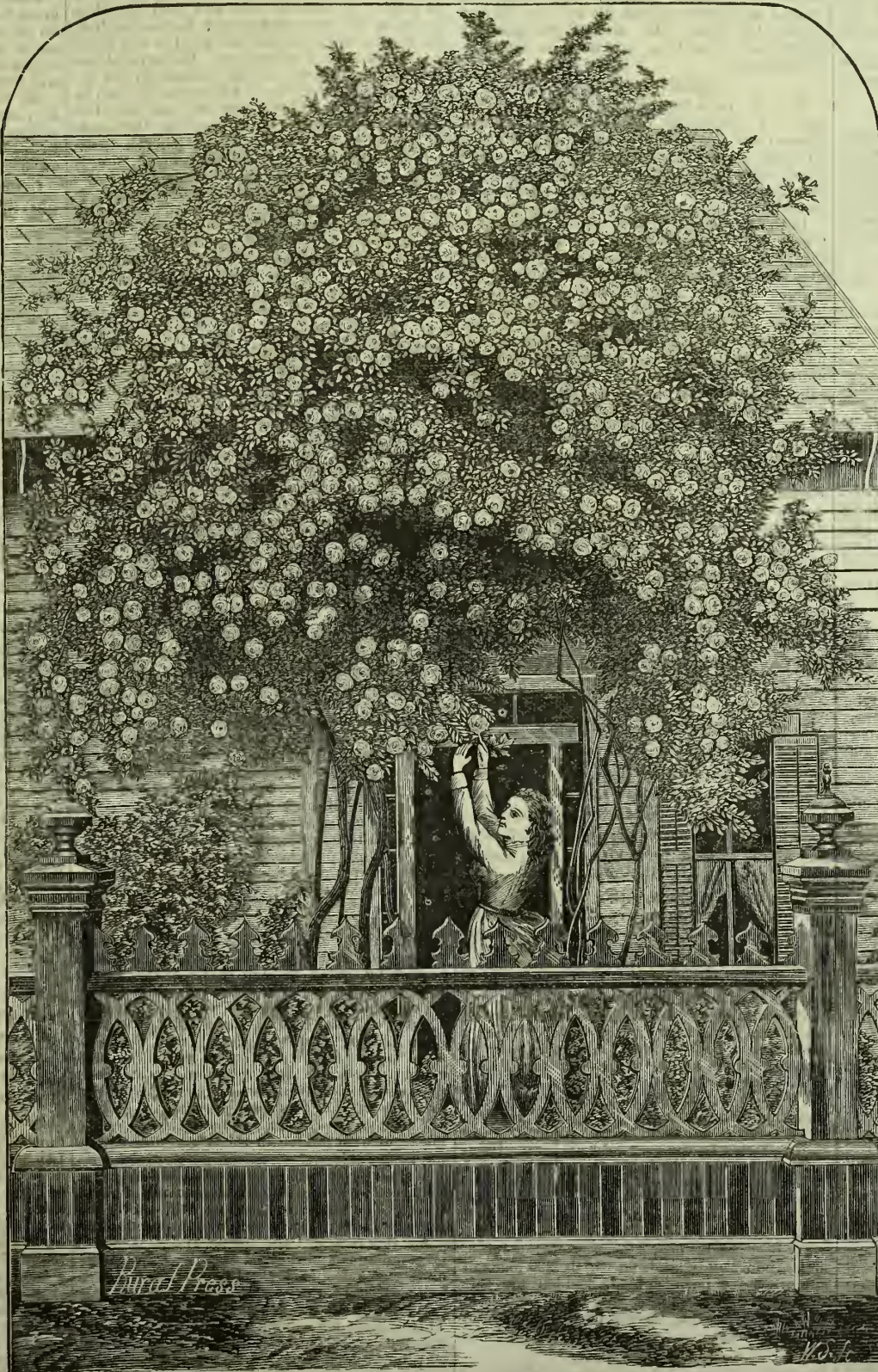
Our State Agricultural Society is too rapidly becoming a one-sided concern. Instead of being conducted in the real interests of agriculture, disseminating facts and information on the subject of fruit, plant, vegetable and grain growth, the best modes of rearing and feeding farm animals and the improvement of our dairy products, the main force of mind of the directors seems to be the promotion of the horse racing, gambling department of the institution, over every other interest.

We learn that a sum equal to about \$22,000 is to be expended in the erection of a "grand stand," for the convenience of those who would be witnesses to the annual trials of speed between fast horses; while nothing is proposed to add to the interest of the exhibition of farm products at the pavilion of the society.

The people of the State, so remote from Sacramento as to make it impossible for them to attend the annual fair, must all contribute their share to keep up this horse racing, pool selling, gambling concern, whether they object or not; they are at the mercy of the directors of the Society, and hold their peace, but for how long, we shall see, unless some improvement in management be made.

HOW AND WHEN TO DRY COWS.—It would seem as though there could be no difference on this subject, when the great trouble generally is with our cows and our way of feeding them, that they will dry up anyway for the greater number, long before we really want them to. But there are some excellent cows in California and well kept, which continue to give milk nearly the entire year. It is better for these however, to be

dried off carefully by drawing off all the thick milk every three or four days. Not to do this would be to endanger the udder and perhaps cause the loss of the use of one or more teats. The time for doing it should be from a month to six weeks before the cow comes in. H. will find his answer in the above.



A FLORAL KOH-I-NOOR.

ture, but when I look at it I sigh to think how poorly the best productions of human art can compete with nature.

O. P. FITZGERALD.

Santa Rosa, June 4th, 1873.

We would remark, that this splendid speci-

THE Florida pecan nut is a profitable one for cultivation. For instance, ten acres could well sustain 210 trees, which would yield the seventh year about 300 bushels, making over \$2,000 from ten acres. That is nearly equal to an orange grove.

CORRESPONDENCE.

Notes of Travel.

No. 1—FOR THE PRESS—By C. M. D.

Stockton and Vicinity.

Stockton, January 7th, 1874.

Stockton, the county-seat of San Joaquin county, stands at the head of slough navigation with a population of about 13,000.

Here is a valley, at once the most fruitful, productive and extensive in California. In fact, it is a sea of land. We took a ride about seventeen miles in the country, and found the farmers all busy plowing and sowing their productive soil, which responds abundantly to the hands of industry.

The county is highly favored with four beautiful rivers, the Merced, Calaveras, Mokelumne and the San Joaquin. Farmers, merchants and manufacturers are all unceasing in their operations, preparing for the coming prosperity, which they view with an anxious eye in the no distant future. We hope and trust their hopes may not be blighted, and that they will reap in abundance the golden harvest for which they are now making such extensive preparations.

In the following we shall speak of some of the manufacturing and agricultural industries of the city.

Shipments from Stockton from 1862 to 1873.

	Bushels.	Value.
1867.....	864,266	\$1,143,879
1868.....	1,384,833	1,162,924
1869.....	1,829,733	1,674,221
1870.....	1,569,200	1,047,660
1871.....	1,114,650	1,283,360
1872.....	3,410,333	3,000,000
1873.....	1,674,800	2,008,960

Receipts of Wheat in 1873.

By teams and steamers, 64,360 tons. By railroad, 10,950 tons. Total, 75,310 tons.

Shipped during six months ending Jan. 1st, 1874, 50,244 tons. Leaving in store in Stockton, 25,066 tons.

Wool Shipments.

The principal firm engaged in wool shipments is Owens & Moore, who shipped 463,400 pounds. Mr. De Blainville shipped 110,000 pounds, and about 50,000 pounds were shipped in small lots. Total value, \$102,578.

Poultry and Eggs.

	Value.
83,000 dozen Eggs.....	\$32,800
7,100 dozen Chickens.....	36,050
500 dozen Ducks.....	4,500
2,800 dozen Geese.....	2,800
17,000 dozen Turkeys.....	25,500

Total value.....\$104,650

Manufactures of Grain and Flour.

Stockton City Mill, Sperry, Burkett & Co. proprietors: Wheat, ground, 7,560 tons, worth \$302,400; flour, 57,680 barrels, worth \$374,920; graham flour, 360 barrels, \$1,960; cracked wheat, 18 tons, \$1,080; corn meal, 630 barrels, \$2,992.50; ground, 1,640 tons; of barley, corn and screenings, 52 tons, \$480; paid for labor, \$19,000; cleaned 1,150 tons wheat for seed and market.

Lane's Mill,

R. B. Lane, proprietor: Wheat used, 2,400 tons, worth \$94,400; flour, 16,000 barrels, \$96,000; meal, 372 barrels, \$1,870; barley, 1,482,391 pounds, \$22,000. Total business, \$214,270.

Foundries.

Stockton Iron Works, situated on California street, between Weber avenue and Main streets, Farrington, Hyatt & Co. proprietors. Average number of men employed, 14; wages paid, \$15,000; value of material used, \$12,000—castings and machinery for 35 headers and miscellaneous.

Globe Iron Works,

Corner of Main and Commerce streets: Average number of men employed, 22; amount of wages paid, \$19,520. Total business of the year, \$49,500.

Stockton Paper Mill,

R. B. Lane proprietor: Capacity, 3,600 pounds per day of good news paper. Cost of machinery, \$70,000.

Woolen Mills.

The Stockton Woolen Mills were erected in 1870, and commenced operations the same year. The proprietors, Messrs. Lambert, Doughty & Tatterson, originally invested about \$30,000 in the enterprise, and during 1871, with one set of machinery, 6,000 pairs of blankets were manufactured, of a superior quality. The product of the mill is on an average 1,700 yards of flannel, and 162 pairs of blankets. The pay-roll averaged about \$800 per month. At present 15 men are employed in the establishment.

Tanneries.

There are three tanneries in operation in Stockton, the Pacific, Wagner & Harrison's, and Kartschoke. The Pacific, Kulman & Wagner proprietors, produced \$30,000 sides of leather, valued at \$150,000, and 75 dozen of uppers.

Wagner & Harrison tanned 280 hides per week, and the total value of the year's manufacture is given at \$72,800.

Kartschoke manufactured leather to the amount of about \$24,000 in value.

The value of the chicory manufactured in this city in 1872 was \$1,500. The total value of the product of this establishment in 1873 cannot fall short of \$7,000.

Agricultural Warehouses.

H. C. Shaw, 201—203 El Dorado St., Stockton, is the oldest firm in this line of business in the city.

Sign of Webster Brothers Manufactory, Market, between Center and El Dorado. This firm has now had an existence of 24 years, and in nearly the same location. Its business for 1873 was \$120,000. Classification of sales: 50 headers; 5 threshing machines; 5 horse-powers; 10 horse, Fox & Derrick; 30 mowing machines; 50 chisel cultivators; 150 gang plows, 2 to 7 in gang; 200 Studebaker wagons; 50 express; 50 Gem seed mowers; 30 Sweep-stake sulky gangs, and a large assortment of small farming implements. Mr. Shaw is also agent for the Buckeye mower, Fairbanks' scales, Vibrator threshers and Studebaker wagons.

The firm of Jones & Hewlitt deals exclusively in agricultural implements and everything usually kept in a first-class establishment of that kind.

Wine Manufactory.

George West & Co. are extensive manufacturers of native wines, consisting of Port and sherry of excellent quality. He employs a capital of \$20,000, and on an average, 12 men during the year. His annual products are 20,000 gallons, and he has now on hand 37,000 gallons.

Windmill Manufactory.

John S. Davis is engaged in the manufacture of windmills, called the Gainfirst Bossett mill. Also the Champion hay press, with his improved windlass latch, the cost of which varies from \$245 to \$265. Last year he manufactured 183 and employs three men steadily.

In the foregoing we have given you a list of the principal manufactories relating to agriculture; but they are by no means all of which Stockton can boast. There are besides many wagon, tinware, harness, and other minor manufactories for which we have not space at present, but will mention another time. Stockton has a bright, future prospect before it. It has now two railroads in operation, and two more in contemplation—the Stockton and Visalia and Stockton and Ione—narrow gauge. The latter runs through the richest coal region in the State. A street railroad is already in course of construction, the cars for which are manufactured. It will run from the Stockton and Copperopolis railroad depot to the Central Pacific.

The PACIFIC RURAL PRESS is read by hundreds in this city and county, and all its patrons pronounce it the most sensible, reliable paper that comes across their threshold. Its friends are numerous, its readers are many; and while the RURAL PRESS is hailed with pleasure, mechanics and scientific men do not forget the MINING AND SCIENTIFIC PRESS.

Roots, Pumpkins, Brown Bread, and Things in General.

EDITORS PRESS:—I do not believe in conceding to prejudice even the value of a turnip. I remembered quite well that friend Olden had taken exception to turnips and potatoes, and had not mentioned beets. It does not affect the question of the comparative value of roots and alfalfa as food for beasts. Liebig classes beets, turnips and potatoes all three together. I finish this paragraph with a quotation from his work on the "Chemistry of Agriculture and Physiology," that Mr. O. may not judge me ambitious of obtaining the woman's victory of "last word." Possibly the extract may induce him to cast aside his prejudice. Why I wrote of beets was, that I am the happy possessor of those desirable five acres devoted to that crop, which the RURAL so justly mentioned as a desideratum to every farmer, and I prefer to speak that I do know, and testify that I have seen. I object to turnips, not from prejudice, but from having tried them, and found them wanting. White turnips are apt to mildew, and Swedes in addition to the mildewing are badly affected by the grey cabbage louse. However, as far as regards feeding properties, I believe the turnip excels the mangold wurzel. "One thousand parts of beet, turnips, or potatoes, yield by incineration, 90 parts of ashes." (Liebig, C. of A. & P. p. 154.)

My beet patch, near 4½ acres of low lying, moist, poor sandy land, on which 200 loads of manure have been spread, yielded me this season some 200 tons of beets, mangold wurzels. Not every farmer has suitable land for a root crop.

What All can Raise,

However, is a crop of pumpkins. Choose a friable piece of land; plough deep, (10 inches) early in April; plough again, shallow, in mid-April, and sow in hills four yards apart each way; thin to three vines in a hill, and keep down weeds by running a harrow, followed by a drag between the rows, while the weeds are in their first two leaves, hand-hoeing close to the young plants. The harrow loosens the roots of the weeds and the drag buries them,

roots and branches. Choose a hot day for this operation. On four acres I have raised this year 50 tons.

I have to thank two ladies for enlightening me on the

Brown Bread Question.

I was not altogether benighted when I asked Mary Mountain to "come on with that BB, recipe"—I had seen, eaten, and even made BB, but I wanted to be put up to all those extra wrinkles that dissipated the dyspepsia of the R. P. editor in such double quick time. Thanks again, M.M. for the sermon apropos of the coming gems. Personally, I believe more in sermons than in gems, and I propose to show my faith by my works. Man does not live by bread (not even tho' it be hygienic brown) alone, but by every word that proceedeth out of the mouth of God. That is, by knowledge of the Truth, whether it be hygienic, mathematical, philosophic, or spiritual. We seem to be rather in a haze as to

What Constitutes Truth.

Let us leave our turnips and pumpkins awhile just to think this over. What makes Truth? Nothing short of the will of God expressed in His Word (I don't mean the Bible by that) and accomplished by that Word. We call it a truth that 2 and 2 make four, a mathematical truth, but we do not pause to ask ourselves why it is a truth. We say it is true and good from the mere fact that it is so, and unchangeably so; and he who contradicts it shows himself foolish and ignorant. Quite so! Unanswerable! is it not?

For this same cogent reason every operation of God's will must be true and good, for when he wills He generates power to accomplish. He speaks and it is done, and lo! it is very good; because none can gainsay it. He says let two and two make four, and the veriest tyro in figures cannot make it one jot less or more, and he who bases his calculations on two and two making five builds his house on the sands of folly and ignorance. I have chosen to exemplify my meaning by this most simple mathematical proposition, because, of all kinds of truth, mathematical truth is the easiest to deal with, and the hardest to darken with words without knowledge. It looks very simple to say that two plus two equals four because God has so decreed it; but God declared to Moses His name in an equally simple form—no Jehovah, not Chance, not Providence, not Nature, but merely "I Am Who Am."

Hygienic Truth

Is equally God's will expressed in that Word "by whom all things were made, and without whom was not anything made that was made." God has made man's stomach to digest certain diet, man's skin to be kept clean by perspiration and cold water, man's lungs to receive an uninterrupted supply of fresh air. If, by our ignorance or willfulness we contradict God, and pack our insides full of unwholesome viands, unmastered, and lacking the saliva we have wasted over our tobacco; if we just smear over our faces and hands with water and towel, when we should bathe our whole bodies, leaving these unwashed almost from year to year; if we shut ourselves up at night in unventilated rooms, and expect to benefit our lungs by breathing warm, vitiated air, instead of that which we stigmatize as "night air," and which really is pure and fresh, though chilly; if, I say, we do any or all of these things we show our ignorance of sanitary propositions as simple and demonstrable as the proposition in mathematics that two and two make four; and, by our folly or ignorance we induce pain and sickness, thus unwillingly and unwittingly proving the excellence, goodness and wisdom of those laws of health given by the great "I am who am." Mary Mountain rightly couples together "True Intelligence and True Christianity; neither has ought to fear from the other."

Our Lord promised his true disciples that they should "know the TRUTH that the truth should make them free." But, somehow, it has come to pass that many of us have been taught that intellect must be shelved when Christianity is mentioned. Reason has been prescribed, and blind credulity and gullibility lauded by many in high places of the earth. St Paul tells us to "prove all things," to "stand fast in our liberty," which we have in Christ, etc. He had no fear of the darkness of error putting out the Light of Truth that shieth more and more unto perfect day. He could go among the Athenians, the most practised logicians, and back them right down by sheer weight of rational argument; he had no need to squirm out by saying that he could not argue with infidels or those who discredited the Bible.

We have glanced at mathematic and hygienic truth, let us now look for a moment at religious truth. The same proposition will serve us here, viz, that "God's will alone is excellent."

For this reason, "He speaks and it is done, he commands and it stands fast." "I will, the mere atoms despise me," I cannot even reduce one particle of dust to its ultimate atoms, nor can I annihilate one filament of a spider's web. Think, then, for a moment, of the constant exhibitions of the power of His will, the inconceivable velocity of light, the unmeasurable immensity of space, the tremendous energies of the planetary systems, and the countless marvels of our every-day existence, and feel in your inmost souls how good and true is the great I Am Who Am; and good and true simply because His will is done in truth and equity, and all contradiction or opposition merely proves the folly and ignorance of those opposing.

Is he good and true who denies two and two

to make four? or he by whose fiat two and two are four?

Is he wise and good who lives greedily, uncleanly and ignorantly? or he by whose laws cleanliness and temperance are necessary to health?

We contradict God as far as the little measure of life and power He has lent us will permit, and then blame him for the penalties incurred by transgressing His laws, as though He was the author of evil.

Whatever He wills is good and true because it is unchangeably accomplished. He wills two and two to be four and it is four, yesterday, today and for ever, and therefore it is true and good, and all resistance to His will is necessarily folly, sin and ignorance. Let us all then avoid any culpable ignorance and wilful disregard of His laws, hygienic and otherwise; voluntarily submitting ourselves to his His will as alone excellent; then willing as He wills, we share His power, and have, as our Lord said, "the kingdom of God within us."

I do not make any apology, Messrs. Editors, for occupying your valuable columns with this short sermon to my brother farmers. The subject admits of none, however faulty my handling of it.

A disregard of God's excellent will even in farming operations must ever prove to the disregarding that it is hard indeed to kick against the pricks. And if it be necessary to know God's will as to seed-time and harvest, and the conditions of healthy animal life, how much more important that we should not be ignorant of that will as regards ourselves.

John Bunyan depicts in his "Pilgrim's Progress" a "man with a muck rake," too intent on his muck raking to lift his eyes and see the angel, waiting, longingly and lovingly, with a crown of gold for the poor muck raker if he will only look up and receive it.

My beet patch proves my faith in muck raking; and my sermon proves that I am at least sufficiently interested in the waiting angel to wish that your readers may be similarly interested.

EDWARD BERWICK.

Carmel Valley, Dec. 23, 1873.

P. S. Will Mr. Boot of San José give us a sermon on strawberries, when he can spare time? When is the best time to cut them down, and is the whole top cut off or only the side leaves and runners, and how long will a plantation keep in profitable bearing?

A Durable Whitewash.

EDITORS RURAL PRESS.—I herewith send receipt for whitewashing, in reply to your Benicia correspondent. This wash is incombustible and cheap. It will prevent the collection of moss, and affords a most efficient protection from fire, under ordinary circumstances of exposure to great heat. Take a sufficient quantity of good stone lime and slack it carefully in a closed box, to prevent, as far as possible, the escape of steam; after it is thoroughly slacked pass it through a fine sieve. To every six quarts of this slacked lime, add one quart of coarse salt, and one gallon of water, the mixture then boiled and skimmed cleaned; then to every five gallons thereof, add by slow degrees three-fourths of a pound of potash and four quarts of very fine sand—the finer the better. Coloring matter can be added to fancy. Apply with a paint-brush. This wash, if the sand be ground fine, looks equally as well as ordinary paint, and is far more durable, besides being incombustible. It forms a hard cement, and as such will stop cracks in a roof or elsewhere. Wood so protected will never decay from the surface. Two good coats applied to bricks will render them utterly impervious to moisture. The expense is a mere trifle. Every farmer should cover his outbuildings and board fences with this wash.

C. T. HARRIS.

Calaveras Co., Model Ranch.

Eggs vs. Riches.

EDITORS PRESS:—On page 361, Dec. 6th, of the PACIFIC RURAL PRESS, our friend G. W. T. C., of San Gregorio, gives his manner of treating his hens, and says that only one in thirty is disposed to "take stock in" eggs at 65 cts. per dozen. At our house, we claim that too many thoroughbreds and chicken pens won't pay. Let us illustrate the matter in question a little. We used to obtain some nice bouquets of our best roses for Christmas holidays, thus:—By letting the bushes run down by neglect and drouth in summer, then prune up and irrigate in late fall, and the annual rest required by "Imperative Nature," having after a fashion been taken, fifty per cent. of a spring crop could be gathered in December. Somewhat after this manner we run our hens. We let them run down poor in the latter part of summer, and as many as feel like it scratch for one chick, then in early fall feed up, and with the thriving comes the molting and the rest having been taken she is very apt to take stock in the 65 cts. per dozen contract. A year old hen, that runs down thin scratching at the barn yard in August, then cared for after the treatment of Mr. G. W. T. C., that won't lay in October, must have modern thoroughbred propensities, for our old-fashioned dunghills will take stock in 65 cts. per dozen every time.

GEO. RAY MILLER.

From Cloverdale, Sonoma County.

EDITORS RURAL:—I went to Healdsburg yesterday to attend installation. Had a capital time. I do not think in the 18 miles down Russian river valley, I saw 100 acres of newly plowed land. As usual, we waited for the rain. The 3d of December it came, and since then we have waited for it to stop. Sonoma has never failed to produce a fair crop if gotten in anytime during the rainy season; but it is so much pleasanter, more expeditious, and more economical, putting in grain in the fairer weather, and longer days of October and November. That I shall hereafter, by aid of summer fallow and chisel cultivator, in addition to the usual catalogue of thanks to be thankful for on Thanksgiving day, to include, that my small grain seeding for the coming year is done.

A Few Questions about Grapes and Vines.

I want to put out 25 to 30 acres for early and late market and for raisins. What shall I add to the Sweet Water for early? The Tokay and Black Morocco for late and Muscat of Alexandria and Fifer Zagos for raisins? Shall I take more than one cutting from a shoot? Do suckers make good cuttings? Is it any advantage or disadvantage to get the cuttings before I am ready to put them out? Is it allowable to raise any crop between the rows the 1st and 2d year? For my uses would manure injure the grapes? Where shall I send the RURAL Press, the *Aldine*, the *Am. Agriculturist* and some other volumes to be bound? And now I want a word with your paper folder. I am an old folder and old maidish that way. If he will send my paper as neatly folded as *Hearth and Home*, I will be his uncle for the season.

Cloverdale, Jan. 4, 1874.

An interesting letter, and now we would like to have some expert in raisin growing, answer as to the varieties best for raisins, as far as his experience goes.

We should prefer to take cuttings from good, short-jointed shoots rather than from suckers; either will do, but preference should be given to well matured shoots from well ripened wood of last year. Cut them now, anytime, the sooner the better. Better not to cultivate any crop between the rows of vines; but if you will do it, let it be a crop requiring to be hoed, never any kind of grain crop. No land in California that we have ever seen, suited to grape culture would be in the least benefitted for vine growing by the application of manures, till after several years of culture. Send your books for binding when it suits your convenience; we are always ready on that point.

Opium Poppy Culture.

EDITORS PRESS:—I have a correspondent in Wisconsin, who is desirous of engaging in the culture of the opium poppy in California, and would like to get some information concerning it for him.

I want to get all the information relative to its culture—purely facts, no suppositions—where seed can be procured and price, and from whose instructions, printed or written, concerning its culture and also the method of obtaining the extract from the plant, and the proper time to do this.

My correspondent is a gentleman of means, and wishes to locate in Southern California, and if he can get any information in regard to these matters, will start the cultivation of the opium poppy on a large scale.

A. S. WINCHESTER.

Santa Barbara, January 9th, 1874.

[We have already given several exhaustive articles on the growing of the poppy and collecting the opium; and our readers would hardly excuse us for repeating them so soon. We must refer our correspondent to Vol. 3 of RURAL PRESS, June 22d, 1872, number, which contains the gist of much that we have said on the subject. Ed.]

Irrigation—Summer Fallow.

EDITORS PRESS:—In your PRESS of January 3d I saw an article from Hagar, of Grayson, on irrigation and summer fallow. I think from the tone of this letter they have struck the key note for the successful farming of the San Joaquin valley. I have long since been of the opinion that summer fallowing was the best mode of farming the interior valleys of the State. I would suggest they add drilling to their summer plowing, by so doing it will give them a saving of seed and insure their grain to be all in a uniform depth, and be a guard against its being dried out after the first rains. I believe the only successful way of irrigation is under-ground irrigation. In Chile they grow their grain on summer fallowed land, entirely, often following two seasons for one crop and by this process they scarcely ever fail of raising good crops, and their mode of tilling there is a very primitive one; their plows are something near the shape of our old-fashioned one-horse shovel plows with one handle instead of two, what we Californians would term a crooked stick.

W. N. G.

Santa Rosa, Jan. 5, 1874.

Profits of Plum Growing.

EDITORS PRESS:—A recent trip through Napa valley, causes me to wonder why farmers will continue to raise wheat and barley on the same land year after year, when nearly every one has more or less of his land adapted to other crops more profitable, and less exhaustive to the soil.

In the neighborhood of St. Helena especially, I noticed on most every farm, land adapted to hops, alfalfa, and the various kinds of fruit, especially the almond and plum. The latter is a sure crop here, and as to profit, your readers may count for themselves. At fifteen feet apart, 193 trees may be planted to the acre. I do not know from experience, how much they would produce, but think that at the age of seven or eight years, 50 lbs. of the pitted—dried fruit to the tree, would be a low estimate. This would give 9,650 pounds, which at 20 cts. per lb. would give ten dollars per tree, or \$1,930 for the acre. If any one thinks I have placed my estimates too high, they may reduce them one-half or even three-fourths, and still it will leave a handsome reward for the labor and capital invested.

It seems to me, there is no finer climate in the world, for drying fruits, than in upper Napa valley.

The poorer lands are very properly chosen for vineyards; and the grapes are sold to the wine makers for an average of one cent per lb; whereas five or six cents might be realized by converting a portion of their vineyard products into raisins. If they have not the proper varieties, they could easily make the necessary change by grafting, and only one year's loss of time.

I notice that most of the farmers sow wheat, barley or oats for hay. Their richest land only produces four tons per acre; whereas the same to alfalfa produces six to eight, and this without irrigation. A saving of ploughing and seeding every year is made as well.

For hops, no better land can be found than the rich loamy bottoms of Napa Creek; for a proof of this, a visit to the yards of Mr. A. Clock and C. A. Story will convince the most skeptical.

Mr. C. commenced about six years ago with very little capital, and although hops ruled very low, the first three years, he has succeeded in amassing a handsome fortune.

Some of the land owners are dividing up their farms and selling off in lots to suit purchasers, which will give those that can appreciate the value of these lands for fruit growing, a chance to secure a home in one of the most beautiful and productive valleys on the Pacific coast; and amid scenery the most grand, a mild and healthful climate, with all the advantages of good society, excellent schools, churches etc., etc.; with a sure competence in a few years from this, the most delightful of all occupations, horticulture.

Those with some experience, and a little capital, to purchase, plant, and wait for a few years for returns, would do well to visit Napa valley before locating elsewhere.

Lands are still within the reach of persons of moderate means, but are advancing every year.

Bottom lands are generally held at about \$100 per acre. About the villages at \$150 per acre, and in some cases for \$200 per acre. Small tracts, with house, well, small orchard and other improvements may be had, titles perfect.

If this letter meets the eye of any person that can tell from actual experience, the yield of the plum tree—dried fruit—he will doubtless confer a favor by communicating through the columns of the RURAL.

J. M.

St. Helena, Napa Valley, Jan. 1st, 1874.

Letter from Reno.

EDITOR PRESS:—Though there are a number of subscribers for your excellent journal here in Reno, I do not recollect of having seen any contributions to its columns from this section. We on this side of the mountains can hardly be governed by the same rules that our agricultural friends in Cal. are, but we may, through the medium of the PRESS disseminate such knowledge amongst ourselves as is applicable to this climate and region. There is an abundance of reading, however, always to be found therein, of general application, and for one I would like to see the number of subscribers in "Truckee Meadows" and this entire valley increased. To that end, I have spoken to my neighbors, when agricultural topics came up in conversation, of the value I placed on the RURAL PRESS, and shall take pleasure in endeavoring to induce some to send for it, even if obliged to discard some of the trashy literature which has ridden into their homes on an oil chromo. Within a few years the attention of settlers here has turned toward the cultivation of the "Sage brush" soil, wherever water could be brought from the Truckee river in ditches for irrigation, and it has been found that for many kinds of vegetables, and for alfalfa it is very productive. The excellence of potatoes grown here is acknowledged by the San Francisco and Sacramento markets, and though Virginia City, and along the line of the C. P. R. R. east as far as Elko, furnish us with a ready market for our produce, some finds its way to Cal. Increased amounts of alfalfa are sown every season and the natural grass on the meadows has to give way to this superior feed

wherever it can be supplied. In the earlier period of settlement, the palmy days of "Washoe," the owners of the meadows grew rapidly wealthy with hay at \$100 per ton. Now, it is the "Sage brusher's" time, with alfalfa at \$25 to \$30 per ton, and Timothy still higher. But two, and sometimes three crops of alfalfa are cut here, yet the hay is of superior quality. It is our staple, for, as you may know, Nevada lays but small claim to success in the cereals. In a recent number of the PRESS I saw that you had promised an article on the cultivation of the cranberry, when any one so desired, providing they had the requisite soil and facilities. Believing that to be the case with a considerable number here, and myself in particular, I shall be pleased and grateful for the *modus operandi*, and will give this excellent fruit a trial. I have found nearly all the necessary directions in one of the Agricultural Reports for the cultivation, after getting a start. There, I am not let into the secret, whether cuttings, roots, or the seed are essential.

Recently, it was said that a Grange was to be organized in this valley soon, yet I do not hear of any steps in that direction. With the king of monopolies cutting our beautiful valley in twain at its northern extremity, and its satellite, the Virginia and Truckee R. R. severing it from north to south, we are very much in the position of the two boys out on a lake in a thunderstorm; neither could pray, yet one said to the other, "By Hokey! something must be done." Its no use to pray to grasping monopolies, that we all know, but By Hokey! we can do something else.

We can, and do, exclaim, Glory to Gideon! now that Cal.'s idol, Newton Booth, is to represent the Pacific slope in the next congress, and meantime sing that old song, "There's a good time coming, boys, wait a little longer."

SAGE BUSHER.

Reno, Nev. Jan. 5th 1874.

Oakland Jottings.

A Defence of the Sex, and a few Criticisms on the Lords of Creation.

EDITORS PRESS:—The kindly face of old Sol has been at last disclosed to us, after so many long weeks of concealment behind leaden clouds and deluges of pouring rain, and it is needless to say that nature animate and inanimate, who is supposed by out-side barbarians—that is all such unfortunates who do not dwell in Oakland—to hold her sway amid these sylvan shades, rejoices. She has also put on (I suppose it would be more elegant to say, doused; well, doused) her most gorgeous livery, and with her clean, well-washed face, begins to present altogether a very creditable appearance.

With the cessation of the rain, there is an effort, socially speaking, to make people less hermit-like, and occasionally a lecture, or an evening reunion of some sort, makes a break in the monotony of our hum-drum lives. Thus an entertainment on the 6th, for the benefit of the Oakland library, which consisted of a lecture, by J. C. Ferguson on "Scotland," together with poetic readings, highland bag-pipe music, and which concluded with a dance, was an highly enjoyable affair to the intelligent and appreciative audience, who listened.

To-day the University re-opens, and students and professors, who for a season have thrown aside book and pencil, and by the family hearth-stone joined in the recreations and amusements which the reunions of the holiday season just passed made suitable, have returned to their posts, and for another term take a pull together up the slippery "hill of science."

In the RURAL PRESS of Nov. 22d, there appeared an article under the head of "Observations on the sexes," and signed "E. E. A.," in which the writer makes some very odious comparisons between his own (I take it for granted, no woman would write thus of her own sex), and the sex to which his mother (if he ever had one) belonged. I intended to have answered the article referred to at the time, but a multiplicity of duties prevented, but I trust it is not too late, ever, to refute a slander. "E. E. A." cites an example of a woman finding the need of a pin, while walking in the street, and approaching another woman for the loan, is indignantly denied the request, with the added insult that "she wasn't a walking pin cushion." Now, I do not believe that "E. E. A." ever saw such a libel on woman as the example he cites, and if any such exist, they are very rare indeed. So far as my own experience goes, I have, when traveling among entire strangers, and when placed in many unpleasant and embarrassing positions, found the most ready sympathy and aid from the best dressed, and what "E. E. A." would call the "well bred woman of the world;" and I do not believe that any woman needing aid that her own sex alone could give, and asking for it in a proper manner, would meet with a refusal, be the one asked never so "stylish;" for a silken dress does not necessarily cover a cold or unfeeling heart; and because a costume is made in the prevailing fashion, it does not follow that the wearer is a mere bloodless statue.

The added caricature of two friends meeting after a prolonged absence, is as unnatural as it is false. It may be the style among "E. E. A.'s" lady acquaintances for one to greet the other after long years of absence with the cheerful salutation, "Why! how very haggard you do

look;" and follow it with the question, "where did you buy that lovely dress?" but I have not the pleasure of the acquaintance of such people.

Indeed, we are having quite too much twaddle from masculine would-be-wits about women's extravagance, women's folly, women's vanity, women's weakness in various ways, and the public is sick of it. If those boys who aspire to show women the proper path to tread, and to teach them how to dress and deport themselves, would first use a little of the money spent in liquors, cigars, fast horses, "nobby suits," etc., in putting a little education into their shallow brains, and a few grains of common sense into their general make-up, we should hear less of women's follies and perhaps see a trifle of improvement in the literature emanating from the young scions of the quill. Such a change is decidedly needed, and we trust will not be long in coming.

DORA DARMOORE.

The Oaks, January 7th, 1874.

DR. MARCY, says *Les Mondes*, has recently demonstrated that the heart acts like all mechanical motors in that the frequency of the pulsations varies according to the resistance which it meets in driving the blood through the vessels. When the resistance becomes greater, the throbs diminish; they accelerate, on the contrary, if the opposition becomes less. During life, the action of the nervous centers makes itself felt on the heart, of which it renders the pulsations slower or quicker, whatever may be the resistance experienced. Dr. Marcy eliminated this nervous influence by removing the heart of an animal, and causing it to work under purely mechanical conditions. The heart of a turtle was arranged with a system of rubber tubes representing veins and arteries. Calf's blood, defibrinated was caused to circulate, and a registering instrument noted the amplitude and frequency of the movements of the organ. When the tube containing the blood leaving the heart was compressed, the liquid accumulated in the rear of the obstacle and the heart emptied itself with greater difficulty, the pulsations weakening perceptibly. On relaxing the pressure, thus allowing free course to the blood, the throbs accelerated rapidly.

BREATH OF THE NEVADA UPAS.—Billy Anderson, the well-known lawyer, who is now in this city, and who for some years (since 1868) has been a resident of Eastern Nevada, gives a startling account of the effects of the poisonous fumes from the smelting furnaces there in use. He speaks particularly of the town of Eureka, where these furnaces are very numerous and are scattered through the village. He says that in approaching the place a smell resembling that of garlic can be detected at a distance of at least three miles. Often the smoke and fumes hang over the town in clouds so dense as to resemble a London fog, and the smell of the poisonous gases is almost unendurable. Kittens and puppies die soon after coming into the world, and it is found impossible to rear these animals in the place. A sheet of white paper laid in the open air and left over night, will be covered with a thick white crust. The arsenical fumes mingled with those of lead and other minerals, more or less affect the health of all who reside in the town. Some are but slightly affected, while others suffer very severely. The poisonous atmosphere of the place not only affects the physical but also the mental health of many, causing them to become morose, nervous, and in some cases, wandering in mind.—*Enterprise*.

NEW PHOTOMETER.—A simple arrangement, which may be exceedingly useful for many purposes, has been devised by M. Yvon. A piece of paper or card is folded in the middle, and placed upright on a table in such a manner that the two halves form right angles. In the line bisecting the angle thus formed, and at some little distance from its apex, is placed a tube, blackened in the interior, through which the observer looks at the edge of the paper or card. The sources of illumination to be compared are placed at opposite sides of the card. So long as the two surfaces are unequally illuminated, the observer has a perception of relief; when, however, the light is perfectly equalized, he sees what appears to be a plane surface.—*Iron*.

PREVIOUS to the Franco-Prussian war, the St Laurent, of the French line, was fitted with electric lights of great power, which were plainly discernible for many miles at sea. At the beginning of the war this light was taken from the steamer and used by the Government for harbor defence, and has not since been used at sea. The managers of the French line are now considering the propriety of providing all their ships with lights of this description, which would, except under circumstances most unusual, render a collision impossible. The substitution of life-rafts for life-boats is also under consideration.

TIN or block plates are now being manufactured in England by a new process, consisting in the preparation of the iron used in their manufacture. A number of refining furnaces are employed, into the first of which the pig or cast iron is submitted to the melting process, and from thence run into other "lumping" refineries. Instead of using charcoal, as is commonly the case, the fires are fed with tan. This process has proved very satisfactory, and is meeting with popular favor by those engaged in this branch of industry.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F. General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

List of New Granges.

[Reported to the PACIFIC RURAL PRESS since our publication of the full list of California Granges on the first Saturday of the month.]

FRESNO COUNTY.

ADAMS GRANGE, Big Dry Creek, Fresno Co.: T. P. NELSON, Master; THOS. H. WYATT, Sec'y.
BORDEN GRANGE, Borden, Fresno Co.: J. W. A. WRIGHT, Master; J. S. FICKENS, Sec'y.

KERN COUNTY.

BAKERSFIELD GRANGE, Bakersfield, Kern Co.: S. JEWETT, Master; JEROME TROY, Secretary.
KERN ISLAND GRANGE, P. O. Bakersfield, Kern Co.: P. D. ROBE, Master; J. F. GORDON, Sec'y.
NEW RIVER GRANGE, P. O. Bakersfield, Kern Co.: JOHN G. DAWES, Master; JAS. DIXON, Secretary.

SACRAMENTO COUNTY.

FRANKLIN GRANGE, Georgetown, Sacramento Co.: AMOS ADAMS, Master; P. K. BEAKLEY, Sec'y.

SAN JOAQUIN COUNTY.

LOCKEFORD GRANGE, Lockeford, San Joaquin Co.: G. O. HOLMAN, Master; SOL. S. STEWART, Sec'y.

TULARE COUNTY.

VISALIA GRANGE, Visalia, Tulare Co.: WILEY WATSON, Master; H. G. HIGBIE, Sec'y.

YUBA COUNTY.

MARYSVILLE GRANGE, Marysville, Yuba Co.: C. G. BOCKIUS, Master; JAS. M. CUTTS, Sec'y.

P. of H. and Legislators.

The Legislature of every State in the Union, which is now in session—and a large number are in session—is more or less exercised over the great reform movement which has been initiated by the farmers. The same may be said of our national Congress. It is everywhere evident that the influence of the Granges or Patrons of Husbandry is strongly felt, and that the propriety and justness of their demands are being recognized by a large portion of the people outside of the Order. The late judicial and senatorial elections in this State were largely influenced by this feeling, and the result of those elections has had a powerful reflex influence on the people and legislators in other sections of the Union.

In several of the Western and North-Western States, large numbers of Patrons have been elected to their several legislatures—on nominations always made by outside organizations; whenever so elected they are united upon a common platform, which utterly ignores all old party lines. This platform inculcates retrenchment and reform in every department of government; insists upon the right of government to regulate and control railroads, and all other corporations created by governmental acts, especially with regard to fares and freights, and discrimination in charges; it also looks to a radical reform in the banking policy of the nation, declaring the present system of national banks one of the most stupendous swindles upon the people ever devised by any legislative body; it contemplates important and radical changes in the tariffs imposed upon imported goods, requires a more strict accountability of government officers, greater care in selecting them, etc.

As the choice of each succeeding legislature in the North-western States comes before the people, the influence and significance of this movement grows stronger and stronger, and there is now not the remotest doubt that it will hold the balance of power at the next Presidential election, if, indeed, it does not hold an absolute majority of the votes and States of the Union at that time.

So far as progress in this direction is being influenced by the Patrons, it is not as a political organization, but merely through the moral influence alone, which the Order exerts upon the great mass of the people. It is to this novel, yet most potential feature that the movement owes its strength.

It knows no leaders; it has no enemies to punish, no friends to reward, and it seeks neither office nor emolument. Its only hope of reward is in the satisfaction of doing a good work for the benefit of its own members and the country at large. The old party cry that "to the victors belong the spoils," it hates and abominates. It would see none but fit and competent men elected to office, and looks to their moral fitness as an absolute essential, and one over-riding all political or other considerations.

Bro. N. W. GARRETSON has now the editorial control of the P. of H. department in the *Iowa Homestead and Farm Journal*. He is also Secretary of the State Grange of Iowa. We cordially welcome him to his new field of labor.

The Grange Lecturer.

One of the most important offices connected with the Grange is that of Lecturer. The office should be no sinecure, but should be filled by a wise and competent person. Our State Lecturer, J. W. A. Wright, seems to be fully imbued with the spirit of his work, and is doing much to advance the Order. We heard of him, a few days ago, in the extreme southern part of the San Joaquin valley, stirring up the farmers there to earnest work, and planting the seeds of the Order wherever he went. Between the 10th and 31st of December he traveled over 500 miles and organized thirteen Granges in different parts of three of the largest counties in the State—Fresno, Kern and Tulare. The labor and exposures attendant upon such a work must have been greatly intensified by the extremely unpleasant character of the weather during the last twenty days of the month of December. The next week we heard of him again, away to the north of us, in Yuba and Butte counties, still pushing on the work of organization and expounding the principles and objects of the Order wherever he goes. During the past week he has visited Colusa, Meridian, Grand Island and Woodland, installing officers, lecturing and exemplifying the secret work.

We are pleased to say that we also bear of good work being done by many of the Lecturers of subordinate Granges. Two weeks ago we gave an excellent paper read by D. K. Rule before the St. Helena Grange, of which, we believe, he is Lecturer. We have also before us, in the *Stockton Independent*, an instructive lecture, delivered before the Castoria Grange, by its able and worthy Lecturer, F. J. Woodward, Esq. We believe that our Lecturers, and, indeed, all our Grange officers, everywhere are faithfully performing the duties of their respective offices.

But Lecturers, above all others, should be chosen for their especial fitness for the office. A large portion of the efficiency of the Grange must depend upon their efforts. In addition to Grange work, the Lecturer should labor to prepare himself for the introduction of such subjects as will tend to draw out the practical knowledge of Patrons in regard to farm work of all kinds; and the Secretaries could not employ themselves better than in taking notes of all that may be thus said of an interesting and profitable kind, both for permanent record in the books of the Grange for future reference, and also for transmission to the agricultural papers which circulate among the Granges, in order that all Patrons may have the benefit thereof. If this practice should become general, much practical good would be the result.

As soon as the Granges get into working order, and time can be spared from initiations, this mode of instruction and improvement should form an important feature in our work. It should, and no doubt will, do much toward improving the hearts and minds of Patrons generally. If nothing more can be done, judicious selections should be made by the Lecturers for reading before the Grange.

Much complaint is made in some quarters of neglect in this particular, and it is charged that the Granges are not doing as much as the Farmers' Clubs did formerly. There is some reason in the charge, and much reason also for the neglect, growing out of the absolute necessity of the case—the great multiplicity of business which is forced upon all new organizations; the importance of practice to reach a reasonable degree of perfection in our work, and the unavoidable necessity for time to initiate and instruct new members, as they are constantly coming in.

The real, practical work of instruction in our California Granges will soon commence, and when well under way cannot fail to exert an important influence in improving systems and practices of agriculture in this State.

Memorial Resolutions.

At a meeting of the Centerville Grange, No. 120, Saturday 17th, 1874, the following preamble and resolutions were submitted and adopted:

Memorial.

Whereas—It has pleased Almighty God, in his wisdom, to remove from our midst, by death, our esteemed brother ROBERT BLACOW, therefore

Resolved, That in the death of Bro. Blacow our Grange has lost one of its most earnest and efficient charter members; the community a thorough farmer, a good neighbor, and an upright and honorable man; his family an affectionate, devoted husband and father.

Resolved, That we extend to his bereaved wife and family, our heart felt sympathy, in their sad bereavement.

Resolved, That these resolutions be spread on the minutes of the Grange, and a copy be forwarded to the family, also to the *Haywood Advocate* and *PACIFIC RURAL PRESS*.
HOWARD OVERACKER, Sec. pro tem.
Centerville, Jan. 19, 1874.

The Granges and the Mechanics.

The views of Stockton Grange, Patrons of Husbandry, in relation to the action of the mechanics upon the question of apprenticeship, are expressed in the following preamble and resolution:

"Whereas, The mechanics of this State in their organization declare that the young men of this State shall not be instructed in their various trades, except in limited numbers, and as may be directed by the officers having control of such organization; and, whereas, the course pursued by the said mechanics in debarring the rising generation of the State from acquiring an honorable means of support, and that the course pursued by the said organization in not permitting our young men to learn trades, has the effect of bringing up our young men in forced idleness and making them fit subjects for the State Prison; and, whereas, there has been a certain correspondence between our worthy State Lecturer and a gentleman representing the said mechanics' organization, with a view of bringing about concert of action between the mechanics and farmers: Therefore, be it resolved, That it is the sense of this Grange that it is inexpedient at this time to form any alliance with the said organization."

We do not believe that there is any great number of mechanics in the State at the present time, who hold to any such views as are above alluded to. There may have been a time, two or three years ago, when there was; but we believe a great change has since come over public sentiment in that particular, and we fully believe that a large portion of the mechanics throughout the country are largely, if not fully, in sympathy with the teaching and views of the Patrons of Husbandry. But while, according to the provisions of our constitution mechanics are not admissible into the ranks of the P. of H., we may again allude to the fact that but a few weeks more will elapse ere an order of a similar character will be presented to the mechanics of this State, which, while it will not interfere with any existing organization among the mechanics, will enable that large branch of our producing people to fraternize more fully and freely with their brother producers on the farm than they now have the opportunity of doing. In this connection we would urge upon Patrons the propriety, in fact the necessity, of a strict compliance with the requirements of our Order in not admitting mechanics to membership—especially to charter membership—explaining to all such who may desire to come in, that the time will soon arrive when they will be enabled to reach every substantial advantage which could be attained by an actual membership.

Meeting of the National Grange.

The National Grange of the P. of H., meets at St. Louis on the first Wednesday in next month. As the legislative body of a constituency of over ten thousand Subordinate Granges, its proceedings will be looked for with much interest, and will no doubt be of a very important character.

Among other matters that will be brought before that body is the following in reference to a revision of the National Constitution and By-Laws of the National Grange. This business has been proposed by a special Committee appointed at the late meeting of the Iowa State Grange:

This Committee will recommend that the requirements set forth in the organic law of the National Grange fixing the eligibility of members of the State and National Granges be so amended as to correspond with the principles herein enunciated, to-wit:

That said bodies be composed of such delegates as may be elected thereto, in accordance with the principles that govern the American system, and that representation and taxation shall correspond. And any member of the 4th degree shall be eligible to any office in either body.

And further, That each State Grange shall have sole power to organize and control Subordinate Granges within such State, and that all fees for dispensations and charters be paid to the State Grange.

Also, That the representation in the National Grange be based upon membership, and that each State be entitled to one representative at large, and one for every fifteen thousand members, and one for every fraction of over ten thousand; and said representatives to be elected by the State Granges—fourth degree members being eligible to membership.

A Committee of six delegates was appointed by the Iowa State Grange to attend the National Grange and urge their views upon the attention of that body. Notice of this action has also been given to all the other State Granges throughout the Union, and their cooperation is solicited.

The Transportation question and the Railroad question generally, will probably occupy a large share of the attention of the National Grange, and no doubt some plan of action will be decided upon, on which the Patrons throughout the country will be a unit.

Colusa Grange Installation.

We have given elsewhere a brief report of the installation at Colusa Grange, furnished us by the Secretary. We clip the following additional particulars from the *Colusa Sun*:

There was a large attendance of the Patrons of Husbandry, on Monday, from different parts of the county, to witness the installation of the officers of the Colusa Grange, and listen to the lecture of Grand Lecturer Wright. Mr. Wright was perfectly at home at the business. He is a gentleman of fine address, easy delivery, is concise in his language, coming directly to the point, and always stops when he has made the point. The installation ceremony was very interesting.

The Installation Address.

He gave a short history of the order and then explained fully its objects and intentions. So concise were his remarks on this branch of his subject that we could not well condense them, even if we had the lecture before us. In essentials, he said, there must be, and was the most perfect unity; but in non-essentials there was the greatest freedom of opinion. A person gave up none of his political, religious, social or business rights by becoming a member of the Order. He must keep the business secret, and then go just as far with his brothers of the Order as his inclination leads him. No political or religious matter could ever be discussed at a meeting of the Order, and members were enjoined to allow, with charity, in their brother, the greatest latitude in such matters. It was one of the principles of the Order to encourage home mechanics, home merchants, home manufacturers, etc., and the Patrons propose to interfere in such matters only when forced by exorbitant charges to do so. They proposed to inform themselves concerning the markets of the world, and arrange to get their share of the profits on their productions, in accordance with the state of the market. They proposed to meet and consult about all matters pertaining to their business, about the most profitable crops, the best manner of cultivation, etc. In short, they proposed to talk about all things pertaining to their interests, and act upon such as to them seems best.

Officers of Other Granges also Installed.

Besides the officers of the Colusa Grange, the following were also installed:—E. C. Hunter, Master of Funk Slough Grange; D. H. Arnold, Master of Spring Valley Grange; H. A. Logan, Master of Antelope Grange; Peter Perdue, Master of Freshwater Grange; J. P. Kimball, Master of Central Grange, and L. D. McDow, Overseer of Funk Slough Grange; W. H. Williams, Treasurer of Central Grange, and Peter Peterson, Treasurer of Antelope Grange. Seven o'clock in the evening the Grange met and conferred the fourth degree on L. F. Moulton and J. T. Marr; after which Mr. Wright instructed the members of the secret work and business of the Order.

Brother Wright Still on the Move.

From here the Grand Lecturer went to Meridian, where he installed the officers of that Grange on Tuesday, and on the same evening he lectured at Grimes' Hall, to the Sycamore Grange. On Wednesday he was to have been at Woodland, so it will be perceived that Bro. Wright is a hard laboring man.

Southern District Council P. of H.

The Southern District Council, composed of the Granges of Los Angeles and San Diego counties, met at Los Angeles on the 3d inst., and considering the unfavorable condition of the weather and roads, there was a very full representation. The proceedings were interesting and important. Much of the business was, of course, of a private nature; but one of the more important matters discussed and decided upon, and in which all in that portion of the State are interested, whether in or out of the Grange, was the organization of a

District Agricultural Fair Association.

The Directors chosen to act for the first year are: J. F. Marsons, J. J. Morton, J. A. Nicols, L. W. Atchinson, J. T. Gordon, J. Q. A. Stanley, J. S. Thompson, E. Every, J. E. McComas, H. L. Montgomery and A. B. Hayward. The capital stock of this association is to be \$50,000, divided into two thousand shares of \$25 each. The association is to be known as "The Agricultural Exhibition of Southern California." The Directors met on the 9th inst. to complete the organization.

The matter of the establishment of a Grange Co-operative Union is also under consideration.

NAPA GRANGE.—The installation of the officers of this Grange took place on Saturday last—Brother J. W. A. Wright conducting the ceremonies. The retiring Master, W. H. Baxter, Secretary of the State Grange, was the recipient of a series of complimentary resolutions. He also made a neat retiring speech. An address was also pronounced by Bro. Wright. We had expected to receive the speeches and full particulars for this week's issue, but they have not yet come to hand. The newly elected Master was necessarily detained from the meeting, and of course was not installed.

From the Granges.

HOLLISTER GRANGE.—Secretary S. F. Cowan, writes that this Grange is prospering finely, and now numbers 87 working members, with several applications for initiation. The officers for the current year were installed by W. M., J. D. Fowler. A fine lunch was spread for the occasion, which all seemed to enjoy very much. The following resolutions were offered by Bro. E. Mason, and adopted by the Grange:

As the first term of our officials closes it is eminently proper and fitting that an expression of good will and hearty approval be given them, especially where so much zeal and energy has been displayed, as in the case of some.

Therefore, Without wishing to draw any line of distinction, we feel that an injustice would be done unless particular mention were made of those whose duties, always laborious and sometimes difficult, have been so well and correctly discharged. Among this class are found our Worthy Secretary, whose duties have necessarily been severe, yet throughout have been correctly discharged and with much credit to himself and satisfaction to all the members of the Grange. Also,

Resolved, That the Worthy Assistant Steward, by his untiring industry, promptness, and energy, is entitled to the warmest thanks of all the members.

Resolved, That to the Worthy Master much praise is due for the patience and forbearance manifested, and the justness and impartiality of his rulings and decisions as presiding officer, also for the untiring zeal manifested by him in all that pertains to the good of the Order. May the best wishes of all the members ever be with him.

Resolved, That each and all, for the prompt and punctual manner in which they have performed all the duties pertaining to their respective offices, are entitled to the warmest thanks of all the members of this Grange. On motion, was unanimously ordered spread on minute book.

A remittance of \$21 for new subscriptions for the RURAL PRESS, and \$6 for renewals, accompanied the above.

SANTA CRUZ GRANGE.—The Editor of the Granger having recently met with this Grange says:—"We met with the Grange—a goodly number of the substantial farmers of the valley, drilled with them in the secret work of the order, gave them such council as we were able, were hospitably entertained by them, and left them, ourselves better for the visit. This Grange adopted for its motto "Go slow, and keep in the middle of the road," and though they have gone "slow," they have not kept exactly in the "middle of the road." We found them in bad working order but greedily receptive and we think so instructed them that they will henceforth have no difficulty. As soon as the busy season is over, we have no doubt this Grange will rapidly increase in numbers, and there is no reason why it should not become one of the leading Granges on the coast. We regret to say that Bro. Cahoon, Past Master has been quite ill for some time, and is still so feeble as to be closely confined."

YOLO GRANGE.—State Lecturer, J. W. A. Wright, by invitation visited Yolo Grange, No. 13, on Wednesday, the 14th inst. His arrival was unavoidably delayed until the afternoon train; for that reason W. Sims, of Buckeye Grange, installed all the officers elect, except J. A. Hutton, the W. M. elect, and the Gate-keeper. Upon the arrival of Mr. Wright after the usual introduction, he lectured on the objects and workings of the Order. The Grange then adjourned till 7 o'clock, when the installation of the W. M. was proceeded with in public. Very interesting remarks were made by Mr. Wright. The Masters of all the Granges in the county, except Antelope and Hungry Hollow were present. It will pay any Grange to get Mr. Wright to talk to them. He is not only entertaining, but highly instructive.—Yolo Dem.

ATLANTA GRANGE.—We learn from Master W. J. Campbell, of this Grange, that Bro. Andrew Wolfe, Past Master of Stockton Grange, assisted by Bro. A. B. Munson, Secretary of Wildwood Grange, installed the officers of Atlanta Grange on the 10th inst. Bro. Campbell writes us that the prospects are good in that vicinity for a good crop; that the farmers are getting along finely with their plowing and seeding. Many had already completed that work on the 13th inst., and most of the farmers thereabouts would complete the work of seeding in two or three weeks longer.

EDEN GRANGE.—This Grange, located at Haywards, had a very pleasant time at the installation, on Saturday of last week. The ceremonies which were public, were conducted by Bro. W. M. Jackson, Master of Yolo Grange; and an address was given on the occasion by W. B. Ewer, of the RURAL PRESS. After the installation ceremonies were over, the work of exemplification was gone through with under the direction of Bro. Jackson. This Grange occupies a very important locality, and will no doubt, ere long be one of the most important in the State. It has much good material, but is comparatively new in the work, and has not yet got fairly into operation.

ELK RIVER GRANGE.—The Master, T. Meyer, writes to the Granger as follows:—"Our Grange is progressing slowly, but our membership is unexceptionable, and we intend to keep it so. We were very weak in the beginning, but are gathering strength. The weather has been rather unfavorable to our more speedy development, since it has rained on nearly every day of meeting, the day of our organization—4th of October—not excepted; nevertheless, all the members have pretty generally turned out, which shows that all take sufficient interest in our glorious Order to make it a success. We had our first harvest feast on New Year's Day, when the fourth degree was conferred on four candidates—we have six more candidates to put through this month. Our harvest feast was a complete success, which was in a great measure due to our good sisters. We had everything that heart could reasonably wish for; good attendance, good music, good singing, and last, but not least, a sumptuous repast. The social features of our Order begin to tell and to be appreciated."

SANTA BARBARA GRANGE.—The installation of officers of the Santa Barbara Grange, elected to serve for one year, took place last Saturday afternoon, January 3d, 1874. Quite a full attendance of the membership was had. The ceremonies of installation were performed in public. The Grange met at 10 o'clock on the morning of the same day, for the purpose of initiation of new members, conferring degrees and other business. O. L. Abbott is retained Master, and Miss Virginia F. Russell was installed Secretary.

This Grange has been steadily increasing in membership ever since its organization, and bids fair to become a large and influential body.

COLUSA GRANGE.—INSTALLATION.—R. Jones, Secretary, writes under date of January 14th, as follows:—"Last Saturday our annual installation ceremonies took place, and were conducted by Bro. J. W. A. Wright. We assembled at our hall, clothed ourselves with our proper regalia, and forming in a procession, marched to the Christian Church, led by the assistant Steward, the past Masters and members following, with the Editor of the Colusa Sun bringing up the rear, carrying in one hand a spade and in the other a basket of apples. Before proceeding with the ceremonies, which were public, Bro. Wright, briskly, but forcibly explained the growth and views of the order. We were pleased to have with us a number who were not members of the order. After the ceremonies were concluded, the members were again formed in a procession and returned to the hall, where a short session was held for the exemplification of the unwritten work. Bro. Wright's stay with us was brief, but it was pleasant and profitable. We have had plenty of rain; crops look finely, with a good prospect for an abundant harvest."

CALISTOGA GRANGE.—A correspondent of the Granger writes from this Grange, under date of January 12th, as follows:

As a Grange we have thus far been successful in every sense of the word, except having to meet on one or two occasions in dreadful stormy weather, but that we will call success, as rain is indispensable, especially in dry seasons. We started in our first initiation with a class of eight, and on last Friday, Jan. 9th, we enjoyed our first Harvest Feast; and surely we shall look anxiously for the next one, for our secretary especially, enjoys such occasions very much, and really wonders why we can't have a feast in every degree; thinks may be the object is keep the newly initiated in suspense. At our next meeting we will start in with a class of seven or more, and, by the way, we expect to initiate the oldest man and woman in this section. He is a character in his way, and we, as well as he, expect to enjoy it "huzely." Farmers in this part of the country are taking every advantage of the past few days of dry weather and are giving rest to neither man nor beast while the sun shines.

LAKEPORT GRANGE.—HARVEST FEAST.—On New Year's Day the Lakeport Grange, with other Granges in the county as invited guests, celebrated their Harvest Feast. The exercises were held in the M. E. Church, and were of an interesting character. Considering the inclemency of the weather, the Order was numerously represented—there being nearly three hundred present. The feast was a marvel of abundance and variety of edibles. After the repast, advanced degrees were conferred with imposing ceremonies, and then the members dispersed to their homes, feeling much gratified with the day's success.—Lake Co. Bee.

BLOOMFIELD GRANGE.—Brother D. Bruner, of this Grange, under date of January 17th, sends us the list of officers elect, which will be found in its appropriate place, and adds: "Our Grange is prospering finely and there seems to be much interest taken in the Order here. We had a severe storm on Thursday last, which did much damage in this part of the country, in the way of blowing down fences, chilling stock to death, etc."

COMPTON GRANGE of Los Angeles county, holds its third Harvest Feast to-day, Saturday, January 24th. Members of neighboring Granges are invited to be present, and a good time generally is expected.

TEMESCAL GRANGE, OAKLAND.—The officers of this Grange were duly installed by Deputy A. T. Dewey. The Master, Dr. E. S. Carr, made an appropriate speech in his well-known and interesting style. On motion of W. Chaplain, J. V. Webster, the Master, was requested to furnish so much of his address as practicable for publication in the PACIFIC RURAL PRESS. The next meeting occurs at 2 p. m. on Saturday of this week.

SEBASTAPOL GRANGE.—Bro. D. Bruner, of Bloomfield, informs us that the 2d Degree was conferred on 19 members of Sebastapol Grange, on the 10th of December. The Grange is increasing rapidly and they think a larger hall will have to be secured. The citizens generally of that neighborhood are becoming very much interested in the Grange.

LIVERMORE GRANGE, ALAMEDA Co., meets at 10 next Saturday, on which occasion a public installation will take place. Eden, Centerville and Temescal Granges, of the same county, have been invited, and a public address is to be given.

TULE RIVER GRANGE.—This Grange is rapidly getting into the work. The farmers there are in earnest, and devote half a day each week to Grange work.

SARATOGA GRANGE.—Saratoga Grange, in this county, is progressing finely. It is in good working order, and growing in numbers. At its meeting on the 7th inst., six were initiated.—Granger.

Charters Received, Etc.

Bro. Baxter, Secretary of State Grange, desires us to state that he has received Charters from Washington up to, and for Grange No. 84; but they cannot go out until after the return of our Worthy Master Hamilton from the meeting of the National Grange, as they require his signature. The Roll Books have all been sent out up to, and including Grange 119.

Bro. Baxter also desires us to ask the Secretaries of the various Granges throughout the State, to report to the State Agent, I. G. Gardner, as soon as possible, the number of warehouses in their respective localities; their capacity; by whom owned and controlled; accurate amount of acreage sown, and the crop progresses, the prospective results. We must have accurate and reliable information, in order to act intelligently, and the Granges must give the aid so necessary to successfully carry out the business of the agency.

OFF FOR THE NATIONAL GRANGE.—We understand that Bro. Hamilton, Master of the California State Grange, and Bro. Wright, Past-Master, will both attend the meeting of the National Grange, at St. Louis, as accredited representatives from this State. By reason of the fact that the Pacific Coast cannot possibly have more than three representatives, if all go that are entitled to seats, a number of our prominent Patrons have volunteered to send Bro. Wright there at their own individual expense—the National Grange paying the expenses of only one delegate from each State—the acting Master. We are not advised whether Bro. Clark of Oregon will go; but presume he will.

We have no doubt that California will be ably, if not fully represented. Bro. Hamilton is a man of sterling qualities and most excellent judgment. Bro. Wright is better known throughout the State, and, though somewhat diminutive in person, is stalwart in intellect and ready in debate. He is familiar, both by practice and study, with most or all of the many important matters which will come before that body for its consideration and decision. Bro. Clark, of Oregon, is a strong, stalwart man, of few words, but superior judgment. He is a worthy representative of the stalwart farmers of Oregon.

SOME of the enterprising Grangers of Carson valley are preparing to plant nurseries of chestnut, hickory and other timber trees this spring.—Vir. Enterprise.

This is the first we have heard of a Grange in the State of Nevada, and we presume, notwithstanding the above announcement, that their existence there is as yet a myth. But we see no reason why the farmers of that State should not take hold of the great work in which their brethren throughout the country are now so earnestly and so successfully engaged.

We shall be most happy to record the organization of the pioneer Grange in Nevada. Will not the farmers of Carson Valley make a move in the matter—if they have not already done so?

CROWDED OUT.—We have several matters in relation to the Granges—letters, etc., which are unavoidably crowded out of the present issue. All will appear next week.

Election of Officers.

TOMALES GRANGE.—P. R. Prince, Secretary, sends us the list of officers elected by this Grange, the organization of which took place Dec. 17th, 1873, as already noticed:—Wm. Vanderbilt, M.; O. Hubble, O.; F. W. Bemis, L.; S. C. Percival, S.; F. A. Plank, A. S.; Stanford Duncan, C.; D. B. Burbank, T.; R. H. Prince, S.; J. Buchanan, G. K.; Mrs. O. Hubble, Ceres; Mrs. F. W. Bemis, Pomona; Miss Amelia Waters, Flora; Mrs. F. A. Plank, L. A. S.

EL MONTE GRANGE.—Secretary J. W. Marshall, sends us the following as the list of officers elect for this Grange for the following year:—S. S. Reeves, M.; George Mark, O.; Geo. W. Durfee, L.; E. S. Harris, S.; W. H. Gwinn, A. S.; Jas. D. Durfee, C.; Chas. Dougherty, T.; J. W. Marshall, Sec'y; W. P. Cooper, G. K.; L. A. Reeves, Ceres; W. M. Marshall, Pomona; Jennie Mark, Flora; M. J. Reeves, L. A. S. Board of Trustees—J. W. Marshall, J. D. Durfee, Miss Fannie Mark.

GEYSERVILLE GRANGE.—Bro. R. R. Leigh reports the following as the officers elect of this Grange. They were installed on the 9th inst.—C. M. Bosworth, M.; William Ellis, O.; A. H. Stiles, L.; C. P. Buckley, S.; G. W. Benjamin, A. S.; W. S. Beeson, C.; E. Mos Hamilton, T.; R. R. Leigh, Sec'y; Leander Ellis, G. K.; Mrs. C. M. Bosworth, Ceres; Mrs. C. P. Moore, Pomona; Miss Luella Walcott, Flora; Mrs. W. Low, L. A. S. R. R. Leigh (Secretary) has been elected by this Grange to act as their local agent.

ADAMS GRANGE.—The organization of this Grange was announced two weeks ago, and we are now enabled to give, from the Fresno Expressor, the list of officers elect, as follows: P. Nelson, M.; Thomas Hall, O.; Thomas Jeans, L.; J. W. Potter, C.; Thomas H. Wyatt, Sec'y; W. W. Shipp, T.; Logan Potter, S.; J. A. Jack, A. S.; E. H. Patterson, G. K.; Mrs. Mary Hall, Ceres; Mrs. M. B. Ross, Pomona; Miss Laura Jeans, Flora; Mrs. S. F. Doak, L. A. S.

PLEASANT VALLEY GRANGE, San Buenaventura county, was organized by Deputy Milton Wasson, on the 10th instant, with the following list of officers:—D. Rondebush, M.; W. P. Ramsauer, O.; Elmer Drake, L.; A. S. Clark, S.; Jos. Davenport, A. S.; W. O. Woods, C.; J. O. Barnette, T.; B. Browning, Sec'y; W. H. Walker, G. K.; Miss Anna Wood, Ceres; Miss Ollie Walbridge, Pomona; Miss Myra Walbridge, Flora; and Mrs. Sarah Walker, L. A. S.

HOLLISTER GRANGE.—Officers elect: R. Rucklidge, O.; E. Nason, L.; Job Molsburg, C.; E. B. Kent, S.; J. D. Fowler, A. S.; Wm. Kelly, T.; W. H. Oliver, Sec'y; S. F. Cowan, Ass't Sec'y; R. D. Pease, G. K.; Mrs. Henrietta Molsburg, Ceres; Mrs. M. C. Pease, Pomona; Mrs. M. E. Cowan, Flora; Mrs. M. C. Pomeroy, L. A. S. Trustees—S. F. Cowan, 3 years, U. Wood, 2 years, J. D. Fowler, 1 year.

ATLANTA GRANGE.—Officers elect: W. J. Campbell, M.; F. M. Gardner, O.; W. H. Snow, L.; Hugh Clendenin, S.; John Hollister, A. S.; J. W. Moore, C.; Mrs. J. W. Moore, Secretary; Milton Miller, T.; T. Gilbert, G. K.; Mrs. T. M. Gardner, Ceres; Miss Florence Hunsucker, Pomona; Miss Emma T. Gardner, Flora; Mrs. Jennie M. Lombard, L. A. S.

LOS BANYOS GRANGE.—Officers elected: We learn from A. McGlashen, that the following officers have been elected and installed for the current year:—W. M. Viney, M.; B. F. Davis, O.; C. H. Wiley, L.; G. Shaffer, S.; S. H. Acker, A. S.; G. F. Lawrence, C.; A. McGlashen, Sec'y; W. G. Jones, G. K.; Mrs. J. McGlashen, Ceres; Mrs. J. Shaffer, Pomona; Mrs. S. A. Smith, L. A. S.

BLOOMFIELD GRANGE.—Officers elect: Wm. H. White, M.; D. H. Parks, O.; A. A. Boynton, L.; Wm. S. Edminister, S.; Wm. Lacost, A. S.; J. Kuffle, C.; Wm. P. Hall, T.; A. B. Glover, Sec'y; W. W. Parks, G. K.; Mrs. S. A. Canfield, Ceres; Mrs. O. M. Colburn, Pomona; Mrs. A. P. Hall, Flora; Miss Ollie White, L. A. S.

ELK RIVER GRANGE.—Officers elect: Theodore Meyer, M.; G. H. Shaw, O.; S. H. Stewart, L.; F. S. Shaw, S.; A. Forbes, A. S.; S. B. Zane, C.; W. Oston, T.; D. A. DeMerritt, Sec'y; J. W. Gardner, G. K.; Mrs. S. H. Stewart, Ceres; Mrs. M. Shais, Pomona; Mrs. D. E. DeMerritt, Flora; Mrs. F. L. Meyer, Lady Assistant Steward.

YOLO GRANGE.—Officers elect: J. A. Hutton, W. M.; T. J. Dexter, O.; R. B. Blowers, L.; D. P. Diggs, S.; Ed. Gallup, A. S.; L. P. Pond, C.; H. Deaner, T.; D. Schindler, Sec'y; D. Shellhammer, G. K.; Sisters E. J. Diggs, Flora; M. Blowers, Ceres; M. O. Schindler, Pomona; H. L. Hutton, L. A. S.

KERN ISLAND GRANGE.—Officers elect: H. D. Robb, M.; F. P. May, O.; J. R. Haworth, L.; O. B. Ormsby, C.; H. Noble, S.; J. Carlock, A. S.; George H. Carlock, T.; J. F. Gordon, Sec'y; C. B. Caldwell, G. K.; Mrs. H. Noble, Ceres; Mrs. J. W. Lundy, Pomona; Mrs. Mellie Caldwell, Flora; Mrs. Callie Carlock, L. A. S.

COLUSA GRANGE.—Officers elect: W. K. Estill, M.; J. P. Banbridge, O.; J. W. Welch, L.; J. F. Wilkins, C.; L. Kilgore, S.; J. H. Roland, A. S.; J. Friar, G. K.; A. J. Scoggins, T.; R. Jones, Sec'y; E. J. Banbridge, Ceres; S. E. Wilkins, Pomona; Miss Mattie Starmer, Flora; Mary Kilgore, L. A. S.



"The Weather."

What miseries human mortal could tell of,
Both tender, and tough as old leather;
A terrible army all jumbled pell-mell,
Of the ills that are caused by "The weather."

If in presence of friends we are yawning and gaping,
Or pinning with ennuil to death, or
We something have done there's no way of escaping,
We put it all down to "The weather."

If we run short of words when we press the fair digits,
When love-making on the damp heather,
We stammer and stick till we both get the digits,
And find an escape in "The weather."

Is it headache we've got, or rheumatism twitching,
In arms or extremities nether—
I've even heard say that when noses are itching—
Its owing to some sort of "Weather."

When vainly our brains we are racking and riling
For cause of this light as a feather,
We give it all up in despair, and then trifling
Say that it's surely "The weather."

But a truce to such stuff, though I haven't yet got to
The end by a mile of my tether,
But somehow I'm dull, and my rhyming is not to
My liking; it must be "The weather."

—Ex.

An Engineer's Yarn.

ALBERT WILLIAMS, JR.

I am a practical mechanical engineer. Not one of these youngsters who go to a scientific school for a few years, and take a C. E., M. E. or something of the kind, and then put on airs about it. They always affect to snub us practical men, but we rather get into them when it comes to real work. Of course, these chaps are well enough in their way (and that isn't mine) in getting up artistic drawings and models, and all that sort of thing. And sometimes they are of some account. There was young Hoppin, who helped me with that toggle-joint. I originated the idea; he put it into shape. I made enough to retire on it, and I did the square thing by him, if he was a "scientific man," so I feel perfect free to speak my mind about the lot, always excepting my friend Hoppin.

But this isn't telling my story. There's my wife Bessie (bless her dear little heart), always saying I can't come to the point without as many twists and turns as my own old machinery. Perhaps she is right. But then, this is the first time I ever tried to express myself in print, and I don't exactly know how to go about it, so you must excuse me. That's reasonable, isn't it? And, besides, I am getting so stont and logy-like, that I aint as sharp as I used to be. My young acquaintance Karl, who is an editor, or some equally useless member of society, has roped me into this scrape, and ought to help me out; but he docan't. All he says is, "Fire away old man, and make it short and sweet." I'm afraid this isn't telling my story, either. Prolixity (that's the word) comes sort of natural like to me now.

Let me see. It was sixteen years ago last summer that I went to New York in search of employment. I had been running an engine in a big tannery in the western part of that State, and doing first-rate, till the company failed, and I was thrown out of work. So I was looking about town for something to do. Money-gauge so low that I was ready for anything after a fortnight of searching and waiting. I happened to be walking through a down-town cross street, when I saw a placard in the window of a paper-box factory—"ENGINEER WANTED. GOOD SALARY." "That's just me," says I, so I went into the office and asked if I would do. The manager said he would try me. He did try me, and it seema I must have satisfied him, for he told me to stay.

Now it is about this manager and this paper-box factory that my story, such as it is, will be; and to make things all straight and plain, (a sort of oiling up at the start) let me attempt to describe them both.

First, then, the manager, Mr. Samuel Harkness, also sole owner of the factory. This Mr. Samuel Harkness was the greatest villain I ever came across. He'd a dead now, poor mar, and I hate to speak ill of those who are gone, 'cause, you see, it's much the same as chinnirg behind a man's back; but he was a villain all the same. Not one of your story-book villains, either. I have read lots of novels, romances, and such stuff lately, but I haven't acen anything about their villians that applies to my villain. Theirs are invariably thin, dark men; of lithe, serpentine motion; with yellow faces, straight black hair, and deep-set, fugitive eyes. Something of the evil one cropping out at every point. Why, Lord bless you, you'd recognize this kind of villain soon as every one clapped eyes on him just as you would a patent machine, with every hit of metal labeled. My villain wasn't tall, wasn't dark at all; was tolerably stont, in fact,

and well-to-do looking; didn't squirm a bit; and, to cut this description short, was just like most anybody else you meet. When I engaged under him, of course I didn't know anything about his villainy. How could I? He wasn't labeled.

And now for the factory itself. It was a somewhat dilapidated five-story brick concern. Engine in cellar (most every manufacturer had his own power then, instead of just belting on to the one big engine of the block, as they do now); office and samples, first floor; clipping and folding machines, second floor; girls pasting, sorting and trimming, on the third floor; stock of all sorts on the fourth and fifth. We used to turn out an immense deal of work with very few hands. There were about twenty-five or so girls, the manager, his clerk and office-boy, a man to hoist and do odd jobs, the fireman, and myself. Except when stock was taken in, or work sent out, there was nobody else in the building.

I generally kept to my own business, and staid down in the cellar nursing the old engine. She sadly needed it, being as rickety and patched up a contrivance as one carea to stay alongside of. She always reminded me of some old people you see, who are always in need of a pectoral for a cough, or a liniment for rheumatism, or something or other. This engine of mine was in such a state that she always wanted easing somewhere, a rivet here, a plug there, new stuffing, more felting, or a band around the whole boiler. From boiler to fly-wheel she was rickety, rickety. But there was no present danger to be apprehended; all was aafe enough with proper care and attention. There was the rub. I had to exercise that same proper care and attention all the time. But if I was so occupied, I could not help meeting the girls now and then in the passage-way. Most of them were of the common sort—coarse, vulgar creatures, that I never could abide. But there was one little pale-faced girl I took to straight off. She wasn't a bit like the others, and seemed as nice and quiet, and lady-like, as they were noisy and common. As I said, I took to her, and she—well, she didn't altogether snub me. We got to be fast friends soon. She told me the tale of her sad life; how her father had been a prosperous mechanic, and they had lived in such a dear little home; how the father died, and left her, a mere mite of a thing, in charge of her feeble mother and baby sister; and how she contrived to get along and keep grim famine from the door on the pittance of her earnings. Whenever I could, without making a fuss, I helped them along a little. And when we got well acquainted, I used to hurry through my work so as to be able to see her home every day after six o'clock. Sometimes, too, we used to go to concerts and lectures together; and very often I found time to visit them all of an evening. I hadn't said a word of love to her yet, but was waiting till my wages were increased enough to enable me to keep a home of my own, and then ask her to fill it. Of her state of feeling toward me I knew nothing, except that she looked upon and trusted me as a brother.

One thing used to rile me, though, and that was the aneaking sort of liking that Harkness seemed to have for her; and worse, he showed it plainly enough by the way he persecuted her with his odious attentions whenever he got the chance. She told me she would leave the place if she could only get another.

I have said that it was sixteen years ago that I entered the box factory. If you will take the trouble to subtract, you will find that makes 1857. It puts us just in the year of the great financial crash. I had been in the factory about three months, and was getting used to the general run of things; and though it was out of my line, and none of my business, I could not but notice how slack trade seemed to be. Rumors of failure up the street, down the street, on the corner, at Nos. 35 and 37 over the way met my ears. Rumors of failure past and failures to come. Rumors of great distress east, west and south. Rumors of a threatened general smash up. Money men tell me that when the market is tight, it only needs such a wholesale panic to bring down every one. It is the apprehension, not the reality, that does the work. But this is not telling my story, either.

Well, old Harkness kept on with his manufacturing, though I could see that, day by day, fewer calls for work were made. He always wore a cheerful smile through those troublous times, as much as to say, "Look at me, if you want to see a model man of business. I don't speculate. I don't get involved. Mark my consequent prosperity." Now when I see a man with a good deal of bluster and swagger about him, I always make up my mind that he is a coward at heart. And when some people parade their financial soundness, the Wall street animals always snuff rottenness somewhere. It must have been on this principle that I began to suspect that Harkness wasn't so safe after all.

One night I was delayed by an unexpected break down in gearing, and stayed in my cellar long after the girls, the clerk and the fireman had gone, hard at work tinkering at the engine. No one was in the factory but Harkness and myself. I do not think he suspected my presence. As I was taking off my overalls and fixing up, I heard a heavy dray come up to our door. There were four or five men with it, who were not our regular cartmen. They jumped out, were let in through the half-closed doors of the main floor above me, and were led up-stairs by Harkness. Presently they reappeared, bearing cases of various kinds of stock, fancy paper, gilding stuff, light machinery and

different odds and ends, with which they loaded the dray, and then drove off again. All was done in such a quiet, mysterious way, that it was evident that something wrong was being done. What could it be? The men were not robbers, for there was Mr. Harkness, and he sole owner of the factory. A man does not commit a larceny on his own property. I couldn't make it out at all.

I started to go. Just as I entered the office from below, Harkness came in by the passage-way door from the floor above. He started perceptibly when he saw me, but instantly regained his composure, and said, as cool as you please:

"Ah! you're late, Bill. What's wrong to-day? I hope you won't blow us up for a week or so yet. We're doing a staving business, Bill." (I think I see him now, "washing his hands with invisible soap in imperceptible water," and with that self-satisfied, hypocritical leer on his face.) "Just sent a load of fine boxes down to the *Winged Arrow*. She sails to-morrow, so we had to ship in a hurry. Fine boxes; and a beautiful vessel, Bill. Good night to you."

"Good night, sir," said I, and left.

As I went up the street, another dray passed, driven toward the factory. I had the curiosity to turn and watch to see, whether it, too, stopped there. It did, and when I reached the corner of Broadway, I stopped and looked back once more. There, in the darkening twilight, the same process of hurried loading was being repeated. It seemed to be all right. Harkness was there, but somehow, I wasn't quite satisfied. Trimming machines are (not fine, assorted, gilt-edged boxes, by any manner of means, you know. And I knew it, too, though, very likely old Harkness didn't give me credit for being so well posted. Well, if I couldn't settle the question, the next best thing was to give it up. And give it up I did.

Next morning I went over, as usual, to the factory. Jim, the stoker, opened the doors always, as he had to be early to tend to the fires, which we banked every night. I expected to see Jim, but was much surprised when I saw Harkness. This time it was he who came up through the cellar door and I through the other. As before, we met unexpectedly. Now it was my turn to be surprised. He was intensely pale, and seemed much agitated. With a strong effort of the will he strove to conceal his strange manner. He endeavored to speak calmly, and half-succeeded.

"Bill," said he, "Jim has tended to the engine, it's all right; come outside with me, I want to talk to you."

He turned to the cellar door and shouted: "Jim, come up here, come up at once. Run over to Mr. Brent's private house—you know where that is—and tell him not to discount that bill to-day. Be quick!"

"Yea sir, coming," sung out Jim leisurely. Suddenly he tore up the cellar steps. His face was ten shades paler than Harkness', an expression of horror was fixed on his features—an expression of agony and fear that I shall never forget. It haunts me still. It will stay by me till my dying day. Poor fellow, he's gone, too, since then.

Jim hardly stopped in his wild flight, as he hoarsely whispered, rather than cried:

"Hundred and ten on the steam gauge! Safety valve clogged!! Run for your lives!!!"

I took in the situation at once. Terrible the danger was. The old boiler was registered at eighty pounds to the square inch, but we never dared run higher than thirty. And a hundred and ten! We were standing directly over it, and while I hesitated, the pressure must be steadily rising. It flashed upon me that there might be no more danger in jumping down and pressing the safety valve, than in running away, and in spite of the awful panic, I had a prejudice against running.

I looked down from the doorway, upon the trembling, panting, straggling steam demon beneath. The safety valve apparatus was in plain sight.

From the end of the lever hung several huge links of chain.

I don't think I'm a coward—usually, at least, I know I am not. But that evidence of villainy took me all aback. I staggered and clung feebly to the lintel for support. The words seemed forced out of me, and not uttered with my volition:

"You accourel. You'd steal your insurance, would you?"

A sudden vindictive push sent me headlong. As I fell I heard a demoniac laugh.

"Peach, if you want to!"

And the door swung to with a click of the spring lock.

At the foot of the steps an open trap, the sub-cellar hatch. The distance was so great that I had time to notice all this. Would it hurt me much when I struck? Would it kill me outright?

And this was all.

When I came to, I found myself in a well remembered room. Bessie, my Bessie now, hung tenderly over me, waiting for the light of recognition to appear in my fevered eyes.

All was soon told. The boiler must have burst the very instant I struck. Harkness was killed by a flying piece of machinery; the would-be murderer had exchanged places with his victim, for I, strange as it may seem, was dug out of the ruins alive, and got off with only a broken arm. God forgive him.

Bessie insists that if it hadn't been for the accident, I should never have "spoken out." So, after all, it was a blessing in disguise.

The Habit of Saving.

Petty economies are generally disagreeable to those who have to practice them, and they always require much self-control; still they are the only means by which men in general can lay up a provision against sickness or old age. Liberal expenditures and a princely style of doing business constitute, in exceptional cases only, the road to success. More money is sometimes made by spending than by saving, since a good credit is thereby established, which takes the place of capital, and permits an otherwise impossible extension of business. But these instances are rare, and unless unusual ability and vigilance are employed, adventurous spirits come to grief. Among the large classes that live upon wages and salaries, there is (positively) no exception to the rule that a penny saved is a penny earned. Indeed, in some instances it is more, since time that has a money value is also wasted in unprofitable expenditure and health imperilled.

Wastefulness characterizes our domestic economy to an extent unheard of in more frugal countries, and we must always eat, drink, and be clothed with the best that the market affords. Hard work deserves fat living, is the national maxim, and almost the only unbeliever in it are the strangers within our gates, especially those of German origin or descent, who are rapidly accumulating fortunes by their exceptional frugality. There is a certain justification for our liberality of expenditure, even upon economic principles, for it has been definitely ascertained that the better the workman is fed, clothed and housed, the more productive he becomes as a mere machine. And so it happens that the pauper labor of Europe, the generally alleged excuse for a high tariff policy in this country, does not produce satisfactory economic results. Your machine, even if man is only regarded in the light of a producing agency, must be kept in good order, otherwise its products are meager. There is no economy in depriving ourselves of an abundant supply of nourishing food, decent raiment, and healthful shelter; but this affords no excuse for the prevalent sin of waste, nor does it justify spending hard-won wages upon expensive delicacies, unnecessarily large habitations, or costly trifles. There is far too slavish a subserviency to fashion among all classes. Economy in this respect would not only save money, but tend to create a much-needed independence, both in dress and in our whole manner of life.—Ex.

IMITATION.—This yarn about our "Crowa" is from the *Chicago Times*: The Crow delegation visited the Exposition, and while in the mechanical department they were much taken with a number of buzz-saws in motion. When a Milwaukee man with a wooden leg noticed them, and having read in his Sunday-school books that Indians were great imitators, determined to test the assertion. So Milwaukee stuck his timber-leg before the saw, and in a twinkling both leg and boot were on the floor. To say Thin Belly was astonished would be but a mild way of expressing his feelings. He looked at the boot and he looked at the man, then he tragically remarked, in his own native language: "It shall never be said that a pale face was more heroic than an Indian chief." He folded his blanket more closely about his body, gave a look of scorn at the surrounding whites, and then stuck one of his legs in front of the swift revolving cutters. But no sooner had he done so than he was more astonished than ever. He gave a yell, and frightened nearly to death, the attendant quickly shut off the steam, and the saw ceased its revolutions. Perhaps it was not demolished by the other Indians! There wasn't left a piece big enough for fine comb; and the attendant aforesaid narrowly escaped with his life. In the meantime the Milwaukee man had disappeared, and has not been seen since. As Blackfoot and his friends were leaving the hall, he was heard to say: "Osaw mileg, oph."

If anybody doubts this yarn, shoot him on the spot.

A CERTAIN French baron, whose scientific tastes led him to collect the skulls of celebrated persons, one day received a visit from a man with whom he was accustomed to deal.

"What do you bring me here?" asked the baron, as the man slowly unwrapped a carefully enveloped package.

"The skull of Shakespeare."

"Impossible!"

"I speak the truth, Monseigneur le Baron. Here is proof of what I say," said the dealer, producing some papers.

"But," replied the baron, drawing aside the drapery which concealed his own singular collection, "I already possess that skull."

"He must have been a rogue who sold you that," was the remark of the honest dealer.

"Who was it, monsieur?"

"Your father," said the baron, in a mild tone. "He sold it to me about twenty-nine years ago."

The broker was for a moment disconcerted, but then exclaimed, with vivacity:

"I understand. Be good enough to observe the small dimensions of the skull on your shelf. Remark the narrow occiput, the undeveloped forehead, where intelligence is still mute. It is Shakespeare's, certainly, but as a child about twelve or fourteen years old, whereas this is when he had attained a certain age, and had become the great genius of which England is so justly proud."

The baron bought the second head.

USEFUL INFORMATION.

Why do Paints Dry?

It was proved long ago, that linseed oil, when exposed to the air, became covered with a hard crust, and that this crust is produced by the absorption of oxygen. Paint made from oil and coloring matter alone does not dry because it parts with any thing or because it gives off any vapor, but because it becomes hard by the action of the atmosphere. It is stated in a recent work on paints that oil does not form even the basis of a paint. This is more technical than judicious. Oil alone, if laid on in thin, successive coats, becomes very hard and forms a durable and impervious varnish, which protects the wood beneath almost as well as paint would do, at least so far as moisture and air are concerned. Against the sun's rays, however, it is a poor defense. But as it has been found impossible to apply a sufficient coat of this varnish in any thing like a reasonable time, the oil has in general been mixed with various colored powders or pigments, which thicken it and thus enable us to lay on a heavier coat. Many of these pigments have no action on the oil, and it is always best that they should have no action. Compounds of lead, which are known to form chemical compounds with the oil, are amongst the very poorest paints. White lead is confessedly one of the least efficient of all our preservative agents, the authority referred to is the contrary notwithstanding.

When paint is applied to a fresh surface of wood, it often appears to dry in a short time. In this case, however, it will be found that the paint has not really dried, but that the oil has been absorbed by the wood; and in this case the pigment is often left in the form of a friable powder, loosely adherent to the surface to which it was applied. It rubs off very easily. This occurs to a less extent with white lead than with any other paint, simply because the lead combines with the oil and holds it on the surface, thus preventing its sinking in. We are inclined to regard this feature as one which confers no advantages upon white lead. It is probably better for the wood that as much oil as possible should soak into it, and it is no great disadvantage that the paint of the first coat should not adhere strongly. Where economy is an object, the absorption of the oil is prevented by first applying a coat of cheap sizing. The size fills up the pores of the wood, and prevents the sinking in of the oil. For in-door work, this answers very well, but for out-door purposes it is objectionable.

But all paints do not dry in the manner that we have mentioned. For in-door work, where it is desirable that the paint should dry rapidly and have a dead or non-reflecting surface, paint is generally mixed with turpentine. This is a volatile oil, which passes off rapidly when exposed to the air, and thus leaves the paint behind as a thin crust. This ability of the paint to resist atmospheric influences is thereby lessened; and this, for in-door work, is a matter of no consequence. It would be wrong, perhaps, to say that the oil of turpentine passes off entirely by evaporation, as a small portion probably becomes oxidated and remains behind. The amount so retained is, however, very small.—*American Homestead.*

A NEW WEATHER VANE.—The old weather-cock has two essential faults; it indicates a direction when there is a dead calm. It gives no means of learning the force of the wind; while it fails to show the true course of the same, by exhibiting merely its horizontal component. M. Tany proposes the arrangement to be attached to the ordinary lightning rod. Just above a suitable shoulder on the latter is placed a copper ring, grooved and made into a pulley easily rotated in a horizontal plane. Around this passes a knotted cord, the ends of which are secured to the extremities of a short stick or metal rod, to which is secured a simple streamer. Thus constructed the vane indicates a calm by falling vertically, and besides shows the strength of the wind by being blown out more or less from the lightning rod. As is evident, it is capable of motion in every direction, so that if there exist in the wind an upward tending vertical component, the same will be shown.

TANNING LAMB-SKINS WITH THE WOOL ON.—Wash the pelts in warm water, and remove all fleshy matter from the inner surface; then clean the wool with yellow soap, and rinse the soap thoroughly out. When this is done apply to the flesh side the following mixture for each pelt: Common salt and alum, one quarter of a pound of each, and half an ounce of borax, dissolved in a quart of warm water; add to this enough rye-meal to make a thick paste, and spread the mixture on the flesh side of the pelt. Fold the skin lengthwise and let it remain two weeks in an airy and shady place, then remove the paste from the surface; wash and dry. When nearly dry scrape the flesh side with a knife, working the pelt until it becomes thoroughly soft.

COVERING FOR STEAM PIPES.—Loose paper is wrapped round the pipes and painted with thin syrup; an this is painted a mixture of 4 bushels of loam, 6 bushels of sand or coke-dust, 3 pails of syrup, and 30 pounds of graphite; the mass is put on 20 mm. thick, and painted with oil or tar.

New Way of Coloring Metals.

It is announced that metals may be colored quickly and cheaply by forming on their surface a coating of a thin film of a sulphide. So for instance brass articles may be thus in five minutes coated with any color varying from gold to copper red, then to carmine, dark red, and from light anilin blue to a blue white, like sulphide of lead, and at last a reddish white, according to the thickness of the coat, which depends on the length of time the metal remains in the solution used. The colors possess the most beautiful luster, and if the articles to be colored have been previously thoroughly cleaned by means of acids and alkalies, they adhere so firmly that they may be operated upon by the polishing steel. To prepare the solution dissolve 1½ ounces of hyposulphite of soda in 1 pound of water, and add 1½ ounces of acetate of lead dissolved in ½ pound of water. When this clear solution is heated to 190° to 210° Fahr., it decomposes slowly and precipitates sulphide of lead in brown flocks. If metal is now present, a part of the sulphite of lead is deposited thereon, and, according to the thickness of the deposited sulphite of lead, the above-mentioned beautiful luster colors are produced. To produce an even coloring, the articles must be evenly heated. Iron treated with this solution takes a steel-blue color; zinc, a brown color; in the case of copper objects, the first gold color does not appear; lead and zinc are entirely indifferent. If instead of the acetate of lead an equal weight of sulphuric acid is added to the hyposulphite of soda, and the process carried on as before, the brass is covered with a very beautiful red, which is followed by a green, (which is not in the first-mentioned scale of colors,) and changes finally to a splendid brown with green and red iridescence. This last is a very durable coating, and may find special attention in manufactures. Very beautiful marbled designs can be produced by using a lead solution thickened with gum tragacanth, on brass which has been heated to 210° Fahr., and is afterward treated by the usual solution of sulphide of lead. The solution may be used several times.

PEPSIN AND THE DIGESTION OF FIBRIN WITH-OUT PEPSIN.—Experiments performed in the physiological laboratory of Heidelberg by Gustave Wolffhügel, under Kühne's direction, have led to the results essentially differing from those of Von Wittich and previous experimenters. 1. Wolffhügel finds that pepsin is not diffusible. 2. That the pyloric glands produce no pepsin. 3. That both hydrochloric and citric acids in solution, containing 0.4 per cent. at a temperature of 60° C., are capable of dissolving boiled fibrin, though somewhat slowly, and of converting it into peptone. 4. This power of forming peptone is perceptible in both acids at a temperature of 40° C. (104° F.) Though the action of nitric acid is decidedly slower, on this account nitric acid is to be preferred to hydrochloric in experiments on the presence and action of pepsin.

BRACNOT described a sugar obtained from mushrooms which was found to be mannite. A. Muntz examined several different species, and in some no mannite was found, but a sugar which was undoubtedly trehalose or mycose; some contained both sugars.

GOOD HEALTH.

Catching Cold.

Catching cold is "as easy as lying," but to explain the pathology thereof is by no means so readily done. In fact, until the recent researches of Dr. Rosenthal, whose work on the subject is attracting much notice in Europe, almost nothing was known about it except the mere fact that the ailments popularly ascribed to "cold" are liable to occur after the body, or some part of it, has been suddenly chilled, that is, cooled below the normal temperature. There are two factors concerned in this chilling process; the nature of the external medium—such as air or water—in contact with the body; and the condition of the blood-vessels.

Dry air has very little power to abstract heat, if it be still; but a slight wind, from the constant contact of fresh particles of cold air on the surface of the body, soon carries off its heat. If there is much moisture combined, the chilling effect reaches its maximum. Experience has shown that it is not so much the absolute lowness of temperature which gives rise to colds, as sudden changes from a higher to a lower. The reason of this was not understood until Dr. Rosenthal explained it. When the surface of a healthy animal is exposed to cold the cutaneous vessels contract, and by thus confining the blood to the interior of the body, prevent its cooling, and preserve the temperature of the vital organs, unless the application of cold be continued for a considerable time. This is not the case, however, when the animal has been previously exposed to warmth. The cutaneous vessels become paralyzed by the heat, and remain dilated even after the cold has been applied. The blood is thus exposed over a large surface and becomes rapidly cooled, even though the temperature of the surrounding medium is not very low.

In Rosenthal's experiments, animals were kept from 97 to 104 degrees F. The temperature of the animals themselves quickly rose during their confinement to 111 or 113 degrees. After their removal it not only sank to the normal temperature, but even below it, so that an animal which was from 108 to 111 degrees in the warming apparatus fell to 96.8 degrees, and remained at that for several days, although the room in which it was kept was moderately warm. Confinement in a close office, hot theater, or crowded ball-room, will have a similar effect on man. From such places, people pass out into the cool, open air, or sometimes even purposely station themselves in a draught. The blood, which is coursing through the dilated vessels of every part of the surface, is rapidly cooled, and, on its return to the internal organs, cools them much more quickly than it could have done had the person simply been exposed to cold without dilatation of the vessels by previous warmth. Rosenthal lays much stress on the great effect of sudden cooling in bringing on a cold, the sudden change in the temperature of the blood producing an irritating effect, and inducing inflammation in any weak organ in a way that a gradual alteration would not do. It would seem, however, that the alteration must be from a temperature above to one below the normal temperature of the blood, and not a mere reduction from one considerably above the normal to one at or near it.

When much heated we may stand for a short time in a cool atmosphere with impunity; but if we stand long enough to produce a shiver, we run a great risk of catching cold. The fact that it is more dangerous to sit for a long time in wet clothes, appears to indicate that a considerable and more gradual cooling, such as may then occur will produce similar effects to a slight cooling suddenly effected by exposure to a cold draught after being in a chill, in causing inflammations may be partly due to the effect of cold on the tissues themselves, and partly to the congestion which will occur in some parts when the blood is driven out of others by the contraction of their vessels. Rosenthal is inclined to ascribe the chief power to the former cause. Everybody knows the beneficial effect of cold baths, cold sponging, etc., in "hardening" persons, as it is termed, so that they are able to face almost any weather and to endure sudden changes of temperature without injury. Rosenthal considers that the frequent application of cold water or cool air increases the tone of the cutaneous vessels, so that they do not become so much relaxed by heat as to be unable to contract with sufficient force when necessary. The power of regulating the temperature is thus preserved, and the person prevented from catching cold.—*Journal of Chemistry.*

THE THERAPEUTIC USE OF DRY POWDERED BLOOD.—Dr. De Pascale, of Nice, several years ago published some observations on the very beneficial effect of warm blood taken the moment when extracted from the calf or ox, killed for general domestic use. He described at that time several cases of hæmoptysis, in which a complete cure had been effected by this treatment. In a paper recently published, he states that, finding among his English and American patients at Nice an unconquerable repugnance to such a remedy, he was led to adopt the plan of giving the blood in the form of dry powder. This is merely the revival of a practice which was in vogue many years ago, and which has occasionally been tried in this country. The blood of the ox, after being dried in a water-bath, is reduced to a very fine powder, and grated through a sieve. Dry blood can be taken for any length of time, being almost tasteless, and no repugnance is likely to be felt, as is often the case with raw meat. It can be taken as any common powder, mixed with soups, milk, marmalade, or chocolate, or enclosed in a wafer. In some cases, where even the name of blood might have offended the patient, Dr. De Pascale has given it, mixed with a small quantity of pepsin, under the name of "nutritive powders." The quantity he prescribes has varied according to the age, sex, or the state of health and digestive power of the patient. In general, he begins with thirty grains, which is increased according to circumstances; but the quantity must be left to the discretion of the physician.

HINT FOR PROJECTORS OF TOWNS AND STREETS.—It is worthy of remark that the arranging of the streets according to the cardinal points involves a sanitary objection of no mean import. No fact is better established than the necessity of sunlight to health, and no constitution can long endure, without ill effects, the total privation of its health-giving power. Every house on the South side of a street running East and West must have its front rooms, which are generally its living rooms, entirely deprived of the sun during the summer. This fact, coupled with that of the indoor life of American, and particularly Western women, is enough to account for a very large share of the nervous debility which so generally prevails. If the rectangular system must be adhered to in city arrangement, it would be far better that the lines of streets should be Northwest and Southeast, and the cross streets at right angles with them, than as now disposed; in this case the rooms in front or the rear of a house enjoy at least sunshine in the morning or evening. A strong proof that sunshine is wholesome is found in the fact that during epidemics people occupying rooms not exposed to sunlight are comparatively much worse off than those who enjoy that blessing.—*Manufacturer and Builder.*

DOMESTIC ECONOMY.

Food.

Though man does not live by bread alone, the bread portion of his sustenance is of very great importance. Ignoring the body is as fruitful in mischievous results as living for it alone. Body and soul are so dependent on each other that what affects one affects the other, and the more finely organized the body and the soul of any person may be, the greater must be his care to keep the two in perfect harmony.

It makes a world of difference what one eats. No class of people are so particular about their food, the quality, the mode of cooking, and the manner of serving, as those who live by their brains. They know that the human animal who would keep in the highest working order must be as carefully groomed, as nicely fed, as perfectly appointed as Goldsmith's Maid or Dexter, and they lay their plans accordingly. The cooking a potato, the compounding a cup of coffee, the broiling a steak, the making and baking a loaf of bread, are to them of vital importance, as indeed, they should be to everybody. A great many people never stop to enquire what particular diet is best for them, but following the injunctions of St. Paul, in a sense never intended by him, eat what is set before them, asking no questions for conscience sake or any other sake. If "hog and hominy" is the standard dish, they live on that; if hot soda biscuit and steak fried in lard are provided, that must reinforce their strength and content their appetites. It is a melancholy fact that horses and cows and dogs are more intelligent feeders than most human beings, and by natural consequence, they rarely have dyspepsia, gout or humors. If men and women would be governed in their diet by reason as rigidly as brutes are by instinct, a large portion of the ills that flesh is heir to would never be heard of.

How many who read this column understand the chemistry of food, and know just what they must eat to make them warm, what food builds up bone and sinew, and muscle, and what will best supply the nervous waste? How many understand the effect of diet on the temper and disposition of the mind, and avoid whatever will make them irritable, stupid and melancholy? How many mothers regulate the food of their children with reference to these results, and by so doing secure the tranquillity of their entire households? How many students are there, who, alive to the importance of proper diet, eat only food "convenient for them?"

The object of this article is not so much to impart knowledge as to awaken in other minds a desire to investigate this subject in its various bearings. There are hooks full of information of all sorts respecting the chemistry of food, the composition of bone, and muscle, and brain, and blood, which, if generally understood, and their suggestions carried out, would go far to banish sickness, and crime, and want.—*N. Y. Tribune.*

WATER IN THE HOUSE.—A prominent writer says: "Let nobody be deterred from bringing water in the house by any fears of failure and perplexity. You might just as well stop the circulation of blood in the body because it is subject to derangement, as to refuse the circulation of water in the house because now and then the pipe overflows, and your frescoes are ruined. Good workmen will prevent any such accident, but if they cannot, give up your frescoes; do not give up your life blood. When I see the farmhouses, the dairies, the kitchens, whose only source of supply is the well in the yard, or the hoghead at the back door, how life would be lengthened and sweetened if all this heavy, and hard and slow water-bringing could be supplanted by a turn of a screw, I wonder that we do not manage to introduce it, somehow, into our marriage contracts. What an increase of vital force would ensue; what a diminished demand for divorce; what a strengthening and upbuilding of the family bond, if a girl should refuse to marry until there was an inexhaustible supply of water, at least in the kitchen. A house without water works ought to be considered as incomplete as a house without doors, and as 'incomplete in the country as in the city.'"

HOW TO COOK FRESH FISH.—After fresh fish have been dressed well and washed, roll them in Indian meal, (after being sifted of course,) put them into a hot spider where there has been a large spoonful or two of lard melted. Sprinkle over some salt, then put the spider into the well heated oven and let them crisp over. Take them from the oven, lay them on a deep plate, turn all the fat out of the spider; (it will only be found fit for soap grease). Now put only one quarter of a pound of butter in the spider, put it over the fire, and when it is all melted, add one half tea cup of strong vinegar to the melted butter, stir quickly, and pour it over the fish and serve immediately. I find but very few people but what think this method of cooking fresh fish, is very superior to the more common way of cooking it without adding the vinegar gravy.—*Ohio Farmer.*



PUBLISHED BY
DEWEY & CO.

T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to see the SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, Jan. 24, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—A Floral Koh-i-Noor; State Fair Election of Officers. 49. Seed Wheat; The Poultry Business; Sequoia Gigantea; Wild Morning Glory; California Raisins; Small Sour Oranges; Look to Your Orchards; Sixth District Agricultural Society, 56. Jacob K. Snyder; Legislative; Basket Willow and Its Cultivation, 57.
ILLUSTRATIONS.—A Floral Koh-i-Noor, 49. Jacob K. Snyder; The Basket Willow, 57.
CORRESPONDENCE.—Notes of Travel; Roots, Pumpkins, Brown Bread, and Things in General; A Durable Whitewash; Eggs vs. Riches, 50. From Cloverdale, Sonoma County; Opium Poppy Culture; Irrigation—Summer Fallow; Profits of Plum Growing; Letter from Reno; Oakland Jottings, 51.
PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Grauges; Meetings; Etc., 52-53.
HOME CIRCLE.—“The Weather,” An Engineer’s Yarn; The Habit of Saving; Imitation, 54.
USEFUL INFORMATION.—Why do Paints Dry? A New Weather Vane; Tanning Lamb-Skins with the Wool On; Covering for Steam Pipes; New Way of Coloring Metals; Pepsin and the Digestion of Fibrin without Pepsin, 55.
GOOD HEALTH.—Catching Cold; The Therapeutic Use of Dry Powdered Blood; Hint for Projectors of Towns and Streets, 55.
DOMESTIC ECONOMY.—Food; Water in the House; How to Cook Fresh Fish, 55.
HOME AND FARM.—To Learn Farming; Farm Economy; Liberty in the Kitchen; To Clean a Rusty Plow, 58.
THE DAIRY.—Butter Making; Washing Butter; Turnip Flavor in Milk and Butter, 58.
THE APIARY.—The Luxury of Bee-Keeping, 58.
POULTRY YARD.—Guinea Fowls; Success with Hens, 59.
AGRICULTURAL NOTES from various counties in California; Eastern Oregon, 60.
MISCELLANEOUS.—Breath of the Nevada Upas; New Photometer, 51. How to Dress a Sheep; Jolly, 59.

Seed Wheat.

As late as the season may seem to be to an Eastern man for sowing fall wheat, we are asked the question, whether shrunken wheat, if otherwise sound and healthy, is not equally as good for seed as full, plump grain. As thousands of acres will yet be sown between this and April, it is not too late to talk about it. The argument used in favor of shriveled seed seems to be that we get more kernels in a bushel or cental than though the wheat were plump.

But who ever thought that a poor, half developed animal would produce as fine offspring as one faultless in form and in a perfect condition of flesh? It is the same with vegetables as with animals, like will, or has a tendency to produce like. But this is not the strong ground of our assumption, but it is, that in every grain of wheat is stored away the nutriment which is to support the germ in the first stage of its growth and before the root performs that function, and hence the more there is of this germ food, the stronger and better will be the development.

Never plant or sow imperfect seed of any kind if better can be obtained at any price. Better grind your shriveled grain into flour and pay a little more than yours is worth, for sound, plump seed.

TAIL CORN.—A Portland correspondent asks us if Indian corn or maize, of the largest kind, was ever known to attain a height of twenty feet.

ANSWER.—We once saw at an agricultural fair in Michigan, a stalk of corn, of the yellow gourd seed variety, that was 19 feet and 4 inches in height. We have heard stories of its having been grown 24 feet, but nothing authentic.

The Poultry Business.

It is very evident from the increasing interest shown in the growing of poultry all over the country, that the business is being rapidly extended, and yet it does not keep pace with the demand.

East, west, north and south, eggs are worth more in all the great markets than they were ten years ago. Fat chickens at the east, and very poor ones here, maintain high prices as compared with other flesh food, and growers are making as careful selections from the different breeds for special purposes, as ever did the cattle or sheep grower in the choice of his stock.

All seem to be determined to make the most of the situation and use every means available to accomplish it. Thus, to obtain the most value at the least cost for keeping, one—because eggs sell by the dozen—will grow the smallest breed of hens he can get, and produce an egg not actually too small for marketing. Hence we see smaller hens’ eggs in San Francisco, probably, than in any other of the world’s markets.

So when flesh is the object, the birds are sold by the pair with very little regard to their size, weight or condition. But the moment custom establishes the rule that the flesh is to be sold by the pound, as with turkeys generally, all are eager to get their birds not only tolerably fat, but with as large and weighty a body as possible. There are other points also to which the careful breeder gives his attention. If he wants a breed solely for eggs, he chooses the non-sitters; but if to raise chicks, he looks for those which make the best mothers. So that poultry growing is fast becoming a science, well worthy of attention, because it is one that now does, and in the future will, always pay.

Sequoia Gigantea.

It is a noticeable feature in the growth of the young trees of the Sequoia gigantea, that the body of the trunk at the ground attains to a large proportionate size as compared with most other trees of the same age, and from the ground tapers rapidly upward. In advancing a reason for this, we will have to assume that nature, even in the form of a tree, thinks; or in other words, knows just what it is about. The Sequoia in its native soil, climate and altitude above the sea, grows to a very great height and to an immense size.

These conditions must be met in a growth of trunk and root that will stand the immense strain from the great leverage of its vast trunk and wide spread foliage in heavy gales of wind. The tree knows this, and commences to make provision for it while yet quite young; it is therefore the habit of the tree, in any soil or climate where it will grow, to enlarge its trunk at and near the surface of the ground. After the trees in their native forests have assumed considerable size, and are standing quite closely together, each assisting the other to some extent in bearing up against the force of the winds, this difference in the growth of the trunk as between its top and bottom measurably disappears.

The Sequoia, like other trees, can never attain to that great height when grown singly in open ground, that it would in compact forest form, where each tree is striving to overtop its fellow in its race for sunlight; nor can we hardly expect it to find as genial a climate around the bay of San Francisco as in its native wilds.

CRANBERRY CULTURE.—We have given a somewhat lengthy dissertation on the culture of the cranberry in this number because we have had several inquiries on the subject and we like to oblige our readers when we can. There is time enough to send to any of the Eastern cranberry growers for vines for planting in the spring, two months later than this; but as soon as the frosts of the East will admit of taking up and forwarding the vines it should be done, if intended for California.

DANDY JIM.—This is the name given to the celebrated short-horned bull imported by Major Vernon of the firm of Vernon & Flint, Oakland. This bull, which is advertised in our column, is from the celebrated Batea blood stock and as good evidence of his quality, he took the first premium at the late State Fair and also at the Santa Clara Fair. He is now at Oakland where he can be seen by those who admire fine stock.

California Raisins.

Year by year we see an increase in the quantity and quality of California made raisins, and there seems a disposition among grape growers to enlarge the area of the raisin making varieties. It is a move in the right direction and will result in converting many a wine vineyard into a raisin growing one.

But before we can become successful competitors with the best imported raisins, we must make a great advance in our mode of drying and fitting them for the market. Our raisins do not present that fine appearance either as regards size of fruit or bunch, that we see in the imported Malaga, nor do we retain the peculiar bloom upon them which gives to the fruit such a tempting appearance.

In raising grapes for raisins of large size and prepossessing appearance, it is important that the vines receive extra care over those grown simply for wine. Size depends upon two requisites at least; the soil should be almost annually enriched during winter, in no other way can we secure that strength of growth necessary to the production of large fruit.

Next, it is important that too many clusters are not left to grow upon a single branch. It may answer in our virgin soils and fervid sunshine to allow two or even three bunches upon very strong vines, but in Spain, where the best raisins are made, but a single bunch is ever allowed to a single shoot, to ripen for raisin making; the smaller bunches are sacrificed by clipping as soon as the best of two or three branches can be determined, which is as soon as the fruit is fairly set.

There is also a further process for producing fruit bunches void of small berries, it is this: When the grapes have attained the size of peas, or perhaps one-fourth their full growth, clip with shears from the small end of the bunch from three to five of the smallest grapes. This leaves the remainder more nearly of equal size, and gives to bunch raisins a greatly improved appearance.

Wild Morning Glory.

This plant is rapidly becoming a great pest in many places, and if those who have not yet suffered from it knew how extremely troublesome it is when once it gets a root-hold in the soil, no pains or expense would be spared in eradicating every vine of it as it first makes its appearance. No ordinary means, such as frequent plowing and hoeing will ever eradicate it, at least we have never heard of it being done, where any other crop is growing on the same ground.

If allowed to go to seed it multiplies rapidly, and plowing and breaking the roots seems only to renew its vigor, for every section of the broken root will grow again if in any kind of moist soil and covered at any depth the plow reaches. The only effectual way is to let the ground lie entirely fallow of any other crop; then as often as it appears above ground, plow deeply, and with a fine toothed harrow, with teeth standing forward, comb up from the soil any root the harrow reaches, and at the head lands clean the harrow of the roots, and when dry burn them.

Repeat the process through the entire of one season, never allowing a plant to get more than two inches above ground before replowing, and a single season has in some instances, on a small scale been sufficient to accomplish their complete destruction. But among grain or grass crops or fruit trees or grape vines we know of no remedy. Will some one who has been successful in eradicating it give us the result of their experience.

THE FIVE PER CENT. ACT.—This most obnoxious law, allowing the counties of the State to vote a five per cent. subsidy on the taxable property of the county, in aid of railroads or other similar objects, is repealed. Counties cannot now burden themselves with debt by a simple vote of the majority in favor of forcing the minority to help subsidize a monopolizing railroad or other company. Those counties which had done so before the repeal of the law are of course permitted to carry out their contracts if they made any, in good faith if it ruin the people, but they can do no more of it.

ON FILE.—Foreign growths; Poultry, Dry Creek; A new fibrous plant; About Raisin grapes; Letter from D. E. About Jute Mills; The corn worm; Further Notes of Stockton; Letter from Rochester, N.Y.; From W. F. C. Badger Flat; Silk Worm Eggs, Felix Gillet; White Suppernong Grapes; “Subsoiler” on Summer Fallowing; Ideas; Sheep Husbandry, etc.

Look to Your Orchards.

There were many young orchards started in California last year. Orchards of apples, pears, cherries, peaches and oranges. Some of the trees from being in bad condition when set out, or the faulty manner of their setting, did not live. These should be removed and new trees obtained to take their place the moment the ground is dry enough for transplanting.

Nothing mars the beauty of an orchard so much as inequality in the size of the trees, with here and there one gone entirely. Farmers just at this season are likely to be very busy with the sowing of wheat, and hardly feel as though they could spare a day even of their own time or that of their team, to go to the nearest nursery for the necessary trees; but go you should, get the trees, add to your last year’s setting two or three more rows, extend yearly your orchard grounds, and with proper care they will become the best paying acres you possess.

Add to your varieties as well as the number of your trees; there is nothing more gratifying or more health giving than a continued succession of ripe fruits for family use; nothing that gives to a homestead more of the appearance of comfort and thrift than a well kept orchard of choice fruits.

Sixth District Agricultural Society.

The Society met at the Court-house on Saturday afternoon, Jan. 3d, the President, J. S. Mattison in the chair.

Is California Overrated?

The President introduced Mr. Culver from New York. Mr. Culver said that he was disappointed in California and thought it was a poor country for farming, aside from wheat raising. In his travels through the State he had seen thousands of cattle that were not in his opinion, worth one dollar per head. He expected to find a good grazing country and was very much disappointed. He thought California greatly overrated.

Mr. Morgan said that California was a much better farming country than the gentleman thought. All kinds of grain did well here as facts would show. And as good corn could be raised in this county as anywhere else in the United States.

Mr. Kinsley: The corn has always done well on my ranch. This past season he had planted the large yellow Dent corn, the seed of which he had procured from Los Angeles, and it was the best he had ever raised.

Other members spoke to the same effect as the last two gentlemen and the discussion closed without convincing the gentlemen from New York that California is the finest agricultural country in the world.

Mr. Mattison stated that the Board of Managers had not been able to see Mr. Thomas and Senator Beck, but were informed by Mr. Adams that Mr. Thomas would be in Santa Cruz next Monday, when the Board would try and meet him, on the matter of the appropriation.

A communication was received from Mr. Adams stating that he had seeds and plants for distribution and would be happy to give any member of the Society seeds and plants, and instruct them in the propagation of the same. —Santa Cruz Sentinel.

Small Sour Oranges.

There are altogether too many miserable, little sour oranges hawked about the streets by the wagon load at twenty-five cents a dozen. This is not the way things should be. If the many semi-tropical fruit growers who are now making such large additions to their former orange groves, do not take the requisite care to produce fine, large, sweet fruit, salable in every market, they will find to their disappointment and cost that orange growing don’t pay.

As with apples and pears, it is the best varieties only that are worth cultivating, and orange growers should determine now, before the trees are a year older, to engraft the better varieties upon their, at present miserable seedlings. It will certainly pay; but so on, add acre to acre of inferior sorts and you will be complaining in less than five years that there is no paying market for oranges; when if the truth be told as regards all the better varieties, there will be a wider and larger demand for good sizeable sweet oranges than now.

BEET SUGAR.—In the Report of the Board of Directors to the members of the State Agricultural Society at the recent annual meeting in Sacramento, we find the following:

The reduction of beet sugar has proved a great success, not only in Sacramento but in Alameda county. About \$1,000,000 is invested in this enterprise. The yield of tons of beet being 20,000, from which about 3,000,000 pounds of saccharine matter was created. This yield will be greatly increased during the coming year.

Jacob R. Snyder.

The reminiscences of the early pioneers and adventurers on the Pacific Coast must ever possess a peculiar interest for the Californian. Green in their memory will ever remain the trials and incidents of early life in this land of golden promise. These pioneers of civilization constitute no ordinary class of adventurers. Resolute, ambitious, and enduring, looking into the great and possible future of this Western slope, and possessing the sagacious mind to grasp true conclusions, and the indomitable will to execute just means to attain desired ends, these heroic pioneers by their subsequent career have proved that they were equal to the great mission assigned them—that of carrying the arts, institutions, and real essence of American civilization from their Eastern homes and implanting it upon the shores of another ocean. Among the many who have shown their eminent fitness for the important tasks assigned them, none merits this humble tribute to their characteristics and peculiar worth more fully than he of whom we now speak.

Jacob R. Snyder was born in Philadelphia on the 23d of August, 1813. At an early age he was apprenticed to a house carpenter, but his keen foresight showed him there was in the broad and beautiful West a great hidden destiny, a destiny that only required the hand of industry to consummate; and, abandoning the luxuries of civilization and the comforts of a well settled country, he left for the land of primeval forests and untutored savages. At the age of twenty-one we find him emigrating West. He settled at the Falls of the Ohio River, in what was then an almost unbroken forest, but where now stands the City of New Albany. Here Mr. Snyder remained for several years, but in 1845, being thoroughly imbued with the spirit of adventure, he determined to push forward to the Pacific. In the spring of that year he formed one of a party of mine who made Independence, Missouri, their rendezvous preparatory to the arduous journey across the plains. All necessary preparations being made, the party on the 5th of May struck camp and started on their hazardous and tedious undertaking. Besides Major Snyder, there were in the company Judge Blackburn, George McDougall, W. F. Swazy, John Lewis, Hiram Enshaw, (afterwards lieutenant in the California Battalion), and Messrs. Wright and Phen. The party crossed the Sierra Nevada Mountains by what was afterwards known as the Truckee route.

At this time, however, there was no trail, and they spent many days in these rugged hills seeking a proper route, but after suffering almost incredible hardships, on the 23d of September they reached Johnson's ranch on Bear river, and from there went to Sutter's Fort, where the company dispersed. Major Snyder traveled down to Yerba Buena, then numbering less than two hundred inhabitants, whence, after staying a short time, he passed down to Santa Cruz. Owing to a disposition on the part of the natives to check the immigration from the United States, and not only to prevent the ingress of new comers, but to drive out those already in the country, Major Snyder, in the spring of 1846, in connection with others, attempted to get a grant of land from Pio Pico, on the San Jacinto, where a fort might be erected and a protection granted to immigrants. But Pio Pico distrusting the movement refused a grant. Soon after the word reached him of the Bear Flag party. He was subsequently detained by Lieutenant Gillespie from Santa Cruz, communicate in regard to public affairs with Colonel Fremont, then at Pacheco Pass. He was united with Fremont's forces and returned to Monterey, prior to the latter starting on the Southern campaign. Owing to his knowledge of the country and the customs of the people, Mr. Snyder was of much service in bringing this campaign to a successful issue. He was next detailed to duty in a company of mounted riflemen under Captain Fontleroy, at the Mission San Juan, where he remained till Commodore Stockton returned to Monterey. He was then entrusted by the latter to organize an artillery company. He was afterwards commissioned Quartermaster of Fremont's Battalion, with office he filled until the close of the war. He was then appointed by Governor Mason, Surveyor General for the Middle Department of California, where his services were called into frequent activity in settling disputed questions of boundary, but he so discharged his arduous duties that he gained the esteem and confidence of the people. In 1851, Mr. Snyder received a Senatorial nomination from the city of San Francisco, and was elected by a large majority. The Legislature he proved himself admirably adapted to the position he held. He was cool and practical in his views, untiring in his perseverance, and devoted to principle.

In 1859 he moved to Sonoma and purchased his present property. He purchased twenty-four acres from Colonel Haraszthy, a one hundred and twenty-five acres from the Sonoma. He has now a large vineyard of an extensive wine cellar. He has, since his organization, been President of the Wine Growers' Association, and has done much to the industry of viniculture a success.

Legislative.

The Legislature has now got pretty well into the business of the session. There are at this time, some 150 bills before the various Senate committees, which will be reported for action as fast as they can be considered in Committee. There is an evident disposition among the members to pay a reasonable degree of deference to the universal demand for retrenchment, the avoidance of special legislation, and a careful scrutiny into the manner in which public money is being expended, etc. With the present temper of the people and disposition of the Legislature there is a conspicuous absence of the thieving and jobbing bills, which have in times past so disgraced the annals of California legislation.

Repeal of the Five Per Cent. Law.

One of the most important measures finally disposed of is the repeal of the odious Five-



JACOB R. SNYDER.*

Per-Cent. Law, which received the sanction of the Governor on the 14th instant.

Fares and Freights.

The most important measure now before the Legislature is Mr. Freeman's Bill regulating Fares and Freights. There is an almost universal demand for legislation of some kind upon this matter; but it is a most intricate and difficult subject to approach and should be carefully handled; there is no doubt but that the bill will pass in some shape, for the people must be protected to some extent from the excessive and discriminating charges of the C.P.R.R. Co. Whatever may now be done, however, it will be but the starting point of reform in this direction, and will only serve as something which may be studied and experimented upon until the next Legislature meets, when we shall be able to legislate more understandingly than we can possibly do now. This question is now before the Legislatures of quite a number of States—probably every one which is in session—and it is also prominently before Congress, in the form of a Bill "To Regulate Commerce by Railroads between the several States."

The discussion of the question of the right of the Government to regulate fares and freights, is definitely settled by the people, by legislatures and by the judiciary—the only question now remaining is "how to do it."

Irrigation.

The question next in importance to California, is that of irrigation. Many plans have been proposed to secure some general and uniform system of irrigation for the State. It is now quite generally conceded that it will not do to allow the waters which may be so used to pass into private hands; hence some plan must be adopted which will keep their control either within the several counties or in the State itself.

A bill was introduced, last week, by Senator Bush, of Los Angeles, which seems to meet with much favor, and bids fair to become the outline of a general system for the State. It places the waters within each county under the control of the county itself. Although it is designed especially for Los Angeles, whose waters and their use are almost exclusively confined to that county alone, we see no reason why its general principles may not be extended to other counties, where it may be desirable to extend the same ditch or irrigating, and, perhaps, transportation canal from one county to another. Mr. Bush's bill provides for a County Superintendent of irrigation, who, with a Board of Water Commissioners, shall establish a uniform system for the county, and have charge of the same. This plan is very much like that which has been so successfully adopt-

*This engraving, with some of the facts accompanying it, is taken from Menefee's Sketch Book of Napa, Sonoma, Lake and Mendocino counties, now published by Haas Bros., Napa City, Cal.

ed in Utah. We shall have more to say upon this matter at another time.

The Apportionment Question

Is one in which the agricultural counties, and San Francisco especially, is interested, in order that the central and coast regions of the State may have their due share of representation at the State Capital—a right of which they are now unjustly deprived. The matter is before the Legislature; but we fear there will not be that spirit of fairness and equality manifested in its settlement which should obtain. We trust, however, wise counsels will prevail and even-handed justice be meted out.

Equal Taxation.

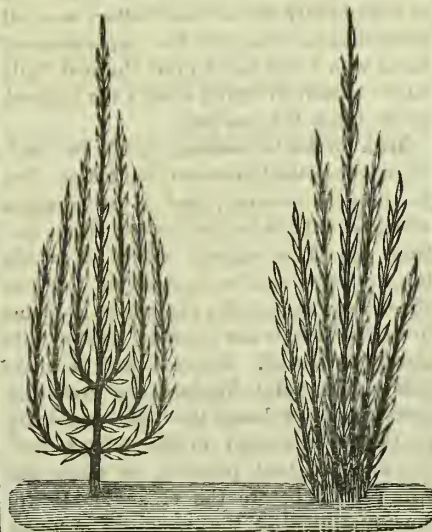
Mr. Evans has a bill before the Legislature, which proposes a remedy for the double taxation that has heretofore borne so hard upon small property men who are compelled to raise money upon real estate by mortgage. This bill provides for the assessment of mortgaged property to its full value, less the amount of mortgage or lien which there may be upon it—the mortgages to be assessed to the parties which own them. This, or some similar bill, ought certainly to become a law.

The No-Fence Law.

Originally intended only for Fresno county, but now applying to Kern, Tulare, Ventura and Santa Barbara, which passed the Assembly on the 12th instant is now, by reference of the Senate, in the hands of the Judiciary Committee for further consideration. In the meantime numerous signed petitions are coming in in favor of its final passage. It should and doubtless will become a law soon—if not even before we go to press with the present issue. The farmers of Kern and Tulare are especially anxious about it, as upon its passage depends the sowing of a large breadth of grain the present season; much further delay will make it too late for sowing.

After Sargent's Land Bill.

The bill introduced by Mr. Sargent to forbid the listing or transfer of any more swamp land from the Federal Government to the State, is meeting with most marked disapproval by his constituency here. There is quite a general belief that there is a very large cat carefully concealed in this metaphorical meal tub, and a concurrent resolution has been introduced, instructing our Senators and Representatives in Congress to oppose the passage of the bill in that body. The bill has been reviewed in an able and exhaustive speech by Mr. Speaker Estee and its doubtful character is quite fully established by the great interest which the railroad men, in and out of the Legislature,



THE BASKET WILLOW.

manifest in the defeat of the condemnatory resolutions. The resolutions passed to engrossment on Tuesday.

Unwarrantable Expenditures of Public Money.

The Legislature is looking closely after the expenditures in the construction of public buildings, etc. The manner in which the public money was squandered in the construction of the Normal School, has already shown how easy it is to swindle the people when such work is not closely looked after. Suspicious having become current that there was something wrong about the erection of one of the buildings of the State University at Oakland, a committee of investigation has been appointed who are now engaged in that labor. The testimony just concluded, shows that even if no frauds were intended there has been a looseness manifested on the part of those who had charge of that work which is highly culpable. There is much reason to believe that much money has been carelessly expended there, which a little care might have saved, and that the State has suffered to the amount of some \$40,000, and finds herself with an inferiorly constructed building on her hands. Dr. Merritt of Oakland, who has had the matter under his special charge, owes it to himself as well as to the State to see that the investigation is complete and thorough.

Rumor also has it that there is something wrong about the Insane Asylum now in progress of construction at Napa. The law authorizing the work assumed that \$300,000 only would be required for its completion. It is now claimed by some that \$1,500,000 will be called

for. It is the story of the San Francisco City Hall repeated on a smaller scale.

It is proposed by Senator Oulton to introduce a bill imposing upon commissioners a penalty for exceeding the law in the matter of such expenditures. Should not the architects, who are the first to mislead in such matters, by handing in to commissioners erroneous estimates, come in for a little legislation?

An Apprentice Law.

Senator Perkins has given notice of the introduction of an Apprentice Law. Such a law is no doubt one of the needs of the State—if it can so be drawn with equal and exact justice to both the apprentice and master. As it is, there is a disinclination among employers to receive boys with a view of really teaching them anything in the way of a trade, for the reason that they can have no control over them for their after service by way of remuneration. The consequence is that our young men are too generally growing up in idleness and vice. A good apprentice law would no doubt do much towards settling the question of what to do with our boys.

New Counties.

It is proposed to establish two new counties—one by setting off a portion of Tulare and Kern into a new county, with a county seat at Porterville. We are not aware that any bill to this effect has yet been presented to the Legislature.

But Mr. Tully, of Monterey, has favorably reported from a committee a bill creating the county of San Benito out of that portion of Monterey county lying east of the mountains. About seven-eighths of the inhabitants living in the proposed county have petitioned for such action. The new county would contain about 5,000 inhabitants, and \$4,500,000 of taxable property; leaving Monterey still with \$8,000,000. The bill will probably become a law.

Constitutional Convention.

The papers are generally, with the exception of the Sacramento Union, averse to the scheme for a Constitutional Convention, as a needless expenditure of the public money. There is no reason why the next Legislature may not attend to such duty, as if the matter is referred to that body its members (with the exception of the hold-over Senators) may be elected with special reference to such a work. It would no doubt greatly benefit Sacramento to have a Constitutional Convention meet in that city next summer; but such benefit would be at the expense of the balance of the State.

Basket Willow and its Cultivation.

Mr. A. V. Wallace, in the New York Tribune, describes his mode of cultivating the Osier Willow, as follows:

While the willow is very hardy and will grow almost anywhere, where vegetation can exist, I find the land most specially adapted to it is muck, or made soil that has received the drainage and wash from higher surfaces. Such land should produce from four to five tons per acre. As the soil grows more wet the product will fall off until one or two tons would be a good yield from a surface covered with water from one to two months during the growing season. On dry, hilly, and gravelly lands, with little depth of soil, and good natural drainage, the product is generally light without fertilizers—from one or two tons of green willows.

The land should be deeply ploughed and pulverized, and the sods and grass roots should be removed as far as possible. The cuttings should be eight inches in length, of well ripened wood, and set six inches deep, at an angle of 45 degrees with the rows, the rows thirty inches apart, and the sets six inches in the rows. As the cuttings are not expensive, it is better to thus insure a good stand than to be to the trouble of re setting the next season. If the ground is dry enough, I prefer to cultivate some small crop, like beans, between the rows the first season, as it will keep down grass and weeds until the willows can get a start.

The first year they will amount to nothing for market, but must be out just the same, as they will branch the second year if not so treated, and spoil them for peeling. The second year a light crop of from one to two tons may be expected, and so on to the third and fourth years, when the willows will become well rooted, and produce as large crops as ever. Particular care should be used in entering them close to the ground, as they will stool out better and facilitate the subsequent cutting. The cost of cutting is about \$12 per acre.

An English writer, quoted in the Monthly Report of the Department of Agriculture, for September, 1873, describes a mode of planting by means of a frame, which marks the particular spot at which each cutting is to be inserted in the ground. This writer shows the importance of pushing the cuttings their whole length into the soil. Rods so planted, he says, send out straight shoots, and when the crop is cut off close to the ground, manure can be applied to the land, plowed between the rows and harrowed over, and kept as clean as an ordinary arable field. This, he adds, by many, will be looked upon very skeptically, but I have practiced it for some years, and have ever reason to be satisfied with the result.

The accompanying illustration shows the difference between willows growing direct from the ground and those planted in the ordinary way.

HOME AND FARM.

To Learn Farming.

There is just one road open to all poor men who want to become, but are not good farmers, and that is by no means a royal road. It is to go to work with every power of their heads and hands and hearts as common laborers on other men's farms. Be careful whom you select for your teacher, and make sure that he is enterprising, economical, intelligent, and successful. Let him understand your object in going to him, and accept the fact at the outset that you are working not for money, but for instruction. Do with alacrity whatever you may be set to do, whether it be to clean out a hog-pen or to break a colt. You will have it all to do for yourself some day, and now is the chance to learn how. Make yourself the most valuable hand on the place, and show that you are worth the trouble of teaching. In this way you may learn so much in a single year—may "get the knack" of so much that is indispensable to success—that you may safely set up on your account with a snug place of twenty acres or more; and if you have made the reputation you have had the opportunity to make, your instructor and neighbors will be glad to give you a helping hand. If you really have the right stuff in you, they will have found it out, and the closest fisted of them all will sell you land on time, if he has it to sell, and will trust you with a yoke of oxen or a horse, for he well knows you are as safe to trust as a savings bank. If you can't reach this in one year, take two, take three. If you get your board for your work, and have a chance to study at odd times, they will be the most profitable years of your whole life, and the knowledge you have gained will be worth more to you than a capital of \$10,000 without it.

When the proper time comes, (don't hurry,) buy a small farm that you are sure you can manage, and don't be afraid to run in debt for whatever you really need to work it with successfully, for you will be sure to come out right in the end.—*Hearth and Home.*

Farm Economy.

Farmers do not have the ready money to spend that some in other business have, they can be just as extravagant with what they do have as anybody else. In these times, it is not a question of what one makes, as much as what he saves. It has been a good fall for saving. The pleasant weather has given an opportunity to prepare land for another year's crop, and save hiring help next spring. It also gives time to accumulate a stock of fertilizers, in the materials wasting about the farm, and save spending money to purchase next spring. In addition to this every farm has more or less dead wood, or cut timber lying around, that should be gathered up and added to the wood pile, so as to save in fuel. The fact is some commence their winter vacation too soon. The ordinary fall work being over, they do nothing but the chores, the only winter work, and spend the best part of the day in idleness, while true economy would suggest that there are many things that can be done during the pleasant weeks of late fall, that will save doing it in the spring, when work presses, and when the lateness of the season may crowd work together, requiring an extra expenditure of money. Money is sometimes paid out for support of the family that could be saved by gathering from the farm. "Gather up the fragments, that nothing be lost," is a good precept for the farmer to act upon, in the late fall, after the usual crops have been harvested, and then if times are hard and money scarce, there are no class of people that are so well provided for as the farmer. They have on hand the food to eat and fuel to keep them warm, gathered by their own hands.—*N. E. Homestead.*

LIBERTY IN THE KITCHEN.—Does it ever occur to you to inquire whether the "Spring fever" which makes you so languid and idle, finds its way into the kitchen? Do you realize that after the exhaust-labors of spring cleaning and the enervating warmth of the season Mary Ann and Bridget may feel as tired as yourself? The little restful trip you have taken has reinvigorated you, and why should you not try the same remedy with your servants. If you live in the city, give them an hour's

rider into the country, and the chances to make a picnic dinner, or if in the country, let Pat take the "girls" in the wagon, a pleasant ride in search of some pleasant sight, or some old friend. Some dyspeptic body may suggest that you must not give the "help" any liberties. He will quote the proverb about giving an inch and taking an ell, but our experience has proved that such is not in the case. Among those who serve us faithfully are some to whom much of motherly advice has been given, and who also have been allowed many breathing spells in their work. The dullest of comprehension will soon learn to love and respect those who treat them with consideration, and in our own home many an hour of extra hard work has been cheerfully done for love's sake, which we could not have got done for hire.—*Christian Weekly.*

To clean a rusty plow use coal oil and a rusty brick; the oil should be poured on the iron and rubbed with the brick until bright. We have sometimes used strong vinegar with good effect. In this as in other matters, "an ounce of prevention is worth a pound of cure," and a little grease rubbed on while the plow is bright, will save all the trouble.—*Ex.*

THE DAIRY.

Butter Making.

The San Francisco butter company are now making butter entirely independent of any assistance from the cow, which has until recently been considered the best machine for the manufacture of this almost indispensable article of food, as well as luxury to many. This butter made from tallow is sold at a low rate, 25 cents a pound, and of course comes in competition with legitimately made butter from the cream of milk.

It is important therefore in order to keep up the demand for the genuine article, that the utmost care be taken to make a superior article from cream. In aid of those who are too much in the habit of making only second-rate butter, we shall from time to time give the experience of those who know how to put the real "gilt edge" butter, bringing always the highest price, upon the markets.

Milk for butter-making should be cooled, not to make the cream rise faster, but to prevent souring, and other changes which would hinder the cream from getting up. The highest point at which these changes can be stopped, or held in check long enough for the cream to come to the surface, is the point to which milk should be cooled. Every degree it sinks below that point hinders the creaming process, and prolongs the time necessary for the milk to stand in the dairy-house. Not to reach that point is to make the milk thicken before the cream is all up, thus diminishing the yield. The great majority of experimenters agree in putting that point at 60 degrees, but variations that reach from five degrees above to five below are made by some parties with very fair success.

The common error in private dairies is to allow the milk to be too warm in hot weather, and too cold in cold weather. The cream will not rise perfectly in either case, and the resulting butter will be imperfect. The loss sustained in failing to get all the butter that a given quantity of milk is capable of making, is much greater than is generally suspected. Few farmers know how much milk they are taking to make a pound of butter. They seldom weigh or measure, or even guess, at the quantity they are using. From what we have seen, and from facts gathered during a series of years, it appears that 28 and 30 lbs. are usually required. Where the facts could be got at, the amount was varied all the way from 34 down to 20 pounds. If the practices in creaming and churning could be suddenly made so perfect as to get all the butter from the milk that it is capable of yielding, every fifth cow could be thrown out of the dairy, and the same quantity as at present obtained. If farmers would take a little pains to know more precisely what they are doing, such losses would not be endured.

Creameries and butter factories usually give us precise figures, but even they are

not always fortunate in showing the happiest results. In factories recently visited, the difference in amount required for a pound of butter has run from 22 to 28 pounds, and this difference is due, not to the milk, but to the different modes of managing it. In a future number, the practical operations of butter making associations will be analyzed and the effect of the different practices explained. Comments are therefore omitted here.

There is no mode of raising cream so perfect as to separate all the cream from the milk. It has been already remarked that different parts of it rise unequally. The larger globules meet with less resistance in proportion to their bulk than the smaller ones, and hence they get to the surface soonest. The smaller the globules the slower they rise; and some of them dwindle down to such minuteness that they would not rise through three inches in a week, if the milk could be kept sweet that length of time. Cream will continue to rise till the milk gets thick, be that time short or long. The best part rises first.

If milk is skimmed every twelve hours, and the cream of each period churned separately, the product of the first period will be the highest flavored and the highest colored, and the color, quantity and flavor of each successive skimming will diminish to the last, but the keeping qualities will grow better. The 4th and 5th skimmings will be quite pale and insipid, but can be kept sound a long time. Where a high flavored article is desired, it is not advisable to continue the process of creaming to long. What will rise in 48 hours, at 60 degrees, on milk four inches deep, is all that is generally profitable to separate. What comes up after that is so white and tasteless as to do more injury, by depressing flavor and color, than it can do good by increasing quantity.

There are other essential features in the creaming process, such as deep or shallow setting, the influence of light, manner of cooling, etc., that need special attention, which will be discussed in subsequent numbers.—*Canada Farmer.*

Washing Butter.

During the past year, several of your correspondents have strongly advised never to wash butter. I have not been beguiled by them, having before experimented sufficiently; but as I am anxious to learn and adapt any improvement, I would like to learn how, during June, July and August butter can be manufactured without washing to keep sweet for six or eight months. My cattle breathe the purest air, have a sweeter and more nutritious herbage than found in a moister climate; no swamp grass and abundance of pure spring water, and the cleanliness of milk house and utensils is evinced by the fact that with the thermometer ranging during the day at from 90 to 100°, in the shade, milk kept perfectly sweet for forty-eight hours. I cannot make butter that will keep without washing, no matter how well worked, but made kept under the same conditions, but well washed, I have no difficulty in producing a good article. It has seemed to me that the loss of flavor and aroma, said to be due to washing, is attributable rather to the salt. I can never discover the nutty flavor and aroma as plain after salting: but it seems to me to me to be plainer after washing than before.—*New Mexico in Rural New Yorker.*

Turnip Flavor in Milk and Butter.

A correspondent of the *American Agriculturist* states that last winter he fed turnips in the usual way at milking time to five cows, until the milk and butter became so strong that it could not be used. He then commenced feeding immediately after milking and found that there was not a particle of turnip flavor in the milk or butter. After a time the taste returned. On investigation, he found that one of the cows was nearly dry and was milked only once a day while she was fed with turnips twice a day. She gave but a pint of milk per day, so that when fed in the morning she could have had only about half a pint of milk in her bag; yet this received so much taste from the turnips that it spoiled the milk of four other cows in full flow. To make the test complete, he had her milked twice a day, when the difficulty at once ceased, and did not recur. Evidently a very small amount of milk in the udder will suffice to do the mischief, and if drying off, cows are milked only once a day while on turnip feed, their milk should not be mixed with that from the rest of the herd.

THE APIARY.

The Luxury of Bee-Keeping.

It seems to us—for we have always kept bees—so strange that any farmer don't have from five to a dozen hives of bees, when he could just as well have them as not. With the movable frame hive, women can just as well become scientific bee keepers as men, for some of the most successful apiarists in the United States are women. In order to show up some of the pleasures resulting from this branch of farming we submit the following:

Apiarians are noted, the world over, for their enthusiasm in their favorite pursuit. This really is not without cause. It certainly is a most fascinating study, and has the added merit of having engaged the attention of some of the mythical heroes, as well as the more substantial ones of the olden time. A correspondent of *Our Own Fireside* (England) gives this pleasant reading in relation to the subject:

The luxury of all summer's sweet sensation is to be found where one lies at length in the warm, fragrant grass, soaked with sunshine, aware of regions of blossoming clover and of a high heaven filled with the hum of innumerable bees. It is that happy hum—which seems to the closed eyes as if the silent sunbeams themselves had found a voice and were brimming the blending blue with music as they went about their busy chemistry—that gives the chief charm to the moment; for it tunes the mind to its own key, the murmuring expression of all pleasant things, the cord of sunshine and perfume and flowers. And it is, indeed, the sound of a process scarcely less subtle than the sunbeams' own, of that alchemy by which the limpid drops of sweet insipidity at the root of any petal is transformed to the pungent flavor and viscid drip of honey. Beyond doubt, there is no such eminent sound of gladness in all the world as the buzzing of a bee. It sings of work as a joy and privilege; of a home of plenty and contentment. Although this burly rover is not our little bee of the hive, but his saucy, country cousin, the song of the one is scarcely sweeter than that of the other, while they blend into rarest music. And well may both be sweet; it is such a pleasant thing to live. There is the hive to finish, there is the dear nest under-ground. They forget yesterday's rain, they fear not tomorrow's frost; the sun is so warm to-day on their little brown backs, and there is such store of honey. It is true, the humble-bee is much the most dazing,—he has the prestige of size, moreover; but the other may find some favor in his new bronze and gold armor, and his coarse velvet mantle. There are few creatures that can afford to labor in such array as that, but when the work is so nice one's dress must correspond. It could never do to rumple round rose-leaves, black as a beetle, and expect not only to be heaped with delicacies, but to be entrusted with love-tokens.

See him now, as he hovers over the small white clover on which he alights, whose sweets are within reach of his little proboscis; or, lost in the great blue bell, swings it with his motion and his melody; or, burrows deep in the heart of a rose, never rolling there, it has been erroneously said, but, collecting the pollen with his pincers, swims the flower while brushing it into the baskets of his hinder legs, and then lifts again for a fresh fare, till, laden and reeled, he fondly issues forth, dusty with treasure; the Merovingian kings, who crowded their heads and beards with gold, were no finer fellows than he. But few months' wear and tear will suffice to tarnish him. By-and-by the little body will be battered and rusty, the wings will be ragged and worn. One day as he goes home heavily burdened, if he winged swallow have skinned him long ago, the flagging flight will fail, he will be too much for him, a rain drop will dash him down; he will become a garden-toad, the focal length of whose vision is exactly the distance to which he can dart his tongue, will see a tired blundering across the sky, and will take a morsel of him, honey-bag, pollen, and all. Yet that is in the future, far (side the focal length of any bee's vision)—that vision which finds creation so fit, and himself the center of it, each rose for him to rule, and welcome everywhere.

POULTRY YARD.

Guinea Fowls.

We have raised and kept Guinea fowls in considerable numbers, both the common speckled and the beautiful white variety. We never saw any profit in them, though they are prolific layers of very nutritious eggs. They are noisy, vagrant and shy, and even with the kindest treatment, not inclined to be anybody's pets. But they are hardy, very easily kept, in fact get their own food through the summer if need be, and on the whole make a pleasing variety about the farm-yard, and we always fancied they offered protection from birds of prey, for if a hawk heaves in sight half a mile off and almost out of the range of the human eye, the Guinea will set up an unearthly screech that is sufficient to frighten into fits the whole neighborhood. Their habits are also interesting and peculiar, and furnish a never-failing source of interesting study and observation.

The only difficult period in their lives, in our experience, has been when they are quite young. They require at that time to be fed very often, as they suffer severely from a deprivation of food. Egg and milk prepared in the form of custard is an important part of every meal for the first month, with oat-meal mixed in dough. After that vegetables boiled and mixed in are very useful. For the first two or three weeks food should be given as often as every three hours.

Instinct leads the Guinea fowl to roost on trees and high up, but it is better to get them in the habit of going into the hen-house in winter. They are, however, quite hardy, and we have had them go through the winter safely roosting every night out of doors on the trees.

As this bird is inclined to hide its nest and eggs, sometimes at a considerable distance off, and in the woods or thick shrubbery, it is decidedly better to get the eggs early in the spring under a small-sized common hen.

The Guinea fowl is a favorite dish with epicures, and it will hereafter command a high price probably, as an article of luxury.

In rearing the young it is proper enough to adopt the same mode of treatment as for young turkeys.

The Guinea fowl was well-known to the ancient Romans and Greeks, and in the luxurious days of the Empire it commanded a high price as a great delicacy for the tables of the nobles.

All the eight distinct species of this bird are natives of Africa, but they have now come to be wild in Jamaica and some other parts of the world, where they have been introduced.—*Massachusetts Ploughman.*

Success With Hens.

In the breeding of hens it is important to procure the variety to meet the requirement in each particular case. If you breed for eggs you want one variety; if for flesh or size, another. And after you have obtained the kind you desire, as for instance, the production of eggs, it is essential that a due regard be had to management in order to secure the best results.

As we cannot give our own experience in all matters pertaining to poultry breeding, we commend the following as apparently worthy of consideration:

In this section, most of the breeds of fowls, with their crosses, are kept—generally in small numbers—with varied success. The breed, it is known, has an influence, but much is due probably to the method of keeping, or management. The following is the conclusion I have arrived at, as to the point most favorable to success with hens as layers:

We have observed, that the smaller the number of hens the more eggs per hen were obtained.

That a laying hen wants quiet and contentment. There should be no crowding nor close confinement, but plenty of air, plenty of light, security for laying, cleanliness, good water, variety of food—corn and buckwheat as a base. The buckwheat should be ground and made into cake, mainly, though also fed in the grain.

That a young hen will lay better than an old one; that its flesh is also better; that some breeds, like the French, are preferred for the table.

That the different popular breeds all do well, though varying with different owners, showing that keeping or locality has an influence.

That crosses sometimes are as good as the breeds whence they are obtained. Thus the Black Spanish and Brahma couple well together, both for laying and hatching; but the cross must not be perpetuated by itself; in this case it has deteriorated. Keep up from the original stock and it will be reliable. Other crosses have also done well. Many remarkable cases are reported, some of which have come under our own cognizance.

The Brahma and Black Spanish cross will lay, with slight interruption, the year round. It will continue to lay, if sufficient and regular food be given it, in a barn or other outbuilding exposed to the cold. The greatest success has been obtained in this way with this cross.

It has long been known, and is now more apparent, that there is no profit, but loss, in keeping the common hen, which will seldom lay in winter, and only when its quarters are made warm and pleasant as in summer.

The breeds, and care with them, are sure to secure success. This has sometimes been obtained when they have been neglected, and sometimes not; but we have never known a success to fail where care is taken, and the principles above enumerated carried out. Room, contentment, with a sufficiency of food, are the main things. Then a good breed—non-sitter for eggs—and there will be a balance on the right side of the ledger. It is best to begin on a small scale, and increase, dividing the number as it increases into as many communities as space and number require. If a dozen or fifteen hens are found profitable, the dozen or fifteen hens and their space need but be repeated. This will make so many distinct henneries, though joined together, separated only by a partition. The principle here is, that hens want to be acquainted with each other, used to each other; in other words, a family. With a large number, even though space be given them, there will be an air of strangeness and fear never wholly overcome. Hence the secret of dividing into small communities.—*National Live Stock Journal.*

How to Dress a Sheep.

First, kill the animal in the most approved style; then as life is extinct, skin the hind legs up to the hamstrings; then gambrel and hoist it up; make an incision, high up in the belly, about an inch and a half in length; then insert the stem of a large funnel into the incision, and pour into it from one to two gallons of cold water, the colder the better. The application of cold water cools the intestines and the inside of the sheep, and at the same time, fills the chamber and passes between the intestines and the flesh, thereby preventing any contact of the parts and at the same time cooling every part completely. It also drives out the gases at the incision, so that there is no possibility of the meat becoming affected in any reasonable length of time, which gives the operator time to dress the meat properly. This is done by ripping from hough to hough, skinning downward without further ripping, thereby preventing the wool or any outside filth from coming in contact with the flesh. This, of course, I do as quickly as possible. Then remove the intestines carefully, so as not to break any of them. By this mode of treatment you will find the tallow on the intestines and on the inside of the animal, perfectly cool and rigid.—*Rural World.*

JELLY.—The juice of apple boiled in shallow vessels, without a particle of sugar, makes the most sparkling, delicious jelly imaginable. Red apples will give jelly the color and clearness of claret, while that from light fruit is like amber. Take cider just as it is made, and not allowing it to ferment at all, and if possible boil in a flat pan very large and shallow. Any one living near a "house" for boiling sorghum juice can make this jelly to perfection.

McLAREN, JAMES & CO.,
DEALERS, MANUFACTURERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.
Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.

Real Estate and General Business Agency.
NO. 605 CLAY STREET, SAN FRANCISCO, CAL.
ja10-bp-3m

OUR SPECIALTY: "BEYOND THE MISSISSIPPI."
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required: Nerve and Honest Industry.
THE FAR WEST.
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chromo,
"AMERICAN PROGRESS,"
free to each subscriber.
Two sample WOUNDS sent for 10 cents. Agents wanted.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street,
(Ress House Block), San Francisco. Wholesale and retail dealer in Mens', Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods; also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of
Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 173 J street, Sacramento.

San Francisco Wire Works, 665 Mission
St., S. F. C. H. Gruenhagen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San
Francisco. Manufacturers of Carriages, Wagons and Stage Work of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of
Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,
For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily operated Sewing Machine in the market. Always in order and ready for work. In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m

Grand Hotel Building, S. F.

WAKELEE'S

SQUIRREL EXTERMINATOR.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time. The squirrels die in their holes from its effects.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is scented so that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger of fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco,

Who may also be addressed,

3v7-3m

Dividend Notice.

SAN FRANCISCO SAVINGS UNION.

No. 532 California Street, Cor. Webb.
For the half year ending with the 31st of December, 1873, a dividend has been declared, at the rate of nine (9) per cent. per annum on Term Deposits, and seven and one-half (7½) per cent. per annum on Ordinary Deposits—free of Federal Tax—payable on and after the twelfth of January, 1874. By order,
ja10-4w **LOVELL WHITE, Cashier.**

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,
Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, San Francisco.
21v2-1y

\$5 to \$20 per day! Agents wanted! All classes of working people, of either sex, young and old, make more money at work for us in their spare moments at all the time than at any thing else. Particulars free. Address G. Stinson & Co., Portland, Maine.

WHITE LEGHORN CHICKENS

—AND—

EGGS.

CHOICE FOWLS AND FRESH EGGS AT
REASONABLE RATES.

ALSO A FEW GOOD



DARK BRAHMAS AND BLACK SPANISH.

F. N. WOODS & CO.,

de27-4t

67 California Market.

BRONZE TURKEYS,

Largest and Finest Collection
on the Pacific Coast.

EMDEN GEESE,

58 pounds to the pair, at maturity.



BRAHMAS, LEGHORNS, HOUDANS, HAMBURGHS,
COCHINS, BANTAMS, ETC.,

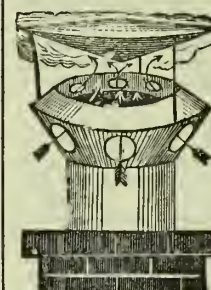
Black Cayuga and other Ducks.
Send for ILLUSTRATED CATALOGUE and Price List.
The Poultry Bulletin, a 32 page monthly, the best.
Subscription \$1.00 a year. Send stamp for copy. Agents
wanted.

Address:

M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by
rail or stage.
3v7-3m-16p-sp

Murtha's Patent Chimney Tops
OR VENTILATORS.

A sure cure for smoky chimneys, and WARRANTED to give entire satisfaction when all others fail, or no pay. They are made to fit any size flue.

COUNTRY RESIDENTS, by sending the measure of the chimney flue, can have them sent to any part of the State.

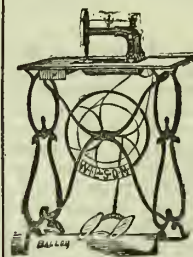
Refers by permission to
Supt. New Almaden Mine,
W. T. Garratt; Wm. McKibbin, Thos. Boyce, Jas. Dows, J. Bandmann, and
HUNDREDS OF OTHERS.
Send for Price List.

RECOMMENDED BY ARCHITECTS GENERALLY.

W. O. MURTHA,

No. 16 Tyler street, San Francisco.

17v27-cowbp-3m

The New Wilson
SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market.

G. A. NORTON, Gen. Ag't
for the Pacific Coast,
337 Kearny St., S. F.
2v27-cow-bp-ly

GUADALOUPE ISLAND COMPANY.

Notice is hereby given that the annual meeting of the stockholders of the GUADALOUPE ISLAND COMPANY will be held at its office, 306 Pine street, San Francisco, on FRIDAY, JANUARY 30th, 1874, at 3 P. M.

WM. M. LANDRUM, President.

ARTHUR RODGERS, Secretary.

ja17-2t

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets.

Next term opens January 6th, 1874.

Write for Catalogue to **ELWOOD COOPER,**
22v6-ly President Board of Directors.

New and Rare Plants for Spring of 1874.

John Saul's catalogue of new and beautiful plants will be ready in February, with a colored plate. Mailed free to all my customers; to others, price 10 cts. A plain copy to all applicants FREE. **JOHN SAUL,**
ja3-cow-3t Washington City, D. C.

MONTGOMERY'S HOTEL,

227 and 229 Second street, SAN FRANCISCO.

This Hotel has been newly furnished, and is situated in a central and healthy location, and is one of the few Hotels in San Francisco conducted on

Temperance Principles.

BOARD, PER WEEK, \$3.50. BOARD AND LODGING, \$4 TO \$5.

SIX MEAL TICKETS FOR \$1.

CHAS. MONTGOMERY, Proprietor.

Passengers and Baggage taken to the Hotel free. —

San Francisco Cordage Company.

Established 1856.

We have just added a large amount of new machinery of the latest and most improved kind, and are again prepared to fill orders for Rope of any special lengths and sizes. Constantly on hand a large stock of Manila Rope, all sizes; Tarrad Manila Rope; Hay Rope; Whale Line, etc., etc.

TUBBS & CO.,

de20 611 and 613 Front street, San Francisco.

Horse Clipping—Price, \$6 per Horse.

Our friends and patrons are hereby notified that we are prepared with the BEST HORSE CLIPPING MACHINE in the country to do and guarantee first-class work.

20v6-3m **PIUNCE & CHANTREY,**

Norfolk Stables, Cor. Ellis and Mason, S. F.

PURCHASERS please say advertised in Pacific Rural Press

AGRICULTURAL NOTES.

CONTRA COSTA.

FINE GRAIN.—*Gazette*, Jan. 17: Mr. L. I. Fish left with us a sample of Chevalier barley that is remarkable for size, weight, plumpness, and its thin husk or skin. The barley is from half an ounce of seed, received about a year ago from England, and planted on the 6th day of February last, yielding, clear of waste, 18½ pounds, or at the rate of more than 2,200 pounds per acre for the ground planted; the seeding having been at the rate of less than four pounds to the acre. This rate of yield is about 600 for 1 of seed; and the question suggests itself, if we may not on this hint, by drilling or otherwise, effect a material saving in the quantity of seed used in our husbandry.

EL DORADO.

Republican, Jan. 15: The weather during the past week has been very favorable for farmers, and they have improved the opportunity to the best of their ability to finish plowing and seeding.

The agricultural interests in this county are rapidly growing in importance. As a rule, until recently, agriculture has been resorted to as a make-shift, and performed in a most slovenly manner, but since it has been practically demonstrated that there is more money and less risk in it than in mining, it is being carried on more systematically and the results are most satisfactory. A greater variety and better quality of almost all kinds of farm products can be raised here than in the valley counties, and although the cost of production in some instances may be greater, the prices obtained for produce raised here, as a rule, are enough more, to more than balance the increased cost, so that when the price of land is taken into account, and the fact that a crop failure is seldom experienced here, the balance, especially to small farmers, is largely in favor of this section over the valley counties. In the vicinity of El Dorado, farmers who a few years ago commenced with next to nothing are now quite independent. They have comfortable buildings, well improved lands, plenty of stock, and are in a fair way to soon become the nabobs of the country, and the same evidences of prosperity are manifest in various portions of the county where farming is made a specialty. This industry, together with the brightening prospects of our mining interests cannot fail to restore confidence and prosperity to this section. Energy and patience is all that is required.

KERN.

Courier, Jan. 10: Mr. G. W. Bevis, of the Barnes settlement, gives us his experience the past year with alfalfa. The year previously he had sown two measured acres with this grass, but very thinly. That year he used it for grazing purposes. The past year, the grass standing rather thinly, he mowed it twice for hay, and permitted the third crop to go to seed. The yield of hay was seven tons, netting him \$10 per ton, and of seed 1,176 lbs., netting twenty cents per lb. the whole crop of the two acres yielding a profit of \$309.20. Besides, he had of seed not clean enough for market, what has since sufficed him to sow ten acres, and a pair of colts grazed the little field all summer without perceptible damage to the crop. The yield of hay is very moderate, but that of seed is large. Still, without being extraordinary, the result is highly satisfactory as showing, under ordinary circumstances, the profits that may be expected from this crop. This patch of alfalfa was never irrigated.

A curious feature of the immigration into the delta of Kern River, the past fall, has been the large number of old residents of the adjoining county of Tulare who have been attracted by the superior agricultural advantages it affords. Those with whom we have conversed complain of the scarcity of water in most places in that county for irrigation, the squirrels and other vermin. These are serious drawbacks that are entirely unknown here, and sufficient of themselves to determine the choice of location between the two places. But they speak of another great advantage we enjoy here. They propose to go into stock raising, and the lands here are better adapted to the growth of alfalfa. There it dies out, in most places, unless irrigated every year. Here irrigation the first year is all that is requisite to secure its luxuriant growth ever after, the permeable nature of the soil permitting the roots to penetrate to the water-level which, in no case, is more than eight or ten feet from the surface.

LAKE.

OUR CROPS.—*Bee*, Jan. 15th: It is rather early in the season for us to make any predictions concerning the approaching harvest. The weather has been very unpropitious for extensive seeding in this country. However, the early sown grain looks very promising, especially that on the uplands. Little or no seeding has been done in the valleys since the commencement of the storm, and farmers are anxiously waiting for a few weeks of fair weather. Dry weather is now our open sesame. As the season advances we shall endeavor to publish the progress of the crops and will thank the farmers to give us the needful information on the subject.

NEVADA.

THE STORM.—*Republican*, Jan. 17th: The storm which has been raging for the last thirty-six hours is said to be the most furious ever witnessed in these parts by the oldest white inhabitants. It has not been cold, but the wind has blown almost a gale, and the snow has

drifted badly, almost obliterating all traces of roads and paths. Nearly two feet of snow has been added to the old crop. The telegraph lines east of here were badly demoralized. The railroad company have kept their snow plows vigorously at work, and so far as we can learn there has been no blockade or detention of trains. Penman & Day's stage left this morning for Sierra Valley, but it hardly seems possible that it can get through. The sleighing party that has made arrangements to go to Hot Springs, this afternoon, was compelled to postpone the excursion indefinitely. At this writing the snow is falling rapidly without any indication of abatement. Out of door labor in this section is practically suspended for the present, and the storm king is having things all his own way.

MARIN.

Journal, Jan. 16: No rain has fallen during the week past, but the weather has been cloudy, with scarcely a ray of sunshine, the air damp and chilly, and the cold unusually penetrating. Rheumatics and neuralgic pains are much complained of, and the cheer and warmth of the sun are earnestly longed for. Meanwhile the grass is taking a good start, and coming up thick and vigorous, and oows that are helped a little by one or two feeds of hay per day, are thrifty and profitable, while those that have the further benefit of a shelter at night are doing still better. Our people are now all convinced of the economy of feeding and housing stock in the winter, and all who are able are doing it.

MERCED.

ANYTHING FOR A CHANGE.—*Argus*, Jan. 17: For the past two weeks the sun has been obscured by a cloud, which has hung over the valley like a pall, and only on one occasion during that time have our people been blessed with the sight of Old Sol; we refer to last Wednesday afternoon, when for a few short minutes the mist cleared away, and the "old fellow" beamed down on us with a warm, kindly smile, when he again "took the veil," and hasn't shown his phiz since. To still further add to the disagreeableness of the situation the weather has been very cold, the streets chock full of mud and slumgullion, and wood \$10 per cord, and still on the raise. Who wouldn't growl and cry out "anything for a change."

MONTREY.

Democrat, Jan. 17: Salinas city is virtually a city on the plain. Nature has thrown no charm of foliage about it. Whatever therefore is done to beautify the place must be at individual and corporate cost. Many of our citizens have duly appreciated these benefits and now have gems of gardens filled with nature's sweetest and fairest ornaments. Let all our citizens who own property invest to the extent of their means in the different varieties of forest and ornamental trees and shrubs, and in fruit trees of the hardy varieties adapted to our climate; let our ranchers and farmers invest also and plant these trees at suitable places on their lands, and all will be astonished in a few years at the marvellous change. It will seem like the magic of Aladdin's lamp; like apples of gold set in pictures of silver. This picture, combined with that of our glorious mountain scenery, will make Salinas valley one of the most delightful and coveted resorts in the State, both for the pleasure-seeker, the tourist and those who seek a habitation that they may dwell in.

SAN BERNARDINO.

RIVERSIDE.—*Argus*, Jan. 8: This thriving town is still progressing as usual, and work of every description is going forward with great vigor. Several new families have recently come in, purchased property and are busily engaged in improving the same.

As soon as railroad trains are running to Spadra, it is expected a daily line of carriages will connect with Riverside.

Plowing and sowing is still going ahead, and the indication is a prosperous and remunerative year for that section.

We were shown a section of an acacia tree, only one year and nine months old, from the seed, which was raised in Judge North's garden, which measured five inches and a half in diameter. This section can be seen at this office. Judge North has a lemon tree in his garden, two years old standing seven feet high and measuring three inches at the butt. The Judge has tomatoes growing in his garden, the vines of which look as fresh and green as in summer time. We could not see that the frost had made any marks among the vegetation in his yard. His orange trees are standing uncovered, and show no signs of being damaged.

OUR CLIMATE.—The *Argus* office was on yesterday presented with a very satisfactory testimonial as to the wonderful salubrity of our climate, in the shape of a magnificent cluster of strawberries; the largest of which, measured nearly three inches in circumference. They were presented by Mr. R. H. King, who has devoted a great deal of time and attention to fruit growing, and we are glad to know that he has met with such remarkable success.

SANTA CRUZ.

Sentinel, Jan. 17: A well known gentleman residing in Santa Cruz and who prides himself very justly on being something of an amateur horticulturist, has kindly furnished the *Sentinel* with some facts which go further to demonstrate the mildness of winter in Santa Cruz than any other circumstance. Any one who knows anything about flowers can form a clearer idea of the climate, from the information given to us by him than they could if they studied for a month a formidable array of figures showing the changes in the thermometer. This gen-

tleman who is as sensitive as one of his own plants on the subject of having his name in print, and whose modesty in this respect alone restrains us from giving it to the public, has a splendid collection in his garden of rare and beautiful plants.

On New Year's morning out of curiosity he took a register of all that were in full bloom, which were growing in the open air, and none were more astonished at the record than himself. The following is a correct transcript from his own notes of the flowers that were in full bloom. Seven varieties of geraniums; noisette and tea roses, neither of which are hardy plants in the East; Bengal and Bourbon honeysuckles; ricinus; a double Catalonian Jessamine. (This Jessamine is a green house plant even in San Francisco); fuchsias, calla lilies, cannas, laurustines, larkspurs, Evening primrose, acanthus; (this is an evergreen and blooms the entire year), pentstemons, nasturtiums, sweet mignonette, tree mignonette, verbenas, myrtle, petunias, Italian alkanet, abutilon, mourning bride, veronicas, French astor, phlox drummondii, lupines, valerian, bachelor's button, stock, daisies, and wall-flower.

It should also be mentioned that in the same garden tuberoses and oranges were in bud, quince peach and apricot trees were growing; also Black Morocco and Flaming Toka Grape-vines.

SANTA CLARA.

TERRIBLE STORM.—*Mercury*, Jan. 17th: A fearful wind storm prevailed at Livermore on the night of the 15th, commencing at 7 o'clock and continuing all night. Considerable damage was done and a number of buildings wrecked. The grain warehouse built by Joseph S. Kohn, and owned by Joseph Wilkinson, was completely demolished, and is a total loss. The blacksmith shop of Hatch & Holmes was totally wrecked. Chimneys were blown down, and one side of the building torn out. The new Presbyterian church in course of erection was completely destroyed. A traveling photograph car, which arrived the day before, was scattered in various directions. Barns and poorly constructed buildings were blown down, but no loss of life has been reported.

EXTENSIVE GRAIN FIELDS.—We are informed that between Salinas and Soledad, 40,000 acres have been sown to wheat this winter for the first time. Around San Juan the acreage of land seeded to wheat is six times greater than that of any former year. The young grain is now up and growing finely.

A DESERVED TRIBUTE.—At the annual meeting of the State Agricultural Society, held in Sacramento, on Tuesday, Col. Coleman Younger, of San José, was re-elected a Director by acclamation. In seconding the nomination, Judge A. L. Rhodes, of San Jose, paid the following deserved tribute to that pioneer agriculturist: "He is the choice of the people of Santa Clara. They know him to be earnest, zealous and devoted to the agricultural interest. He is a true representative of that interest. In all respects he is unsurpassed for the position. In fidelity and zeal, in fitness and standing, he is a representative man seeking the advancement of our State. As we have chosen and elected him, we hope you will return him, again for the office. He is a pioneer agriculturist, and though increasing in years, he is also increasing in zeal for the cause of his State."

ADVOCATE.—A correspondent says: We are so very busy seeding our grain that I haven't had time to talk about the farming interest in the old Ysidro section since the season has taken such a favorable turn. In fact, the weather is fine, and the soil is in such a favorable condition for work, that I scarcely know of anything going on outside of my own neighborhood, except what I learn from your valuable paper. Haste, haste, is the order of the day. From the time we can see to hitch in the morning till long after the going down of the sun in the evening, the crack of the whip, and the "got up Jim," "step lively Pete," "move on there, blue legs," and other such urgent appeals are in frequent use to urge on the faithful team to their duty, ere the rain houses them to their rest and hay. On the broad plains scanned by my eye while guiding my plow, hundreds of acres are seeded daily; though on an average, not more than one-half of the farming land is yet prepared for the seed; nevertheless we are buoyant with the hope of getting all in condition to receive the rains of February and March.

SAN LUIS OBISPO.

WEATHER.—*Tribune*, Jan 10th: Talk of Italian skies, they are nothing to what we now enjoy. The weather during the past week has been superb; and we defy Santa Barbara, San Diego, or any other place to do more than compete with us. Europe is laid in the shade, and the Mediterranean, although a southern sea, can boast no such climate as ours. We wish that the eastern shore of our continent could send all its inhabitants on one trip to this coast. In that case the preponderance of population would soon be established on this side, and San Luis Obispo would then soon be its full share of residents. Our visitors would be loth to return to their old stamping grounds, and as soon as they could cut loose from the wintry skies and sterile soil of the East, would be found setting in a steady tide for the Pacific coast.

YOLO.

DAMP AND COLD.—*Mail*, Jan. 16th: For one week the heavens have been shrouded in gloom. The sun has not been seen but on two occasions during that time. A heavy fog with cold winds have prevented the earth from

drying, and farmers inform us that they are plowing but cannot sow wheat until the soil dries out. The wheat that has been sown on fallow lands, and that "volunteered" is up and looking well, but under the pressure of the cold and damp atmosphere, is not growing very fast.

SANDIEGO.

World, Jan. 10: The most despondent now admit that abundant crops are beyond all possible doubt. We are this year to have a regular old-fashioned rainfall. Already the San Diego river has run in the sight of all, and yesterday afternoon the rain began again, with every probability that it will continue for some days, the wind being from the right quarter.

EASTERN OREGON.

Bedrock Democrat, Jan. 7: Persons in the Eastern States are constantly writing us letters of inquiry in relation to this portion of Oregon, and as it is impossible for us to answer each individual letter, by writing to each correspondent, we propose to give a general answer in this article.

What is known as Eastern Oregon is that portion of the State lying east of the Cascade range of mountains, embracing Wasco, Umatilla, Grant, Union and Baker counties; it is bounded on the north by the Columbia River and Washington Territory, on east by Snake rivers and Idaho Territory, and on the south by California and Utah, and embraces considerable more than one-half of the area of the State. The country is well watered by the Columbia and Snake Rivers and their tributaries. The valleys along the various streams which meander through the whole extent of this portion of Oregon, are fine agricultural and hay lands; the foothills immediately surrounding the valleys are beginning to attract attention, and are looked upon by those who have tested their productiveness, as being equal to the valleys for everything except hay, and for small grain and fruit they are the best.

The whole country is covered with fine bunch grass, and the higher the altitude the finer the grass becomes. The mountains which surround the valley are, as a general thing, covered with fine timber, consisting of the various kinds of pine, fir and tamarac, while cottonwood and willow are to be found along the water courses in the valleys. The mountains abound with bear, deer and elk, with other small game, and the streams with trout and other fish.

The climate is pleasant both winter and summer. Farmers, as a general thing, do not have to feed their stock cattle during the winter. The water is pure and healthy. There is plenty of land that can be bought cheap, also plenty that can be taken as homesteads or entered. There is considerable land in this portion of the State which has not yet been surveyed.

Lombardy Poplar.

We are asked our opinion of the value of the Lombardy poplar as a tree to grow in belts for the protection of grain fields from sweeping fires.

There is no question, but that the poplar would answer a good purpose for the object, and also make a very good wind breaker; but it makes a very poor shade on account of its upright habit of growth, and for any other purpose than making very ordinary fire wood, the poplar has little value; its only merit is in its rapid growth and the ease with which it is propagated as it grows readily from cuttings.

A tree to be preferred in every respect for timber belts, valuable for timber, shade and firewood, and a rapid grower, is the eucalyptus. There are several varieties of this tree differing in their habit of growth, but all desirable, and if planted in rows, with those of lower and more spreading habit on the exposed windward or on both sides, and giving the middle to the *globulus* or taller-growing variety, you would obtain the best protection and a valuable acquisition to the farm.

PATENTS & INVENTIONS.

A Week's List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Jan. 20, 1874.

FOR WEEK ENDING Jan. 6th, 1874.

WATER MOTOR FOR SEWING MACHINES.—Oscar J. Backus, S. F., Cal.

MEDICAL COMPOUND.—Peter Hunter, Corvallis, Oregon.

SECTIONAL CAM.—John F. Mallinkrodt, Middle Boulder, Colorado.

SEED SOWER.—John B. Nixon, Cottonwood. **EGG CARRIER.**—Marice A. Franklin, San Bernardino, Cal.

*The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. **NOTE.**—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with greater security and in much less time than by any other agency.

AGRICULTURAL ARTICLES.

THE "VICTOR" GANG PLOWS IS THE BEST.

Hule's Patent, with all improvements to '73, and with "JONES" Plow Bottoms, the "VICTOR" is the best GANG PLOW in the world. It is simple, strong and durable, and does its work effectually. Don't fail to see it before buying. Price, \$75. Sold only by TREADWELL & CO., San Francisco. Send for circulars. We have also a large stock of Single Plows, including the "JONES," COLLINS, Boston Clipper, Peoria, etc., etc. Cultivators, Harrows, Seed Sowers, Drills, etc., etc. Send for our new Illustrated Price List. TREADWELL & CO., San Francisco. 16v6-3m

MATTESON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to 14v2-3m

MATTESON & WILLIAMSON, Stockton, Cal.

O. CREGO.

S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Bunkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey; Helfield & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers: C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, 24v5-3m San Francisco.

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS.

PIECE MILK-PANS.

STRAINER PAILS,

CREAM PAILS,

MILK PAILS,

ETC., ETC., ETC.

The above are made of the heat materials and in the best manner. We are making a specialty of DAIRYMEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m SAN FRANCISCO.

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,

OIL CAKES and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Office, 3 and 5 Front street. Works, King street, bet. Second and Third. fel5-eow

100 AGENTS WANTED.

\$5 to \$25 per day, selling the attractive little "Coly's Washers." Great inducements offered. Send Circulars. Address, G. R. CODDING, Petaluma, Cal. 20v6-3m



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the

THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

9v6-3m

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

LANDS & HOMES FOR SALE

MOUNTAIN RANCH FOR SALE.

A valuable and productive ranch is offered for sale, located on the public road, between Grass Valley and Colfax. The ranch contains 560 acres of land—320 paid for, and patent received for 160—containing all the best meadow land, and 400 apple trees 16 and 18 years old. There are six lots of 40 acres each, railroad land, which will make the title good to any buyer. The dwelling house is not finished yet; it contains ten rooms, lathed and plastered; 6 on the upper floor and 4 on the lower, with hall; a good stone cellar and one good barn. Last year 1,000 boxes of winter apples were shipped. There are 200 pear trees, and plums and peaches enough for family use. The owner cuts from 30 to 40 tons of meadow hay per year. There are from 5,000 to 7,000 cords of wood, worth \$1 per cord, now standing upon the ranch. Terms liberal. Apply to

P. H. SUMNER,

No. 311 Montgomery st., San Francisco.

September, 15, 1873.

Valuable Farm for Sale or Exchange.

1,000 ACRES OF THE BEST FARM LAND IN THE STATE OF MICHIGAN, a portion of which is well timbered. Rapidly increasing in value. Title perfect. Will be sold or exchanged, in lots to suit, for REAL ESTATE IN CALIFORNIA.

Apply to G. D. CROCKER, Room 16, No. 315 California street, San Francisco. 15v6-3m

Valuable Dairy and Grain Ranch FOR SALE.

In San Mateo County, comprising 900 acres, 400 acres under cultivation, and all well watered and substantially improved. Inquire of

20v6-3m

JOS. W. JORDAN,

N. E. cor. Clay and Front sts., San Francisco.

BIBBINS & CO., LAND EXCHANGE,

402 Kearny street.....San Francisco.

(SUCCESSORS TO BRANDON & BIBBINS.)

Deal extensively in Country Property.

WANTED—FARMS TO SELL AND LEASE.

FOR SALE:

Farms, Grazing Lands and Tule Lands 5v5-1y Throughout the Coast.

FOR SALE.

A Well Improved Farm of 160 Acres, 4v7-1m

FIVE & A HALF MILES FROM SACRAMENTO.

The improvements include two Dwelling Houses, large Barn, Blacksmith and Carpenter Shops, Tool Shed, Poultry Houses, a good sized Orchard and a Vineyard of 20 acres; most of the vines produced grapes the past season. For terms, apply to

ja17-1m

L. UPSON, Sacramento.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

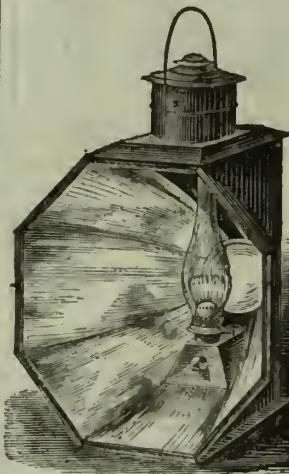
On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 318 Montgomery st., S. F. hptf

A RANCH OF 160 ACRES.

With Barn and House, thirty or forty tons of hay, and with all the necessary farming implements, to be let for a term of years, either by the acre or on shares; situated between Midway Station and Moore's Landing, 2 1/2 miles from either place. For particulars, enquire of CHAS. ALPERS, 22 Bush street, at 1 P. M. 1v7-2m

PACIFIC LAMP MANUFACTORY.



PATENTEE AND MANUFACTURER OF LAMPS, LANTERNS AND REFLECTORS, 802 MONTGOMERY STREET, SAN FRANCISCO.

New Mining & Mill Lights.

Friel's Patent Paragon Vapor Stove.

PATENT GRANTED MAY 20, 1873.

The Great Labor Saver of the Household.

ECONOMY, CONVENIENCE AND SAFETY COMBINED.



JUST THINK OF IT—No Wood, no Coal, no Gas, no Stove Pipe, no Chimney, no Smoke, no Ashes, no Dirt, no Wood Boxes, no Coal Scuttles, no Kindling Wood, but a Friction Match, and the FIRE IN FULL BLAST IN HALF A MINUTE.

Even Hot in Two Minutes.

Steak broiled in seven minutes! Baked Beans in thirty minutes! The fire extinguished in a moment and the house unheated!

It has no rival in all kinds of Cooking and Flat Iron Heating, and combines Economy, Convenience, Neatness, Safety and Durability! The Ladies welcome it; a little Child can operate it, and

ALL RECOMMEND IT.

Prices from \$5 to \$25, according to size. Manufactured and sold by

WM. FRIEL,

69 and 71 Fourth street, San Francisco.

N. B.—Agents wanted in every town in the State. On payment of \$5 one Stove will be sent as sample. 5v6-3m-2am

SOMETHING NEW.



Wooden Pipe of all Sizes.

From one to twelve-inch bore, suitable for water or gas, that will stand as much pressure and last as long as iron, for half the cost.

Send for descriptive catalogue and price list to

11v27-awbp

H. F. WILLIAMS,

331 Montgomery at., S. F.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanicians, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants. PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F. de27-1f

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centreville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

11v6-cow

N. GILMORE, El Dorado, El Dorado county, California.

THOS. BUTTERFIELD & SON,

Breeders and Importers of the

Cotswold, Lincoln, Leicester, Texel and South Down SHEEP.

THE ANGORA GOAT.

Now offer for sale the Pure Bred and High Grades. We have a good lot of Bucks of crosses between the Cotswold and South Down, between the Lincoln and Leicester, and the Lincoln and Merino.

THOS. BUTTERFIELD & SON, Hollister, Monterey County, Cal.

19v4-1f

CYRUS JONES. GEN. GILES A. SMITH. L. H. HICKS.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Duchesses, Rose of Sharon, Booths, Miss Wilkeys, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara avenue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

2v7-3m

CYRUS JONES & CO.,

San Jose, Cal.

Fine Grade

SPANISH MERINO SHEEP.

25,000 head are now owned by this association, and we are in constant communication with parties all over this State, who buy and sell SHEEP and SHEEP RANGES. Parties wishing to purchase or sell are invited to call at the office of the San Joaquin Valley Wool Growers' Association, 15 Stevenson's building, 331 Montgomery street, San Francisco. ja10-1m

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms. WILLIAM L. OVERHISER, Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

Encaustic & Geometrical Tiles.

BEAUTIFUL DESIGNS.

Reproduction of Ancient Work.

IMPERISHABLE PAVEMENTS

—FOR—

CHURCHES, INSTITUTIONS, HALLS, SCHOOLS, CONSERVATORIES, CORRIDORS, CLUBS, VESTIBULES, DAIRIES, ETC.

Suitable for All Climates.

Manufactured of the celebrated Jackfield and Broseley Clays, and arranged in the most beautiful patterns.

GLAZED HEARTH TILES. WALL AND BATH TILES.

Designs and Estimates on application to

GRAVEN, DUNNILL & CO., (Limited),

JACKFIELD WORKS, NEAR IRONBRIDGE, SHROPSHIRE, ENGLAND. ja17-6t

NURSERY NOTICES.

ESTABLISHED 1853.

Stock for Nurserymen and Florists.

TERMS CASH.

Cherry Seedlings—Mazzard.....	\$12 per 1000
" "—Mahaleb.....	20 per 1000
Apple Seedlings.....	12 per 1000
Pear Seedlings.....	15 per 1000
Walnuts, English, 4 to 6 ft.....	15 per 100
" " California bl'k, 4 to 6 ft.....	15 per 100
Spanish Chestnuts, 6 to 12 in.....	15 per 100
Cork Elm, 4 to 6 ft.....	15 per 100
" " 6 to 8 ft.....	20 per 100
Blue Gums, or Eucalyptus, in variety.....	\$3 to 10 per 100
Magnolia, Grandiflora, 3 to 5 in.....	3 per doz.
" " 6 to 12 in.....	6 per doz.
" " 12 to 18 in.....	12 per doz.
Golden Arborvitae, 8 to 12 in.....	6 per doz.
" " 12 to 18 in.....	6 per doz.
Heath-leaved Arborvitae, 12 to 18 in.....	6 per doz.
Crataegus Arhoria, 12 to 18 in.....	2.50 per doz.
" " 2 to 4 ft.....	6.00 per doz.
Enonymus Reptans, Variegata.....	2.50 per doz.
" " Fulchella.....	2.50 per doz.
" " Argentea Marginata.....	3.00 per doz.
" " Japonica.....	3.00 per doz.
" " Aurea.....	3.00 per doz.
Swedish Juniper, 12 to 18 in.....	3.00 per doz.
Heath, Mediterranean "Hardy".....	2.50 per doz.

Will only sell in quantity specified at these prices. If less, 10 per cent. added; if more, 10 per cent. discount.

BERNARD S. FOX,
San Jose, Cal.

13v6-tf

Fruit Trees! Fruit Trees!

AND WHERE TO PURCHASE THEM.

The Santa Clara Valley Agricultural Society has awarded:

Largest collection of Pears, first premium.....	B. S. Fox.
Best twelve varieties of Pears.....	B. S. Fox.
Largest collection of Apples.....	B. S. Fox.
Best twelve varieties of Apples.....	B. S. Fox.
Best collection of Plums.....	B. S. Fox.
Largest collection of Nuts.....	B. S. Fox.
Best soft-shelled Almonds (Languedoc).....	B. S. Fox.

Forest Trees, Shade Trees, large and small, in quantity.

BERNARD S. FOX, San Jose, Cal.

Agent, Mr. THOS. MEHERIN, Battery street, San Francisco. oc18

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care. Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address THOMAS MEHERIN,

516 Battery Street,

SAN FRANCISCO.

P. O. Box 722.

24v6-3m

FRUIT AND ORNAMENTAL TREES.

GLEN GARDENS,

ONE MILE EAST FROM SACRAMENTO.

My stock embraces all the most desirable varieties known, including several new Peaches, among which are the Beatrice, Louise, Early Rivers, Rivers' Early York, Stanwix Early York, Victoria, Prince of Wales, and several others, (all hybridized by S. Rivers of England) and fruited on my grounds this year for the first time in California.

The Louise and Beatrice are 15 and 20 days Earlier than the Hale's Early.

Being the first to import these new fruits, including many sorts not mentioned, purchasers may rely upon getting trees true to name. Also, the FREEMASON and SALWAY, the most valuable late peaches in cultivation. Blackberry, Raspberry and Strawberry Plants; fresh Locust Seed—CHEAP FOR CASH.

E. F. AIKEN,

de27-1m

Proprietor.

AUSTRALIAN GUM TREES.

250,000 on hand for this season, at rates to encourage forest culture. Also, 50,000 Cypress, in shipping order. Nursery on 12th street, one block north of Tubbs' Hotel, East Oakland, Cal. Or address, Box 80, Oakland.

BAILEY & CO., Proprietors.

Beautiful fresh Cypress Seed, \$3 per pound, sent by mail, warranted pure and of the finest quality.

25v6-3m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor.

2v7-3m

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of
NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS, SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,

(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.

Nurseries on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.

Letters by Mail or express will reach us.

ja10

MILLER & SIEVERS.

PRYAL'S NURSERIES.

Fruit, Ornamental and Evergreen Trees, SHRUBS AND PLANTS,

Vegetable and Flower Seeds, Greenhouse and Bedding Plants, embracing all of the most desirable kinds, are now ready and for sale.

BLUE GUM & OTHER VARIETIES OF EUCALYPTUS.

Boxwood Plants for Garden Walks.

Roses of all the New and Old Varieties.

Correspond with me, and, if possible, come and see my trees, etc. All orders will receive prompt attention.

Address:

A. D. PRYAL,

Oakland, Alameda Co., Cal.

DEPOT AND SEED STORE—Broadway, opposite the City Hall; Nursery and Greenhouse, 3 1/2 miles north of Oakland, and one mile from Oakland Horse Railroad depot at Temescal.

Botanical collectors in all parts of the world are requested to correspond.

25v6-tf

TREES, TREES, TREES

—AND—

PLANTS,

In any quantity from one tree to 10,000, both wholesale and retail, at lowest market rates. Fruits guaranteed true to name. I have many new varieties of fruit in my collection which are far superior to the old standard varieties. Among them is the celebrated Beatrice Peach, guaranteed true; this Peach is 20 days earlier than the Hale's Early, and in every respect a fine peach. My stock of Shade Trees and Grape Vines is the largest in the State, and a fine assortment.

Send stamp for printed Catalogue, Price List and directions for planting and training, or come and see the stock, at the CAPITAL NURSERIES. Office and tree depot U street, between 15th and 16th streets, Sacramento, Cal.

ROBT. WILLIAMSON, Prop'r.

Special rates to Patrons of Husbandry. 24v6-3m

ALMOND TREES.

The subscriber has a large lot of young Almond Trees, one, two and three years old, in a thrifty condition, of the celebrated Languedoc variety, which will be disposed of at reasonable rates.

Orders may be sent to the undersigned, and the trees will be properly packed and delivered at Niles Station.

B. D. T. CLOUGH,

(By Express) Niles Station, Alameda Co., Cal.

P. O. Address, Centerville, Alameda Co., Cal.

14v6-tf

ALMOND TREES.

40,000 Brier's Languedoc Almond Trees,

One year old from the bud—CHEAP FOR CASH.

Liberal deductions to the trade and to those planting large numbers. The tree grows rapidly, bears young and constantly, blooms late, is hardy. The almond is large and sweet, with a soft shell.

Send your orders for these and all kinds of fruit and nut trees, to

W. W. BRIER,

24v6-2m

Alvarado, Alameda Co., Cal.

TREES FOR SALE.

The undersigned offer for sale at their Nurseries,

Near Niles Station, Central Pacific Railroad, Alameda county, Cal., a fine stock of STANDARD FRUIT TREES of the orchard varieties, best adapted for California. Our Trees are one and two years old, and all well grown and well rooted, and true to the label.

We invite Planters and Dealers to examine our stock before purchasing. Send for Descriptive Catalogue and Price List. Trees can be sent by regular freight routes or by Express, as directed. Careful attention given to packing for shipment. Local Agents wanted, to whom a liberal commission will be paid. Address the undersigned, either at Centerville, Alameda Co., Cal., or at 418 California st. San Francisco, Cal.

18v6-4m

SHINN & CO., Proprietors.

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gum, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses. Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Trees, and especially Cedrons, Feodars, or Feavine Cedar Reeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubbs' Hotel. ja10

Send for Catalogue.



BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESAL AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Daphnes, Arancarias, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Eucalyptus Acacias, Peppers, Cypress, Pines, Junipers, Cedar of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tube Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine.

2v7-3m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway, Oakland, Cal.

GREEN HOUSE PLANTS,

EVERGREEN TREES,

SHRUBS, ROSES, ETC.

100,000 MONTEREY

CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM TREES, including:—EUCALYPTUS GLOBULUS (Blue Gum)—extra fine street and shade trees. EUCALYPTUS VIMENALIS—both sorts very popular. ACACIAS in variety. Monterey Pines, Lawson's Cypress, etc., etc. Orders attended to. Address:

M. KING, Nurseryman,

OAKLAND, CAL.

23v6-3m

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue.

24v6-6m

Brooklyn Nursery,

13TH AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cypress, (\$3 to \$15 per hundred), 10,000 Australian Blue Gums, and about 3,000 assorted Roses. Also a choice selection of the various kinds of ornamental shrubbery, etc. Special attention given to the laying out of landscape Gardens. Orders received at the Nursery, or at the office of J. P. SWENY & CO., Seedsmen, Nos. 409 and 411 Davis St. S. F.

24v6-3m

JOHN CAREY, Proprietor.

FRUIT AND ORNAMENTAL TREES.

Small Fruits,

Evergreens,

Shrubs,

Roses, Etc., Etc.

Dealers and Nurserymen supplied at Low Rates.

Catalogues furnished on application.

15v6-tf

JOHN ROCK,

San Jose, Cal.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address,

W. H. & G. B. PEPPER,

Petaluma, Sonoma Co., Cal.

21v6-1y

THOS. A. GAREY'S

Semi-Tropical Nurseries, San Pedro street, two miles below the Court House, LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit Trees in Southern California,

Grafted Orange Trees a Specialty.

14v6-6m

THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy BLACKBERRY SETS, for sale at LOWEST RATES. Orders may be addressed through DEWEY & CO., of the Rural Press, San Francisco; ROBT. WILLIAMSON, Capital Nurseries, Sacramento; or to me,

25v6-3m

CALVERT T. BIRD,

San Jose, Cal.

H. K. CUMMINGS.

1858.

H. H. RALSTON.

1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

Removed to 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer.

4v23-1y

AVERILL'S

CHEMICAL PAINT

Of any desired Shade or Color,

Mixed ready for application, and sold by the gallon

It is Cheaper, Handsomer, more Durable and Elastic than the best of any other Paint.

Office, corner Fourth and Townsend streets, San Francisco. Send for sample card and price list.

15v28-3m

HEALY & JEWELL, Agents.

Our SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California. My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnice & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass, Red Clover, White Clover, Musquit Grass, Timothy, Redtop Grass, Orchard Grass, Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the Interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk. My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who raise

Vegetable, Flower and Tree Seeds of all kinds.

Long experience, extensive practice, and the abundant production of this year's seed crop, enables us to offer a selection of Superior Seeds for California and Foreign Soils, and also places us in a position to maintain the lead in the market for Pure Seeds, and much cheaper than those sold by other seedsmen.

A large assortment of Imported DUTCH BULBS and GLASSES just arrived.

ALFALFA, CLOVER, TIMOTHY, KENTUCKY BLUE GRASS, ORCHARD GRASS, and all other varieties.

FRUIT TREES, SHA

The Pacific Rural Press,

NOW IN ITS FOURTH YEAR.

Is a Large, Handsome, Illustrated, Home Journal. Every Farmer, Gardener, Country Gentleman and Rural Homestead Owner should take it. Every Miner, Mechanic, Manufacturer and Professional man and woman who contemplates agriculture, should read it.

It is worth its price for home reading. Send it abroad and extend a knowledge of our wonderful growing country. Subscription, \$1 a year. One sample copy free. Four copies (postpaid) 25 cts.

DEWEY & CO., Publishers.

No. 338 Montgomery St., S. F.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

L. P. MCCARTY—General Agent.

A. C. KNOX, City Soliciting and Collecting Agent.

W. H. RATTENDERRY—California.

J. C. EWING—San Mateo County, Cal.

T. P. POWERS—Napa and Solano Counties.

J. W. RILEY—Monterey County.

CHAS. W. OTIS—Marin and Mendocino Counties.

C. M. DALY—San Joaquin County.

D. BRUNER—Sonoma County.

THE MINING AND SCIENTIFIC PRESS has closed its twenty-seventh volume, and the fourteenth year of its existence. The Press is a most valuable incentive to enterprise, inasmuch as it sets forth weekly the hidden resources, advantages, mining, scientific, mechanical, etc., of the Pacific States and Territories, besides a large amount of valuable reading matter. As the paper is a specialty in its line it should be filed for reference by every subscriber.—*Tuolumne Independent.*

PHOTOGRAPH PAINTING done in the most satisfactory manner at 426 Kearny street, from the smallest card to full life size, on very moderate terms by EMILY R. EASTMAN, Artist, 426 Kearny street, San Francisco.

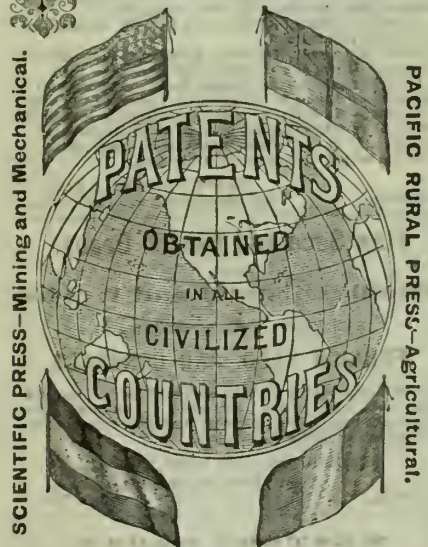
For the very best Photographs go to BRADLEY & RULOFSON'S GALLERY, with an "Elevator," 429 Montgomery street, San Francisco. 2v7-6m

HINTS FOR INVENTORS. We will send on receipt of stamp for postage, FREE, our 52-page Circulars containing 112 Illustrated Mechanical Movements; a digest of PATENT LAWS; information how to obtain patents, and about the rights and privileges of inventors and patentees; list of Government fees, practical hints, etc., etc. Address DEWEY & CO., Publishers and Patent Agents, San Francisco.

DEWEY & CO'S

SCIENTIFIC PRESS

Patent Agency.



OUR U. S. AND FOREIGN PATENT AGENCY presents many and important advantages as a Home Agency over all others by reasons of long establishment, great experience, thorough system, and intimate acquaintance with the subjects of inventions in our own community. All worthy inventions patented through our Agency will have the benefit of an illustration or description in the MINING AND SCIENTIFIC PRESS. We transact every branch of Patent soliciting business, obtaining Patents in all civilized countries. The large majority of U. S. and Foreign Patents granted to inventors on the Pacific Coast have been obtained through our Agency. We can give the best and most reliable advice as to the patentability of new inventions. ADVICE AND CIRCULARS FREE.

DEWEY & CO.,

Publishers, Patent Agents, and Engravers.

No. 338 Montgomery St., San Francisco, Cal.

Canada Victor Tomato.

I invite the attention of the public to extracts from more than a score of letters in my Catalogue for 1874, from Farmers and Gardeners in various States, who raised this New Tomato for the first time last season. These letters are all emphatic in their praises of the Canada Victor Tomato; 1st, for its surpassing earliness; 2d, for its excellent quality, and 3d for its uniform solidity. I now offer to the public, Seed saved from selected specimens only, at 15 cts. per package and \$1.50 per ounce. My Seed Catalogue free to all applicants.

JAMES J. H. GREGORY,

ja17-2t

Marblehead, Mass.

CALIFORNIA LAND AGENCY.

Will attend to the Location, Purchase and Sale of Lands and Farms, the Examination of Titles, and the Payment of Taxes.

1,000,000 Acres of well selected Lands in California, Oregon, and Washington Territory for sale. Also, buy and sell property in the city and vicinity.

W. M. BRANDON,

2076-ly-16p, 635 California street, San Francisco.

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull,

"DANDY JIM."

Of the world renowned DATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old; This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured. 4v7-3m

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, imported last year, and bought of Hammond.

J. H. DODGE.

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal. ja24-tf

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blisters of all kinds are speedily removed by it. WILLIAMS & MOORE, Prop'rs, Stockton, Cal. 3v7-3m

SEED WAREHOUSE.

(Established in 1850.)

ALFALFA—Pure California, Cheap, in lots to suit.

Timothy, Blue Grass, Red Top, Rye Grass, Red and White Clover, Mangel and Sugar Beet, and all other varieties for Field and Garden Culture.

S. W. MOORE & CO., Seedsmen, ja24-1m 420 Sansome St., near Clay.



FOTTLER'S EARLY DRUMHEAD.

Farmers and Gardeners you all need this Cabbage for two reasons; 1st, because it is the earliest of all the drumhead varieties; 2d, because every plant in an acre will make a large and solid head. Seed of my own growing sent postpaid by me for 15 cts. per package; 75 cts. per cz. \$8.00 per lb. My Seed Catalogue FREE to all applicants.

JAMES J. H. GREGORY,

ja24-cow-2t

Marblehead, Mass.

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho. Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee.

642 MARKET STREET,

N. E. corner of Montgomery.

T. CORLEY,

NURSERYMAN & FLORIST.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned, being a PRACTICAL NURSERYMAN, offers his services for laying out of gardens, plots, etc.

T. CORLEY,

4v7-3m No. 315 Washington St., San Francisco.

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental Trees, Shrubs, Roses, GREEN HOUSE PLANTS, ETC.

We are constantly adding to our varied stock the NEWEST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call.

LANDSCAPE GARDENING attended to. ja24tf

9 9 9 9 9 9 9 9 9 9 9

GROVER & BAKER'S

IMPROVED

LOCK STITCH

SEWING MACHINE.



No. 9.

SIMPLE, DURABLE,

LIGHT RUNNING, RAPID,

EASILY OPERATED,

Accurate and Perfect in Principle,

Beautiful in Appearance.

In every respect the best and most popular Lock Stitch Machine made.

R. G. BROWN, Agent,

116 Montgomery St., San Francisco.

25v6 lam-sa

9 9 9 9 9 9 9 9 9 9 9

SAN JOSE INSTITUTE

— AND —

Business College.

A Day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department

Is under the supervision of James Vinsonholler, who for many years was at the head of Business Colleges of San Francisco.

The Twenty-fourth Session commences January 19th, 1874.

For circulars address

3v7-2m JAMES VINSONHOLLER.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California. Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.

7v6-tf-16p2

FRUIT TREES.

Also, SHADE, ORNAMENTAL AND EVERGREEN Trees, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good reference must accompany all orders. Lombardy Poplars 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists, K street, between 8th and 9th, SACRAMENTO, CAL. 4v7-3m

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Finley Peach, Georgia Freestone Seedling, the first offered in the State, its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled from the Nursery.

BRYAN & DOMINGOS, 4v7-2m P. O. Box 151, Sacramento, Cal.

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,

ENGLISH RYE GRASS,

RED TOP,

ORCHARD GRASS,

TIMOTHY,

MESQUIT,

RED CLOVER,

WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-ly16p SAN FRANCISCO.

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street, San Francisco,

WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE and RED CLOVER SEED, etc.

Agent for GARRY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE.

BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th.

R. J. TRUMBULL, 15v6-6m-16p 427 Sansome st., San Francisco.

Improve Your Poultry.

It Costs No More to Keep Good Fowls than Poor Ones!



SEND STAMP FOR ILLUSTRATED CIRCULAR

Containing a full description of all the best known and most profitable Fowls in the country to

GEORGE B. BAYLEY.

Importer and Breeder of Blooded Fowls, and agent for the Poultry World, a monthly magazine devoted entirely to Poultry—tells how to keep Fowls for pleasure and PROFIT. Subscription only \$1.25 per year.

Address GEO. B. BAYLEY,

ja24-tf Box 659, San Francisco.

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 2lv6-tf

DR. ABORN, OCUList, AURIST.

Catarrh, Throat and Lung Physician.

The Most Difficult Cases are invited to call.

Offices and Laboratory, 213 Geary street.

Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M.

2lv6-3m-16p



Volume VII.]

SAN FRANCISCO, SATURDAY, JANUARY, 31, 1874.

[Number 5.]

Culture of the Cranberry.

F. Trowbridge, of Milford, Conn., on the growing of cranberries says:—As the raising of cranberries is receiving more attention from those who are interested in their culture, a few facts in regard to their growth, culture, etc., will be of service to all who wish to raise them for their own use or market. Success in raising cranberries is owing entirely to thorough preparation of the ground and subsequent culture.

The soil best adapted is low, moist land, suitably drained, so that the water will be twelve or eighteen inches under the surface. They will grow on moderately damp soil, that can be plowed or cultivated; they will not do well on dry sand or clay; they grow well on the borders of streams or ditches; as the plant draws its nourishment from air and water, light sandy soil, with an under moisture, is best adapted to their culture. If planted on rich muck or peat, they grow rank and strong, sometimes ten or twelve feet in length, and cover the ground over with a mat of vines three or four inches thick; and as the fruit grows on the end of the shoots the rank growth throws out but few buds, but if sanded over, the shoots are of short growth, the plants become rooted and throw out stronger fruit buds. There are large quantities of land all over our country that would grow large crops of fruit, that is now comparatively worthless, too wet and cold for grass, which if properly prepared by draining and sanding would give good results. In low lands, where you will find them growing in their natural state, it will be covered with moss where no organic matter exists; they are rarely if ever found on muck or peat; only in moss or sand; in moss the vine is hardly ever seen, only the fruit is on the surface of the moss; on the sand the vines are short and throw out bearing shoots near the surface. In regard to land that is wet and spongy, it should be drained and the surplus water left about ten or twelve inches below the surface; it should then be leveled and pure sand, without any organic matter in it, spread over the ground to the depth of three to five inches, in order to keep the surface loose and to prevent foul grass from choking the plants: some growers prefer putting on two or three inches of sand before planting and after two years growth, spread one or two inches more, which I think an improvement. Where the sand is mixed with soil or top strata, it will invariably throw up weeds, and large increase of labor is necessary in keeping the ground free.

Varieties.

[We have taken the time and trouble to prepare the accompanying engraving, in order to show our readers the natural size and shape of the several varieties when grown to perfection. It has caused a delay of the article one week.—Ed.]

Those best known and most extensively cultivated are the Bell, of which there are two or three varieties, Black-bell-shaped or Cape Cod, and a large mottled variety. The Cape Cod and Black-bell are the best adapted for upland and general culture, and are more generally sold; also Mansfield Creeper, which resembles the mottled Bell. There are no rooted plants of this variety for sale, only cuttings. Cherry and Bugle are best adapted to low lands—there are a large number of kinds that vary in shape and color, but all resemble the varieties named.

Planting and Culture.

When the ground is well prepared, lay it out as you would for planting cabbage,

strawberry, or other plants, using a pointed stick or dibble to make a hole four or five inches deep, in which you place the plant; press the dirt around it, and the root and stem will soon start to grow. The remainder of the vines may be layered in the ground, leaving the shoots or stems above. The vines covered will take root and much sooner cover the ground. Another plan, adopted by many, is to take the vines up without root, often six or eight feet in length, which they cut up and sow in drills, or lay the vine down and cover with dirt. In this way it will take from ten to fourteen barrels of vines,

can be covered with dirt in a box and placed in a cellar, until they can be planted out. Where there is no overflow, I am satisfied that they can be planted out in early spring until July, as well as fall.

Every family can have their garden patch, and in dryish soil, grass, meadow muck, tan or sawdust around the plant will be beneficial to retain moisture. They are highly ornamental in pots, the fruit hanging on the plant until the blossom appears for the next crop. They often bear a few berries the first year, and increase every year, coming into perfect bearing from five to eight years, averag-



Bell Cranberry.



Black Bell.



Bugle.



Mottled Bell.



Cherry.



Mansfield Creeper and Foliage.



Mansfield Creeper.

costing \$4 or \$5 per barrel, to the acre. The reason for this course is, that where the vines are grown on rich muck or soil, they do not make roots, but all mat together, and the above is the only way they can be planted out; but where the ground is sanded, they grow more upright, short vines with roots. These are the best to plant out, are packed close, and cost less for transportation, and the only kind that can be forwarded by mail. They are tied in bundles of one hundred each. Ten thousand are sufficient to plant an acre, two feet apart each way; but if the vine above ground is layered as proposed above, the two feet between each plant will be filled at once. Ten thousand plants will cost only \$25. If planted this distance apart, they can be cultivated with a horse hoe or cultivator to keep out the grass and weeds. After two or three years' cultivation they will take care of themselves. If wanted in small patches or in gardens; they can be set a foot apart and will cover the ground completely. They can be planted out at any season of the year—when the ground is not frozen, in the fall, in September, at the North, until the ground freezes, or in the spring until July. At the South and West, if possible, they should be planted from October to January or February. If received too late for planting, the roots

ing 100 to 150 bushels per acre—sometimes yielding as high as 300 bushels.

A point worthy of notice is, that cultivated fruit is less likely to be effected by drouth than wild fruit.

Overflowing is desirable, and I might say indispensable to complete success, as the water can remain over the vines, until there is no danger from frost from 1st to 10th of May, and if it can be let on and off at pleasure in the course of a few hours will prevent their being injured by drouth, or the worm, which is sometimes very destructive. For further particulars see Illustrated Treatise on the Culture of the Cranberry on Marsh and Upland, with the experience of others who have been successful in their cultivation.

Experiments in New England indicate that the cranberry can be cultivated on uplands, though generally with only moderate success. On Long Island, however, there are cranberry patches of five or six acres on high upland soils, good for nothing else, that produce fifty to one hundred bushels per acre, which is considered a satisfactory result, as manure is unnecessary, and the trouble of cultivating, gathering and marketing the cranberry is less than that required by the strawberry, blackberry, or any other of the small fruits.

In some places experiments have been

successful in raising the cranberry in ordinary garden soil; and Mr. Downing has stated that a plant of the size of twenty feet square, will yield three or four bushels annually—quite sufficient for a family.

For ornamental purposes, also, its culture as a house plant is highly attractive.

The Bell variety grows freely in pots, and its drooping growth, its bright emerald foliage, gemmed with delicate flowers and rich clusters of crimson, and coral-like fruit, render it a pretty ornament of the parlor or conservatory.

Green Corn or Alfalfa.

While pæans of praise are everywhere rife regarding the value of alfalfa as a summer forage plant during our season of excessive drouth, and without wishing to detract from its value in the least, we should not, however, neglect another plant, which if not possessing all the merit awarded to alfalfa may upon suitable soils be found a formidable rival, both as regards its real value to the dairyman as a nutritious and milk-producing food, but also in the immensity of its product per acre; we make reference to green corn fodder.

The following from the N. Y. Times is to the point:

Having sowed corn several years, and used it different ways, I find I have derived the most benefit and satisfaction from what I fed out green to cows and horses, from the time it would first do to cut until it was matured enough to harvest. From my experience with using it green, I would rather, with eight or ten cows, to have ten acres of pasture and an acre and a half of sowed corn, than twenty acres of pasturage alone; for at midsummer, when pastures are short and dry, the corn comes sweet and juicy, and an abundance of it. If cut and fed out freely, it will prove to be very satisfying to the cows and satisfactory to their owner. I would partly agree both with the man that says it does his cows no good fed them green, and with him that says it is best of any thing to keep them on, for I do not find it at all suitable food alone to keep cows on; but give them abundance of it, even with the best pasture, and it will be greatly relished, and increase the flow of milk.

My working horses I prefer to keep up through the season, giving them the first cutting of orchard grass, then clover and new hay, until the corn is large enough and the hay is becoming rather dry feed, when I give them the corn with it, and find that the green corn fed with the dry hay is much better than either hay or corn fed alone. I prefer to sow it very early, even at the risk of losing my first seedling. Make a fine seed-bed by fall plowing and cultivating thoroughly in the spring, and sow (with wheat drill) about three bushels to the acre, using our common corn for fine fodder and early use, and the Western for later feed and heavier crop, though the small kind is not so apt to lodge, and I think it better in quality, but not so much of it to the acre.

This year I found by measuring ground, and weighing its produce in different parts of the field, that the corn stood about forty tons to the acre green, and it was the fourth or fifth crop of corn fodder grown on the same ground; by using either a little manure or ashes for a fertilizer each year it lodged badly. One would think that such a heavy growth of vegetation plowed under would enrich the land a good deal, and it was grown cheaper than I could have even drawn that weight of manure on the ground; so I tried plowing under some that stood eight to ten feet high, which I did very well by first rolling it down the way I wanted to plow, then by using a wheel coulter and a chain on a large heavy plow, it turned under nicely; but I must wait a year to see the result.

The carpet worm is a new pest just discovered. It is of dark color, less than half an inch in length, and covered with fine hair. It makes havoc with carpets in a short time. It is said that fine salt and fine cedar chips sprinkled on the edge of carpets will protect them from its ravages.

CORRESPONDENCE.

"Our Jute Manufactories" Again.

EDITORS PRESS:—I was somewhat surprised on the receipt of Vol. VII, No. 1, of your widely circulated, interesting and useful journal, to find on the first page, under the caption "Our Jute Manufactories," an article in which the subject of the proposed removal of the present import tax on jute, bags and bagging was treated in an equivocal if not unfriendly manner.

I have waited, hoping some of your correspondents more competent than myself, would offer some comments on the subject, expressive of the views of agriculturists, and of the true interests of the Pacific coast.

It is true, we have a jute factory in our State, that is protected, subsidized, by the present tax. And it is also true, that the company owning said factory, have gobbled up from the farmers of this State, in the last two years, an amount equal to the necessary cost of their entire works, under the operation of the present unjust tariff regulations. Unjust, especially, because it is a burden on the agriculturists of this coast only. Unjust on general principles, because an improper method of raising revenue for the support of the government. Jute manufacturing needs no defence at the hands of the RURAL PRESS. It is able to take care of itself.

So enormous are its profits, so intent are those now engaged in it, on reaping a golden harvest out of the monopoly they now enjoy, that they have gone to great expense to enclose their extensive works with a high, solid, board wall, on the entrance to which they keep conspicuously posted a placard bearing the inscription, "NO ADMITTANCE," lest by an inspection of their works others might learn the lucrativeness of the business, and be induced to establish other factories in competition with theirs.

It were a difficult task to convince the farmers of this State of the justice of keeping in force a law by which they are compelled to pay a million of dollars annually to keep up a manufacturing establishment to prey upon their industry. Especially one, the operatives in which obtain all their supplies from "the Celestial Empire," the place of their nativity, and to which, when their term of service shall have expired, their earnings will be taken.

One of the arguments most confidently relied on by that class of monopolists who assume the specious name of "protection," is that the building up and maintenance of manufacturing establishments in the midst of rural populations, furnishes a home market for the agricultural products of the surrounding country.

What supplies has this jute factory ever required from the farmers of California? Absolutely nothing. Indeed, when this whole system of protection is denuded of the tinsel logic with which corruptionists have decorated it, in the interest of manufacturing monopolists, nothing remains but the loathsome and hideous lineaments of robbery and plunder.

It is passing strange that any one, cognizant of the enormous burthens under which agriculture is now struggling, should pause in view of this question to propound the inquiry: "Now, what is to be done?"

Shall the farmers of this State, who contribute more largely than any other class, in proportion to their wealth, to the support of our local and State government, continue to pay about a million of dollars annually in tariff duties on an article that is not used, and therefore pays no tax, in any other section of our country, in order that one manufactory that produces about ten per cent. of the bags used in the State may be enabled to pocket \$100,000 a year?

Jute manufacturing needs no protection. It is chiefly carried on in the city of Dundee, in Scotland; and with or without the duty, the raw material can be brought from India, the place of its production, to San Francisco at less cost than to Dundee. With the labor now employed, it can be manufactured almost, if not quite, as cheaply in San Francisco as in Dundee. Therefore, the tariff duty amounts to a subsidy to the company, equal to the duty on the imported article, and the cost of transportation from Dundee to San Francisco.

The only injury the removal of this duty would inflict on home manufacture would be the withholding of the subsidy; without which the business would pay a handsome dividend on the capital invested.

It is a burning shame that so many tolling thousands should be compelled to pay tribute to the avarice of a few opulent speculators.

And it is a source of profound regret, that a journal which these toilers support with their patronage, and look to for the advocacy of their interests, and the defence of their rights, should hesitate to take a firm and unequivocal position on a question like the one under consideration.

S. T. C.

Santa Rosa, Jan. 20th, 1874.

If our correspondent will turn to the last number of the RURAL PRESS for 1873, page 408, where we were discussing the question of the repeal of the duty on jute and grain sacks, he will find the following:

There is no question but that the law imposing this duty ought to be repealed. We import millions of dollars' worth of grain sacks, pay-

ing therefor an onerous duty. We fill them with wheat, and return them to the very country from which they were originally obtained, resulting in a dead loss of the same to the California purchaser. It amounts to a discrimination against those States in which they are compelled by an inexorable custom, to ship their grain in sacks, instead of in bulk.

We consider that in this we took an "unequivocal position," and we are ever ready to maintain it. In our article alluded to by our correspondent, we put certain questions, to farmers and manufacturers of jute, hoping to receive answers from both. We have now heard from the farmers' side; let us hear from the manufacturer, and then all, Editor of the RURAL, Farmer and Manufacturer, will have spoken.

Corn Worm and Eucalyptus.

EDITORS PRESS:—On the principle of "Give and Take," I apply to you or your numerous readers for information concerning the corn worm. Is there any preventative or remedy for the ravages of this destructive grub or its meth, and how may one discover the latter?

Last July, planted sweet corn here, on new, recently broken ground, which grew rapidly and matured early, the ears filling tolerably well and growing to good size; but when the time came for gathering it for the table, almost every ear without exception, was found to have from three to seven worms embedded in the kernels, and even in the softer portions of the cob, rendering the corn entirely unfit for use, unless for the swill barrel. Information concerning the management of such cases, I would like to take. Now as to the giving, I wish to state for the benefit of others, likewise interested, my experience with Blue Gum seed.

I obtained a lot from a seedsman in your city about the middle of the summer, just passed, and having sowed a portion in several different situations, I anxiously awaited the result; but one, two and three weeks passed by, and not a plant was visible; again I sowed and waited, this time in the shade, but with no better success. Nor was this all, for not a single seed could be found in either case, so that I could not judge whether they had ever germinated or not, or whether I would be just in censuring the seedsman for sending me unreliable seed.

However, I concluded before doing the latter, to make another effort, and accordingly procured a small wooden box, filled it nearly full of ordinary soil, and after committing the seed to the moist earth therein, I set the box where I might take my work and watch what would become of those seeds, which but a moment ago I had lightly covered, taking care, however, this time, to leave a few on the surface, in sight, as a standing and visible evidence of what had been done, that I might be sure that they had not been mysteriously spirited away.

After patiently watching for perhaps a quarter or a half hour, without being able to discover anything suspicious in connection with the seed, I had the gratification of witnessing what unraveled the whole mystery, and felt like shouting Eureka in victory; first, there appeared a single, small, red ant, crawling rapidly up the side of the box, running first this way, then that, like a regularly appointed skirmishing party, which I suppose indeed, the industrious and indefatigable little fellow really was. Finally he discovered one of my visible Blue Gum treasures; in a trice, he lifted it, and bore it off down the side of the box, and away to his—to me—unknown provision house. But I noticed that every instant he would meet one or more of his small and equally industrious comrades, and after a moment's communication, would pass on with his burden, leaving all he met to follow his example, with the added advantage of what information he could give them concerning the whereabouts of the newly discovered rations.

The consequence was, that in from five to ten minutes, after the conclusion of my first seed, the box was alive with red ants, each one intently engaged in "nosing out" my precious onion-like little seeds. I could endure it no longer, even with the delight occasioned by so great a discovery; so, resolving that something desperate must be immediately done, even with the risk of losing all my seeds, I hastily seized a kerosene can which stood near and completely saturated the surface of the earth in the box with its contents, concluding that I might as well loose my seed one way as another.

Happily for me, however, after this treatment, the little pests left as precipitately as they came, and in a very few moments I had the box and remaining seeds to myself again, nor did the ants ever return while the odor of the oil remained, and in about three or four days I had the satisfaction of counting some thirty-five tiny Eucalyptus trees, which, considering this latter all transpired as late as October, are doing pretty well. So much for the depredations of the red ant and the remedy.

T. WORTH.

This corn worm is a great pest. We know of no preventative. Will the readers of the RURAL give us their experience and success in preventing or lessening its ravages?

Summer Fallow and Irrigation.

EDITORS PRESS:—I wish to call your attention to a subject that I hardly think is urged upon the minds of the farmers of California with sufficient force. It is the subject of summer fallowing a portion of the land they cultivate each year, instead of sowing the whole every year, and growing but about a half crop. At the present time the attention of the farming community is occupied with the subject of irrigation, which is very proper, and I sincerely hope the same interest will continue until we secure laws that will give to each farmer in every irrigation district, a fair and equitable proportion of all the benefits that can be derived from irrigation in the district where he is located; but there are many localities that cannot be supplied with water, and I believe that the difficulty can be overcome by a judicious system of summer fallowing. During the last summer I made several trips through the San Joaquin valley, for the purpose of forming an opinion from observation of the soil, and the manner of its cultivation, of the probable success of growing wheat in that valley, or rather, if by a different mode of cultivation, lands could not be made more certain to yield a fair return for labor performed, etc. Traveling some sixty miles on the west side of the river, I saw but two tracts of land that had been properly summer fallowed, and the ground well pulverized before the seed was sown; and on both tracts, the yield was from twelve to fifteen hundred per acre, which was a good yield for that valley, while lands where the wheat was sown on stubble, did not return the seed.

I saw other large tracts that the farmers told me had been summer fallowed; that was an entire failure on the stubble lands. The reason was obvious: the land had been broken up after the summer drouth had commenced, and had broken up in lumps from two to eight inches in circumference and was left to bake through the summer months until after harvest, when the seed was sown and harrowed in, or rather by the action of the harrow, these lumps were turned over, but there was not pulverized soil enough shaken from them to cover the seed, or give it sustenance to grow after it germinated. Had the same land been plowed during the winter months, when the soil was loosened or softened by rain, the action of the plow would have pulverized the soil to a great extent, then in the spring after the foul seeds in the ground had become well sprouted, been well harrowed and plowed the second time, I believe in every case of fallowing, good crops would be grown nine years out of ten even in the San Joaquin valley.

Other advantages occurring from a thorough system of summer fallowing are: land clear from foul seeds, and, if proper seed is sown, clean wheat for market; also a continually increased strength and fertility of soil, which is of the utmost importance to the future agricultural interest of the State.

As the present month is the time, in my opinion, for the commencement of summer fallowing, I hope the RURAL will give the subject attention.

SUBSCRIBER.

The importance of summer fallow can hardly be overestimated, in soils which cannot receive irrigation; and for the purpose of eradicating weeds and all foul growths from the soil, there is no substitute upon lands too dry for the growth of hood crops.

Gardening and Great Yield of Melons.

EDITORS PRESS:—The rainy season up to date has been very propitious and the grain in many places looks heartfully green. Farmers are busy in all directions plowing, sowing and harrowing, and before the season will be over, many an acre that never felt the touch of a plowshare will be seeded to small grain. Some of the farmers have begun to make permanent improvements, whereby to supply themselves with a few of the comforts of this life, and others are decorating their homes with fruit, shade and ornamental trees.

Some of us think it will be well not to depend upon small grain alone for money and will increase our already successful alfalfa patches and give broom corn, corn to be fed to hogs, and potatoes a trial. Not a few are making preparations to embark in the garden business, some on a large scale. N. H. Spencer will try 30 acres in alfalfa and vegetables; O. K. Jimmy, 10, and Uncle Johnny Fowle 10. The last mentioned raised and sold three hundred dollars' worth of melons from one acre. All of us think we live in the garden spot of this valley, and that is the reason why so many are going into the garden business.

You are aware that we live under the King's river and San Joaquin canal and have no fear of drying up.

Our Grange is progressing very well—have weekly meetings and always have had—the members generally take an interest in its proceedings and we are trying to build a hall and store room 24x50, and if each member will do what he can there will be no doubt of its being erected in the spring. We had a fine rain on the night of the 15th inst. and a hard one this morning.

W. F. CLARK.

Badger Flat, Merced county, Jan. 17, 1874.

Foreign Growths in the Body.

EDITORS PRESS:—A few weeks ago, a correspondent stated in the RURAL, that he had discovered what appeared to be worms imbedded in cod-fish.

Several years ago, when the first cod-fish from our coast were brought into our markets, I bought one, so white that it was almost transparent. Admiring its clean and fresh appearance, I discovered several spots of a brownish color imbedded in the flesh, which I cut out with a knife. I pulled the roundish coil apart, when I beheld a worm an inch or more in length, tapering and slender. Straightening it out, it would draw up, by apparent elasticity into the shape in which it was found. The idea occurred to me at the time that an egg had been deposited in the flesh after the fish was cured; but if so, why was not the worm alive? I cut out several—all of the same look and elasticity—apparently a live worm in a dormant condition, though I supposed them dead. I have since repeatedly examined these fish, and have found this worm in the Eastern fish, in one case, by holding the fish to the light, the worm being almost the color of the fish.

The following, from Scribner's Magazine of Sep 1872, confirms my own unscientific opinion of the matter. I think all feeble or unhealthy organized bodies, whether animal or vegetable, will become possessed,—(dare I say engender?)—animal organisms within the flesh of their own bodies. I know there are many of the people who believe that animal life pervades, in minute forms, all other animal life.—Would like to hear from Dr. Henry Gibbons, of S.F., on this subject.

But to the extract:—"Dr. Bastian, in speaking of the origin of lowest organisms, says:—It has been long known that Bacteria and Torulae are frequently to be found within vegetable cells taken even from the central parts of plants, whenever these are in a sickly condition or are actually dying. They are apt to exist also within the epithelial cells taken from the inside of the mouth, and the frequency and abundance with which such organisms are met with in these cells are almost in direct proportion to the mal-nutrition and lack of vital power in the individual who is the subject of observation. Then again, in persons who have died of adynamic diseases, in the course of twenty-four or thirty-six hours (during warm weather), Bacteria may be found in abundance within the blood-vessels of the brain and other parts, although no such Bacteria were recognizable in the blood of the individual during life."

Santa Clara, Jan. 1874.

I. A. W.

Silk Growing as a Business.

EDITORS PRESS:—I will seize this opportunity for answering a paragraph of yours in your article on the silk worm egg trade, published in the last number of the Press; you say: "Why not raise the eggs in California and receive the millions of dollars paid to the people of Japan? Is it because our climate is unfavorable to their production, or do we lack experience, or is it that we have not sufficient enterprise to find a market for what we do raise?" In my opinion it is due a little to all of these, with the exception of the climate, which is very favorable to the production of silk-worm eggs. It is true that we, in California, lack experience, and enterprise too, that is, in regard to that very industry. Then, on the other hand, there have been already so much speculation and swindling in that business, that men of means look at it as a non-paying one; here is an instance of it: Mr. Robinson Bonbonne, of whom you made the acquaintance last year, and the very man who organized that silk company with the nominal capital of \$400,000, of which he was the Superintendent, operated in Sonoma, last summer, where he raised, successfully, several hundred thousand of eggs.

Well, that man got along that year through the contributions of the lady shareholders of San Francisco; but after the laying of the eggs, he "vamosed" for parts unknown, taking away with him all the eggs, and the money to pay off the hands. The last heard of him he was in London. Do you think that such swindles will help our poor sericulture?

I know this much, that if I would try to organize a small company with a capital of \$15,000 to \$25,000, for the production of silk and silk worm eggs for the European market, do you think that I would succeed, even in showing a good beginning, something substantial and real to start on? No! for I am satisfied that I would fail. But if, instead of silk and silk worm eggs, I would propose a gold quartz ledge, no matter how poor would be the quartz, I am satisfied that I would have ten chances to succeed against one for the silk proposition. Humbug and speculation seem to have gotten the better of the legitimate business, and that's what's the matter.

FELIX GILLET.

Nevada City, Jan. 19, 1874.

WEAK CALVES.—EDITORS PRESS:—Seeing an inquiry in the Press about weak and deformed calves from Santa Barbara, I would suggest from experience, to change the bulls about once in three years. The weather has been extremely cold for the past week.

A SUBSCRIBER.

Calaveras county, Jan. 22d, 1874.

The Philosophy of Shallow and Deep Plowing when Applied to Sand Loam.

EDITORS PRESS:—A great many have hitherto philosophized upon the subject under consideration. But I think the ideas which Mr. George W. Sperry (an extensive farmer in the vicinity of Stockton) has matured, are, perhaps, nearer correct, than any that have yet been suggested. The opinions which he advances on this subject are not at all conjectural, but have been arrived at by arduous and continued experiments.

Every spring in this country, they have what are called warm spring winds, which occur about the time the wheat or grain is changing from the milk into the dough. The land which is plowed deep at this season will not long retain its moisture, soon drying out through the warmth of the winds; the grain becomes parched and yields but a scanty return, to the industry bestowed upon it.

On the contrary, the land which is plowed shallow, does well and yields an abundant return. The philosophy of which is this:

The fibers or roots of the grain which is sowed in the deep plowed land do not reach or take root in the solid earth, from which to suck its moisture. The land being loosened too deep, and the root of the grain extending no farther it consequently dries out down as far as it is plowed and the grain dies and withers for want of sufficient nutriment. In the shallow plowed land, the root of the grain penetrates the solid ground beneath, which retains its moisture completely and consequently the grain flourishes and prospers. Continuing the process no further, shallow must be preferred to deep plowing.

But Mr. Sperry remarks that if a certain practice be observed the deep plowing is the best, and will yield the greatest crop. That practice is rolling the land after the grain has fully appeared above the ground. The rolling enables it to retain its moisture completely against those warm winds, which occur about the month of April, in every year. Mr. Sperry has thoroughly experimented upon this. Instead of a roller he has as soon as the grain appeared above the ground, turned upon it a numerous herd of cattle which kept it closely grazed down, causing it to grow out so strong and thick that he counted 82 stalks on one kernel of wheat. But his chief object in turning his cattle in upon the wheat was to thoroughly tramp and pack it, thereby causing it to retain its moisture completely. C. M. D. Stockton, Jan. 24th, 1874.

Letter from Rochester, N. Y.

EDITORS PRESS:—The Weston, N. Y., Horticultural Society met January 7th, in Rochester, and held two days. It brought together most of the prominent nurserymen and fruit-growers of New York State, beside several from Canada, Ohio and Michigan. P. Barry was re-elected President. Able and voluminous reports were made by the several standing committees.

Among the many subjects discussed, the following practical and useful remarks were brought out: E. S. Howard had found the General Grant and Hathaway excelsior all that were desirable—to which most members assented—Trophy being too late for our short seasons. C. L. Hong reported 350 barrels of apples shipped from Niagara county by rail and canal, and 487,000 from Monroe—which shows about one-half the productions, home markets and other lines of conveyance taking about half.

A discussion on the cause of decline in fruits and vegetables resulted in nearly a unanimous decision that *fruits* do not decline, but that either some disease or insect attacks certain varieties in some localities, and hence they fail there, but when removed to other localities do well; vegetables grown from seed may decline from admixture or hybridization. In regard to cultivating orchards, some were in favor of continual surface culture, while others thought if there was sufficient fertility to produce a good current year's growth that it was just as well to seed to grass and mulch. Honey locust was decided to be the best deciduous hedge plant.

The Early Beatrice and Early Barnard were spoken of as being most promising peaches for market. Many of the new raspberries proved unsuitable, being too soft; among this class were the Hustin and Saunders. A new berry supposed to be a hybrid between wild red and black, called the "Ganargua," was represented as a red berry propagating from tips of large size—very firm—productive and hardy. Select lists of roses, deciduous trees, shrubs and evergreens were handed in by several members. It was resolved to hold a rose exhibition in June. Also to grant 1st and 2d grade certificates of merit to worthy articles new or newly introduced. 21 plates of winter pears were exhibited by E. Barry, also 2 of B. S. Fox, California seedlings of very great merit, also several plates of pears by W. B. Smith of Syracuse were very fine. Mr. Barry thought we should have to look to Fox of Cal., and Clapp of Mass. for great improvements in pears. Adjourned to meet at Rochester in Jan. next. I. B. JONES.

Nurserymen, Please Notice.

EDITORS PRESS:—About the first of the winter, wishing to purchase about 2,000 fruit trees for orchard planting, I selected the names of five nurserymen, from the PRESS, and wrote to them for catalogues and price list; but one of the lot sent catalogue and price list with varieties, the others writing that they had an abundance of trees with price list, but neglecting to state what varieties of each fruit they had for sale. How can nurserymen expect to do business in this vague, indefinite sort of way? They must not expect planters to send lists of the desired sorts which they wish to procure, and after waiting some time, to be informed that they have not the desired kind, but send something else equally as good, which you may already have. I think a nurseryman or orchardist who does not keep up with the new and improved varieties of fruits, had better quit the business. At this season a man cannot be too careful in the selection of his varieties, as the day for poor fruit has passed. Would it not be better for nurserymen to let farmers and horticulturists know, not only the varieties they have for sale, but the prices? Many a one is prevented from planting trees because he does not know where to find what he wants. Last season, wishing to plant a number of Blue Gums, I wrote to several for trees of a certain age; after waiting some time received answer that they could not be had, as the season was growing late and the supply exhausted; large trees would not do well shipped so far, consequently I procured some seed and raised a nice lot of trees with no more trouble than so many cabbage plants. I would advise my brother farmers to adopt the same course, thereby raising their trees at a cost of two or three cents apiece. W. S. M. Brighton, Jan. 19th, 1874.

White Scuppernong Grape.

EDITORS PRESS:—In your issue of January 17th, I notice your comment upon the White Scuppernong Grape, called out by the inquiry of F. W. Gibson, of Los Angeles county. In 1859, I planted a vineyard in the mountains of Santa Clara county, and having read Downing's description of the Scuppernong I sent to North Carolina for it. I cultivated the few vines I saved, with great care, for ten years, and then dug them up and threw them away. They blossomed full each spring, but before the grapes attained the size of quail spot, they fell off. I never obtained grapes enough to make any wine, but observed that the few, straggling berries that would sometimes remain on, and mature, had a very thick skin, and were worthless for table use. Twenty varieties of the best foreign grapes in the State, planted in the same soil, and subjected to the same climatic influences, bear regularly and bountifully. D. C. FEELEY.

Soquel, Jan. 19th, 1874.

Information of this kind comes directly to the point and is valuable to grape growers, in the vicinity of Soquel certainly; for after this experience, no one will be likely to lose time and money in testing the Scuppernong grape. We wish if others have made trial of this grape in other localities, they would report results to the RURAL for publication.

The Jute Duty.

EDS. PRESS:—Let the mills go to naught if they must. Every true Patron of Husbandry must stand firm to principle. Special legislation in behalf of any branch of industry is wrong. A duty on iron, woolen goods, and especially grain sacks, makes the poor laborer in England pay dearly for his bread, and takes away from the farmer in California what little there is of profit on his crop.

The duty on woolen goods makes the poor in our northern States shiver in their mosquito-bar blankets, while lazy Indians in Victoria can afford pilot cloth overcoats and twelve pound blankets. Free trade forever. E. R. NICOLE.

Tustin City, Cal.

We have more than once expressed an opinion in favor of the repeal of the tariff on jute, bags, etc., and are now pleased to give the ideas of those directly interested.

Graham Pie Crust.

EDITORS PRESS:—In a late number of your paper, "Mary Mountain," in giving instructions how to make "graham pie crust," says: Sift your pan half full of flour, then add two cups of graham flour. Now, novices would like to know how much would fill the pan half full. A pan may hold a quart, a peck, or a bushel. The same writer tells us how to make brown bread. I would suggest an improvement; leave out the soda and sour milk and use yeast and water. NOVICE.

Stockton, Dec. 24, 1873.

THE coal supply of the United States for 1873 is estimated at forty-three million tons, or about one million more than last year—the greater part of it anthracite. The Pennsylvania product of anthracite for 1872 was valued at fifty-three million dollars.

MISCELLANEOUS.

Ancient Lakes of Oregon.

Professor Conder, State Geologist of Oregon, is giving a series of lectures in Portland, some of which are reported in the *Oregonian*. That paper says:

The subject for the sixth lecture was "The Ancient Lakes of our Interior," and many fossil remains, taken from various points in our State, both east and west of the Cascade mountains, were exhibited by the speaker to substantiate his theory that the great sea once covered all this coast, and extended clear to the borders of Kansas.

Several facts have been proved in prior lectures. Among them were—

First—The whole Pacific slope was once a seabed, a fact proven by the presence of rocks in all parts containing shells of animals known to have inhabited the sea only.

Second—That the pressure that elevated or raised this country up out of the water came from the Pacific ocean. This was demonstrated by the inclination of the strata or layers which bore any indications of having been disturbed since their deposit. The folds or strata indicate the direction in which the force that tilted them up was applied, so that there was no danger of mistake on this point.

Third—That the Pacific ocean is now deeper than it once was, which was shown by soundings made in the vicinity of coral reefs. Corals never work in water deeper than 125 to 150 feet, while their reefs are often found to exceed ten thousand feet down. That the settling of the bed of the ocean has kept pace with the rise of the reefs is the theory upon which this was explained.

Fourth—That the settling of the bed of the ocean was the result of cooling of the earth's crust. This process of cooling would crumple the earth's surface just as the shrinkage of an apple would leave the skin wrinkled in folds. So the settling of that part of the earth's crust constituting the ocean's bed would necessitate the upheaval of other portions, as in the falling in of one part of an arch, other parts are pushed outward. In this process, the pressure would be greater where there was the most water, and if we go a thousand miles to the north, where the Pacific ocean is the narrowest, we find the mountains lowest, or if we go two thousand miles southward, we find opposite the vastly wide part of the ocean, the very high mountains of the Andes.

The Pacific coast consists of three great plains. From the first or southern slope the waters which once covered them were drained by the Colorado river. From the central plain the waters were gradually dried up by evaporation, while from the northern slope the vast body of water that once covered it was carried off by the channel of the Columbia.

We infer that when the causes of disturbance operated, the strata had all been deposited. If we find two of these strata upheaved or crumpled, and a third overlying these, not so upheaved, we infer that this stratum has been deposited since the causes which produced the upheaval of the other two were in operation. The upfolding of the earth's crust which formed the Blue Mountains, in the eastern part of our State, began in the eocene period, was quite active in the eocene-tertiary, and ceased in the pliocene—and since that time no great convulsions have taken place. In the days of these upfoldings there were no mammoths, and none of their remains are found in the rocks of the eocene period. The Blue Mountains have not been connected with the older parts of the continent by the withdrawal of the water. These mountains were the nucleus of what now constitutes Oregon, and were the first part which appeared as dry land, though some parts of Southern Oregon were very old, and further explorations might upset this theory of the greatest antiquity belonging to the Blue Mountain region. In those days, plant life was abundant, and many beautiful specimens existed. Among the trees were the palm, yew, maple, alder, etc. The yew was a very beautiful tree, and shed its branches instead of its leaves. Many of these branchlets are still preserved in the rocks, in a petrified form.

The surface in the vicinity of these mountains is generally of volcanic material, though granite and basalt are frequently found. The heat produced by the pressure from seaward sometimes changed the appearance and chemical character of the rocks on the coast. The Coast Range contains many more indications of being an old cast-up sea bed than do the Blue Mountains or the Cascades.

The upturned edges of the folded strata can be seen along the western foot of the Cascades and eastern foot of the coast range. These strata dip under the Willamette Valley, and the same extend northward to Sitka and southerly beyond San Francisco. The Deschutes river flows through a basaltic rock, in some places over three thousand feet thick, the southern through a basin or old lake-bed. Going eastward from the Deschutes, we come to John Day's river. At the great bend in this last stream the basalt only capped the hills; the great molten bed which had flowed out of the Cascade mountains, cooling as it traveled, was three thousand feet thick at Deschutes and only a few feet thick at John Day's. From the high hill at the bend of John Day's one can see for sixty miles one of the most beautiful collections of rocks on the globe. They are of all forms and all colors. These rocks indicate

the fact that a stream of lava once ran through this basin, visible from the hill named. The basin is the bed of an old lake. In it are found many curious remains, among them those of the three-hoofed horse and camels. Many of the same animals existed in Oregon in the pliocene-tertiary period, that are now found in Asia.

The speaker concluded by expressing his confidence in this theory of the comparatively modern origin of man, though the finding of human bones in any period would not upset a single article in his creed. He had not, as yet, been permitted to visit Southern Oregon, and exploration in that region might discover a great deal, as it seems to be an old country, perhaps older than the Blue mountains. Standing on Spencer's Butte, and looking over a large portion of Linn, Benton, Polk, and Yamhill counties, one can but feel the conviction that the vast area before him was once an inland sea, and similar impressions are felt when looking at the country from John Day's Hill, in Eastern Oregon, and the Yakima Heights in Washington Territory.

The next lecture will be on "Surface Facts in Oregon," and will treat of the course of river and mountain ranges, and the glacial theories.

Sugar in Organic Substances.

Sugar, until a comparatively recent date, supposed to exist only in certain vegetables, has more recently been found a very general concomitant of vegetable, and, to a certain extent, of animal life. It exists principally in the form of cane sugar, or crystallizable sugar, grape sugar, or glucose, and lactic, or sugar of milk. In the first form it is found most abundantly in the sugar cane, in sorghum, which is, however, in fact, only a variety of the sugar cane; in the beet, and in the sap of the maple tree, from all of which it is manufactured in large quantities. Indian corn has also been tried as a producer of sugar, and in the Patent Office reports for 1844 are given, by Mr. Webb, the results of some experiments with corn-stalks. Good sugar can be made from corn, but not in quantities to make the crop profitable, as compared with other crops which might be produced upon the same land.

The second form of sugar, is partially uncrystallizable, and exists largely in the grape, hence its name, grape sugar. It exists however, in the juice of many ripe fruits, and to it they owe their sweetness. Also, in the nectariferous glands of flowers, and in connection with another uncrystallizable form of sugar, similar to the brown syrup of the sugar cane, and with certain odorous, gummy and waxy matters it constitutes honey.

The third form, lactic, exists only in the milk of mammalia, from which it may be separated by a chemical process. By action of hot dilute acids, it may be converted into glucose. Glucose is also produced in the human organism by the liver in a healthy state, and secreted abnormally in the disease known as diabetes. The starch of grain is, by fermentation, converted into glucose, and from this to alcohol.

M. A. Petit, a French savant, has recently been examining the leaves of the grape vine, as well as other leaves, and finds they contain, besides a quantity of sugar in the inverted state (*sucrose inverté*), a considerable quantity of cane sugar. Cherry and peach leaves also contain both cane sugar and glucose. In M. Petit's tests, he found that a kilogramme of peach leaves contained 33 grammes of cane sugar, and 12 grammes of glucose. It is highly probable, that sugar, in one of its forms, exists in the leaves of, at least, all fruit-bearing plants. —*Artisan*.

ALASKA COAL LANDS.—A bill to provide for the extension of the United States system of land surveys over the Territory of Alaska, has been framed, but has been nipped in the bud by opposition from the Interior Department. Last winter a bill for the sale of coal lands was passed, and provision was made so that tracts of unsurveyed land could be held by performing a certain amount of work and continuing the same until the surveys were made, when the holder would have the preferred right of entry to the land. A number of speculators, whose headquarters are in San Francisco, succeeded in getting the coal fields of Alaska included within the Act. They have formed companies and dispatched agents to take possession of large tracts of the most valuable coal lands in this Territory, the existence of which is only known to a few men, and now, in order to perfect their grabs, they expect Congress to pass a bill to extend the surveys over them. Commissioner Drummond has addressed a letter to Senator Mitchell in opposition to the scheme. There are rumors also of a combination to control and monopolize the resources of that Territory, but there is a disposition among members of Congress to investigate them all. A movement will be made toward having a Commissioner appointed to examine the whole subject and at the same time to report upon the manner in which the Alaska Seal Fur Company is fulfilling its contract with the Governor.

ANOTHER PERPETUAL MOTION.—J. W. S. writes to the *Scientific American* to say that he has a perpetual motion in running order, and he will dispose of it for \$2,000,000 for a "plot," but if he has to carry it to Washington, he will ask \$5,000,000. The *Scientific American* replies: "The existing financial crisis will, we fear, prevent our correspondent from receiving either of the sums he mentions."

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F. General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

OUR CORRESPONDENCE.—We give up almost the entire space usually allotted to Grange matter to our correspondence, deferring most of what we may have to say ourselves to a future issue. It gives us pleasure to notice the increased interest which our Grange correspondents take in selecting the RURAL PRESS as their organ for communication with the public and other Granges. We shall ever try to make room for all such favors, and can assure our friends that the wide and general circulation which we can give them will insure largely to their benefit; while the great variety of important agricultural and other matter—to say nothing of our numerous and instructive illustrations—makes the RURAL PRESS really the cheapest paper, for the amount of valuable reading given, that is published on the Pacific Coast.

COMING DOWN.—Is it not a little strange to see so many of the wire pulling gentlemen who have heretofore managed political conventions, in their own way, coming down from their stilts, and asking the people what they will have them do? Such things are already being witnessed in many portions of the Union, and are fast becoming general throughout the country. In county and State conventions of all political parties, in our State Legislatures and in Congress, we see the political managers almost everywhere endeavoring to trim their sails to the coming storm, and striving to put themselves aright on the great and live issues which are now before the people. Oh, no, the farmers are not accomplishing anything in the way of reform; they don't know how to do business—of course they don't!

THE PATRONS IN IOWA appear to be up and doing. Among other movements they have recently purchased the patent of a harvesting machine, and propose to manufacture and sell it to Patrons much cheaper than it has hitherto been furnished. They have also made arrangements with a sewing machine company, by which these useful instruments for every farmer's household, can be purchased at fifty per cent. below the ordinary prices.

During the first eight months of 1873, the State Agency was the medium for the sale of farm machinery to the value of \$200,000. As the date of the report, the Agency had order, on hand for the procurement of \$18,000 more on which moiety it was expected the purchasers would save at least \$7,000.

Installation at Napa Grange.

EDITORS PRESS:—On Saturday, January 17th, the officers and members of Napa Grange, with their visitors from Calistoga, St. Helena, and Yountville Granges, met at their Hall on Main street, and marched in procession to Grigsby Hall. They attracted considerable attention, this being their first appearance in public. The ceremonies at the Hall were opened by a short address from W. M., W. H. Baxter, a song by the choir, and then the Worthy Lecturer of California State Grange, J. W. A. Wright, was introduced and delivered a forcible address, in a manner devoid entirely of ostentation, in a tone that all could hear, and in language that all could understand. [Our correspondent has kindly furnished us Brother Wright's address in full, but we are compelled to defer its publication for the present.] The rain prevented the attendance of the officers of the Yountville Grange, and they were not installed as previously arranged. At the conclusion of the Installation Ceremonies the line was again formed, and the Patrons marched back to their Hall.

The retiring W. M., W. H. Baxter, then briefly reviewed the past—his efforts in behalf of the Order—and expressing his regret at being called away to other duties.

The following resolutions were unanimously adopted:

Resolved, By the members of Napa Grange, No. 2, P. of H., that we hereby tender our heartfelt thanks to our late Worthy Master, W. H. Baxter, for the able, efficient and dignified manner in which he has discharged the duties appertaining to the office; that in him we recognize the foremost man in introducing our Order upon this coast, and with pride upon Napa Grange as being the first in the State installed by him as General Deputy, being the forerunner of that enthusiasm since manifested by the people, who have planted Grange after Grange the length and breadth of the Pacific Slope; and that the ameliorating influences of our Order, observable to us all in the brief history of the past, and notably promising in the future, while it is a source of pleasure and profit to us all, we will ever hope it will also be infinitely more so to himself, as it certainly must ever be to him a source of personal pride to witness the grand results of his early work in the cause.

Resolved, That we learn with regret that his duties as Secretary of the California State Grange will cause his unavoidable absence from us here, and while we shall miss his counsel and good advice and general guidance in the Grange, he may be assured that he will be ever present in our memories, and that he takes away with him only our kindest wishes and highest sentiments of respect and esteem.

Resolved, That these resolutions shall be spread on the minutes, and the Secretary authorized to furnish a copy for publication.

J. WALTER WARD,
Sec'y. Napa Grange.

From the Granges.

ORANGE GRANGE.—Richland, Los Angeles county. A correspondent, who signs himself "Alpha," writes a racy letter from this Grange, because, as he says, nearly all the Granges in the State are sending in items of progress, etc., while nothing is heard from Orange. We have room to condense only a few items. Orange is a flourishing Grange with about 75 members, and new ones coming in every month. They had a most splendid Harvest Feast on the 27th ult., when "a powerful union of spirit was manifested." The Grange has a good set of officers but our correspondent thinks that neither they nor the members generally are fully up to their work. If such is the case, "Alpha" should try to enlighten them. We presume there are but few if any Granges in the State, which are not faulty in this particular. He thinks that Orange is situated in one of the prettiest and most desirable valleys in the State, but they had considerable trouble with the water last season. It would often get away from the water master and lose itself in the bushes. Hopes for better management the coming summer. The valley is settling up fast with people from all parts of the world. Have a good supply of ministers, but no lawyers and don't want any. They all know what is right and do it. Happy people! Seem to be troubled occasionally with high winds—came near losing a fine house by them a short time since. Another person came near losing his vineyard "by a heavy attack of weeds" which, however, he finally succeeded in subduing. Orange is undoubtedly a fine place and has a flourishing Grange.

LIBERTY GRANGE.—EDITORS RURAL PRESS.—As you kindly devote a part of your excellent paper to noting progress of the various Granges, I send you a few items pertaining to Liberty Grange, indicating its progress in the grand march of the Patrons of Husbandry. This Grange was organized on the 11th day of last September, with a full list of Charter members. We had some difficulty in providing a suitable place of meeting, but that was finally overcome through the energy of a few of our members; and the work now goes smoothly. The election of officers for the ensuing year, was held in October, as required by Constitution, and the elected were duly installed on the first Saturday of January, our regular monthly day of meeting, namely: Justus Schomp, M.; J. S. Crawford, O.; P. Jahant, S.; T. M. Tracy, A. S.; B. Fugitt, C.; H. W. Childs, T.; J. J. Emslie, Sec'y.; C. C. Fugitt, G. K.; Mrs. H. J. Schomp, Ceres; Mrs. L. A. Thorn, Pomona; Mrs. Eva Woods, Flora; Miss Kate Childs, L. A. S.

Our list of members is increasing moderately, numbering at present sixty-five; and, generally speaking, of good material; with much of the same kind intending to join us at their earliest opportunity. At present, in this locality, attention is almost exclusively directed to getting their lands seeded for the next crop, after which we expect a busy time. Yours Fraternally,
JAMES J. EMSLIE, Sec'y.

FRESHWATER GRANGE.—At our last regular meeting, the following were installed as officers of our Grange for the ensuing year:—P. S. Perdue, M.; W. A. Durham, O.; Charles Wilsey, L.; W. P. Marshel, S.; T. A. Smith, A. S.; John F. Durham, C.; W. C. White, T.; re-elected; R. A. Wilsey, Sec'y., re-elected; F. D. Graham, G. K.; re-elected; Mrs. B. C. Durham, Ceres, re-elected; Mrs. A. J. Wilsey, Pomona, re-elected; Mrs. E. J. Durham, Flora, re-elected; Mrs. E. Graham, L. A. S., re-elected.

Our Grange at the present time numbers 49 members, with a general good feeling manifested by those who do not belong, and waiting in all probability to see whether success will crown our efforts. If it does, they are then ready to share the benefits;—an ungenerous disposition a candid man must admit. No one would have to be a close observer to see that the farmers (as a mass), are the oppressed, while the monopolies, middlemen and officials from the President down have pocketed the profits. The farmers in many instances have fallen behind. Then let us as farmers and not as individuals, rally to the call of the Patrons of Husbandry, with the motto that in unity there is strength. R. A. WILSEY, Sec'y.

DAVISVILLE GRANGE.—Mr. Krimer, Secretary of this Grange writes that not only himself but each other subscriber in that Grange is laboring to extend the circulation of the RURAL PRESS in that neighborhood. This they do for the reason that the greater the circulation the more the publishers can afford to improve the paper. He thinks that every farmer, and especially every Patron should become a subscriber.

Bro. K. writes that the roads in that region are in a very bad condition, although the farmers at the time of writing were very busy plowing and seeding, with excellent prospects of a good crop. Davisville Grange now numbers about 50 members, with new applications every week.

TOMALES GRANGE, MARIN CO., is in a most flourishing condition, and will shortly number 100 members, which is unparalleled when we come to consider that it was organized less than a month ago. It will not be many days till every respectable farmer in the vicinity will be a Patron. They have a fine hall, and all the implements necessary to a good working Grange. Master William Vanderbilt, as in fact all the officers are untiring in their efforts, and are rewarded in seeing themselves at the head of one of the most flourishing Granges in the State.

ANTELOPE GRANGE, YOLO CO.—The Grange at this place was organized Oct. 8, with 26 charter members; it now numbers 44, which is quite an increase in three months, owing to the large farms, sparsity of the settlement, the distance that some have to come, and the impassable condition of the roads. I think it shows a determination in the farmers to stand up for their rights. In fact, I can see a bright future for them, if they are only true to themselves and their cause. The time is not far distant when they will be considered something more than menials. They command two-thirds of the capital of the United States, and with a bold front and a determination to be heard, what need they fear as they have to feed every mouth, fill every granary, and every purse, and why should they be considered unworthy of notice. God speed the Grangers.
W. J. C.

KIWELATTAN GRANGE, Arcata, Humboldt county, Cal., is becoming a live institution, and ere another year will dispense its weal or woe to the Patrons, and leave its track in the community. The feeling that the Grange is fostering with the farmers is well expressed in the following dialogue between a farmer and a merchant, as furnished by a correspondent:

Farmer steps into store to purchase a supply of flour, bacon, cheese and dried fruit. Merchant says, ironically, "I should think after the organization of the Grange and Farmers' Union, that the farmers would raise their own flour, bacon, cheese, feed, etc."

Our aggressive friend being a loquacious one, instead of a working man, had too much tongue for the brain that supplied it. The simple remark dropped from our farmer, that we proposed to raise the merchants, exhibited the point to them both, and the immediate silence that followed proclaimed the order of retreat.

DEEP CREEK GRANGE.—THE RURAL PRESS IN THE GRANGES.—EDITORS PRESS.—I have received copies of the PACIFIC RURAL PRESS for all the officers of Our Grange, which I will hand them at our next meeting. I have been a subscriber myself since June 1871, and do not think any farmer on the Pacific Coast can afford to do without it. It is worth many times its cost every year. I will speak a good word to the members of our Grange at its next meeting in its behalf. Our Grange was organized Dec. 13th, with 30 chartered members, since then we have initiated one member and have now twelve applications for next month, shall probably add at least thirty members in the month of February. The farmers here are all busy now putting in grain, of which there will be a larger amount sown this year than ever before in this valley. Feed is starting finely and everything looks favorable.

F. G. JEFFERD, Sec'y.

BODEGA GRANGE, SONOMA CO.—The officers of this Grange were installed on Saturday, Jan. 10, by General Deputy J. H. Hegler, who thought he was unanimously re-elected master, could not serve his Grange in that capacity, as he had been placed at the head of the Dairy Produce department of the Granges, in San Francisco, where he may now be found at his post, southeast corner of Sansome and Commercial streets. Mr. H. declining, Mr. A. S. Purrine was therefore elected Master, who, together with William Kee, O.; E. H. Cheney, L.; James Kee, C.; Chris. Warnekey, S.; David Cunningham, L. A. S.; James Watson, Sr., T.; J. Wilkinson, Sec'y.; Henry Ross, G. K.; Mrs. A. S. Purrine, Ceres; Mrs. J. H. Hegler, Pomona; Mrs. E. H. Cheney, Flora; and Mrs. G. Warnekey, L. A. S., were duly installed officers of the Grange for the ensuing year. We have a class of ten under way.

FRUITLAND GRANGE, Anaheim, recently met and passed among other resolutions, the following to the effect that—Every man should bear his proportion of the burthen and toil imposed upon the human family. That we do not ask any exclusive legislation for farmers as a class. That we will enter into no combination to raise the price of food or clothing. That, as an organization we ignore party politics, but will support at the ballot box men who favor reform. That we ask for a general irrigation law which shall throw the cost of canals, ditches, etc., on lands benefitted thereby, limiting the assessments upon such lands for such improvements to one per cent of their value. That we will do all in our power to encourage manufactories—especially woolen mills—in our midst.

BUCKEYE GRANGE.—William Sims, Master of this Grange, writes as follows:—Worthy Master Daryl, of Capay Valley Grange, met with the Buckeye Grange on the 17th inst. and conferred the fourth degree on a class of nine. He also installed the officers for the ensuing year. All the Granges of the county were invited, but the state of the weather and roads was such that only a few of those nearest to us could attend. After the business of the day was completed, the Grange adjourned, and all repaired to the dining hall, where the good matrona had prepared a sumptuous feast of which every body was invited to partake, and all did partake, for there was plenty and to spare.

LIVERMORE GRANGE.—General Deputy, W. H. Baxter, State Secretary, will publicly install the officers of this Grange at 10 A. M. to-day. Dr. E. S. Carr, Master of Temescal Grange and Professor of Agriculture in the University of California, is expected to be present, with delegations from all the Granges in Alameda county.

EDITORS PRESS:—Will you please inform a Patron of Husbandry through the RURAL PRESS, whether or not doctors and ministers can be admitted as members of a Grange?
Yours respectfully,
A. PATRON.

Centerville, Jan. 26, 1874.

The true spirit of the Order would lead us to say, no, unless they are actually engaged in agriculture, and make farming, rather than the practice of medicine or preaching, their specialty. Still, it is left in a large degree for each Grange to decide for itself who may and who may not be admitted. The only restriction in this connection, in the constitution of the National Grange, is that the candidate shall be "interested in agricultural pursuits." The general rulings are that the paramount interest of the candidate shall be agricultural.

CLOVERDALE GRANGE.—Charles H. Cooley writes under date of Jan. 19th: The Cloverdale Grange, No. 63, met at their hall, at 10 A. M., Jan. 10th. After attending to regular business and conferring the fourth degree on a class of two, adjourned at 12 M. to the Congregational church to publicly install the officers elect. Bro. T. H. Merry acted as installing officer, and gave us a neat and appropriate address. After the ceremony, Bro. Wm. Caldwell, Lecturer, delivered an interesting discourse on the rise, progress, present condition and purposes of the Order. On invitation, the congregation then adjourned to the hall and partook of an excellent and bountiful harvest feast.

LODI GRANGE.—Mrs. Nellie Cronch, Secretary, writes that the officers elect of this Grange for the ensuing year were installed by Bro. Hutson, Master of Woodbridge Grange, on Jan. 14th. After the installation the first degree was conferred on three brothers and two sisters. A goodly number were in attendance. At our last meeting, Dec. 31st, the fourth degree was conferred on eleven brothers and nine sisters. A bountiful harvest feast was also enjoyed, and the utmost good feeling prevailed.

TEMESCAL GRANGE.—On Saturday last the proposed squirrel law was read by Bro. C. H. Dwinelle, and discussed by different members. A petition requesting the Alameda county legislators to vote for its passage, was signed by those present. An interesting discussion in favor of shade and forest tree planting will be reported next week. It was voted that the first degree be conferred at the next meeting, Saturday, Feb. 7th. Hereafter the hour of opening will be 1 o'clock.

YOLO GRANGE.—Bro. Schindler, Secretary, writes to say that he omitted in his notice last week to state that a harvest feast was enjoyed in connection with the installation ceremonies on the 14th inst. He also writes: "I can state that the Granges in this county are in a healthy condition, and will give a good account of themselves in the future; but we do need such a man as Bro. Wright, or some one like him to talk to us occasionally."

Officers installed for the ensuing year: William Sims, M.; C. Field, O.; J. G. Allen, L.; W. D. Campbell, S.; T. C. Goodin, A. S.; V. Morris, C.; L. Moody, Sec'y.; J. Richards, G. K.; Miss Ida L. Dexter, Ceres; Mrs. C. Campbell, Pomona; Miss Ida Richards, Flora; Mrs. E. A. Moody, L. A. S.

Santa Clara Grange.

EDITORS PRESS:—Our Harvest Feast took place on the 24th, with a large attendance of members, and passed off pleasantly to all concerned. The hurry on the farm being now over, the new attendance of members, shows that their interest in the Grange is unabated. We have already a list of 20 elected, or on the tapis for the coming month; and the question has been agitated, of instituting evening parties among the members, say once a month, for social and literary entertainment.

We have a new thing in the programme, which is recommended as a means of saving time: It is a bulletin board, upon which is written lists of Committees, notice of dues, and other special matters. The attention of the Grange is now directed to live questions of vital concern to the people, since we have come to business, conferring only one degree at a meeting.

There is no division in opinion, on the expediency and duty of the Legislature to regulate the rates of "freights and fares;" none on the question of taxation. The abstract of Coggins' proposed bill in the assembly is unanimously endorsed in spirit and sentiment, so far as they remedy existing evils, which are burdensome to the industry of the country. This Grange favors equal and exact taxation, and no discrimination in favor of capital, although a very large amount of capital is represented in the Grange. The rule must be for all to pay on what they are worth, but no one should be taxed for more than he is worth; i. e., his indebtedness must be deducted from his assessments.

Fraternally Yours,
I. A. Wilcox, Sec'y.

Jan. 26th, 1874.

COUNTY COUNCIL FOR SOLANO COUNTY.—A preliminary meeting looking to the organization of a Council of P. of H. for Solano county was held at Suisun on the 23d inst. when it was recommended that Friday, Feb. 27, be the time, and Suisun the place to perfect the organization. The representation was fixed as follows: One member at large, and one for each thirty members and half fraction thereof. We shall publish the proceedings in full next week.

New Granges.

EDITORS PRESS:—Since my last I have had the pleasure of organizing two Granges of P. of H., one in this county, at Georgetown, in Franklin; the other at Clarksville, in El Dorado county. The weather continues so stormy and the roads so very bad that it is almost impossible to travel in some portions of this county, consequently the charter lists are not so full as they would be if the weather had been pleasant.

On the 9th organized Georgetown Grange with fourteen charter members. Amos Adams, M.; Isaac F. Freeman, O.; William Johnston, L.; George Morse, T.; P. R. Beekley, Sec'y; J. W. Moore, C.; J. M. Stephenson, S.; Troy Dye, A. S.; Thos. Anderson, G. K.; Fidelia Dye, Ceres; Martha Miller, Flora; Sarah C. Beekley, Pomona; Amanda Moore, L. A. S.

On the 13th organized Clarksville Grange, in El Dorado county, with twenty-five charter members. There was a good degree of interest manifested, and from appearances they have the material to form a strong and efficient Grange. The following is a list of officers for the ensuing year: Robert T. Mills, M.; Wm. Woodward, O.; Samuel Kyburg, L.; Charles Chapman, S.; J. F. York, A. S.; J. Maltby, Sec'y; Peter R. Willot, T.; G. C. Fitch, C.; E. L. Wilson, G. K.; Mrs. E. F. Maltby, Ceres; Emma Woodward, Pomona; Carrie E. Atwood, Flora; Rebecca L. Kyburg, L. A. S.

Yours fraternally, W. S. MANLOVE.
Brighton, Jan. 19, 1874.

MANCHESTER GRANGE:—It gives me much pleasure to inform you that after a rough ride on horseback, of seventy miles across the mountains, I arrived here, and on the 14th organized Manchester Grange with full charter list. It is located on the coast, four miles north of Punta Arena, in the midst of a body of rich land cultivated by thrifty farmers, whose produce is mostly potatoes, oats and butter. They all seem anxious to join our Order and will carry out its purposes in good faith. Nothing could exceed the kind and hospitable manner in which I have been treated by them. We had a pleasant meeting and a bountiful feast. The following officers were duly elected and installed: Joseph Wooden, M.; W. R. Lane, O.; S. S. Hoyt, L.; William Munro, S.; Hiram Gilmore, A. S.; Joseph Shepard, C.; A. B. Kendall, T.; B. F. McClure, Sec'y.; S. S. Hunter, G. K.; Mrs. C. W. Lane, Ceres; Mrs. A. A. Wooden, Pomona; Mrs. B. P. Cain, Flora; Mrs. J. Shepard, L. A. S. Yours fraternally, T. H. MERRY.

Manchester, Mendocino county, Jan 17, '74.

LITTLE LAKE GRANGE.—Bros. Dewey and Ewer:—It gives me pleasure to inform you that, on Jan. 20, I organized Little Lake Grange with 30 charter members. We had a very full attendance, and the newly made Patrons seemed much pleased. The following officers were elected:—B. G. Mast, M.; Jesse O. Thompson, O.; Ole Simonsen, L.; Saml. Harter, S.; Wm. A. Blosser, A. S.; M. K. Sawyers, C.; Danl. Lambert, T.; Wm. A. Wright, Sec.; R. V. Doggett, G. K.; Mrs. E. J. Muir, Ceres; Mrs. M. H. Lambert, Pomona; Mrs. M. C. Felton, Flora; Mrs. Parmelia Mast, L. A. S. Post office address of Master and Secretary, Little Lake, Mendocino county. Yours fraternally, T. H. MERRY,
Gen'l. Deputy, P. of H.

RIO VISTA GRANGE.—On Saturday, Jan. 24, Deputy R. O. Haile, assisted by Deputy J. Hegler, organized Rio Vista Grange, with a full list of charter members and the following list of officers:—A. B. Alsip, M.; Richard Thrush, O.; J. W. Cameron, L.; Daniel Stewart, S.; A. W. Elliott, A. S.; Duncan McCormick, C.; Dr. J. W. Connely, T.; J. H. Gardner, Sec.; Thos. Menzies, G. K.; Mrs. Elizabeth Cameron, Ceres; Margaret Menzies, Pomona; Miss J. J. Glen, Flora; Miss P. A. Bicknell, L. A. S.

Brother Hegler will organize at Botinas on Wednesday next, and at Olema on Thursday.

Installation at St. Helena.

EDITORS PRESS:—St. Helena Grange held its installation ceremonies on the 16th instant, and invited Bro. J. W. A. Wright, State Lecturer, to come up to install their officers and deliver a public address for the benefit of those on the outside, who were laboring under mistaken ideas as to the objects and aims of the Grange movement. Bro. Wright, as all know who have had the pleasure of meeting him, is not only a man fully conversant with all branches of the work, but is a practical farmer. Highly intellectual, prepossessing in appearance, and with all a most eloquent speaker. So his address I think will be as "bread cast upon the waters" to be gathered many days hence.

The Day

Was not propitious, being cloudy, and at times raining quite hard, and the previous rains had made the roads almost impassable, but not withstanding all these obstacles our Worthy Lecturer arrived on the evening before. Early in the forenoon of the 16th the Committee of Sisters who had in charge the arrangement of the tables for the Harvest Feast might have been seen in the National Hotel Hall, busy as bees, tastefully arranging the viands which had been so bountifully prepared and supplied by the sisterhood.

At about half past 12 o'clock I went to the Baptist Church, (at present used by the Grange as their place of meeting) to find it well filled with Grangers and invited guests.

All things Being in Readiness,

Worthy Master Crane called the house to order, stated in a few words the object of the meeting, and, after a beautiful song by the choir, introduced Bro. Wright, who delivered an eloquent address; giving a brief sketch of the rise and progress of the Order in the United States, setting forth the objects, aims, intentions and hopes of the Patrons of Husbandry, which very much changed the views of many with regard to the Order. In fact I have heard but one expression among the people both in and out of the Order—that it was excellent and calculated to do much good.

After the Address

Bro. Wright, with Bro. Blanchard, of Napa Grange, as assistant, proceeded to install the Master elect—J. H. Ahison. When the newly installed Master was conducted to the chair, retiring Master Crane made the following address:

Brother:—I greet you! And while I congratulate, I should envy you for having become the incumbent of an office, I should have felt myself so highly honored in retaining; had my antecedents, my earlier avocations, my present physical and mental fitness, better qualified me for the position. You were to the manor born—a practical farmer from inheritance. This is emphatically a working man's institution. Working men should control its deliberations.

The time has arrived in the history of civilization when that class of men—the *bona fide* laborers who dig the wealth of nations from the bosom of Mother Earth with their own hard hands; the men who literally war with all the elements to make them yield the bread we eat; the class of citizens on whose industry all other industries, professions and pursuits are dependent, should no longer act a subordinate part in the management of public affairs.

While education was limited to the privileged few; while the fair face of nature was divided into royalties and manors, our ancestors did not realize that God had made of one flesh all men, and were content to act as henchmen and vassals to their lords. But the time has now arrived when, as Gov. Booth told the Grangers at San José, "Knight of the plow is quite as respectable a title as Knight of the Garter."

I do not claim that a profession when associated with agricultural pursuits, disqualifies one from filling the chair with which you are now honored, or that professional men may not be useful and honorable to the highest degree; but we all know that they have but too often been intrusted with the law making power to the exclusion of practical farmers and mechanics, who know the wants of the laboring classes much better, and understand the principles of civil government quite as well.

Our Legislatures are often composed, mainly, of mere closet theorists, who know as little of the industrial arts as the Western man who was appointed Secretary of the Navy knew about navigation. Going on board of a ship, and looking down the open hatchway, he expressed his surprise by exclaiming: "Why, the thing is hollow!" And many of the learned men whom we call from their cosy studies to enact laws that regulate and control our industry, public expenditures, road making, fencing, taxes, and to vote their own salaries, and sometimes *back salaries*, at that, to be paid by the sweat of our faces, were they to visit a dairy ranch, would inquire, like the city belle: "Which cow gave the buttermilk?"

But we have notable exceptions to this. Our own present representatives—both lawyers—in view of the prevailing dissatisfaction of their constituents, have most wisely and praiseworthy held conferences with the people, and inquired what we will have them to do; and we have the strongest assurance that they will render us more valuable service than we have ever before received from our public servants; a boon which we, as Grangers, and all our citizens will know how to appreciate, to remember and to reward at a future day.

And, now, Brothers and Sisters of the St. Helena Grange, in taking leave of you, as your presiding officer, and accepting a position for which I am better qualified, I return my sincere thanks for the uniform courtesy and kindness with which I have been treated, and the assistance you have ever been ready to render me in the performance of my various and often intricate duties—rendered doubly so from the inexperience of us all.

Although we can not boast of having achieved during our brief existence as an Order, but a small portion of the grand results which have crowned the labors of our brethren in the older States, we do claim, and with a just pride, that we were among the first thirty of the one hundred and fifty subordinate Granges now organized in the Golden State. We claim that the precepts of our Order—Faith, Hope, Charity, and Fidelity—have been sedulously inculcated and observed. We claim that the social feature of our infant institution has been a success in making intimate friends of people that otherwise would have remained comparative strangers.

We know that the machinery of our organization has been put in such working order as to protect the farmer who may be in debt, against the necessity of sacrificing his crop, and also to enable him to purchase his supplies at a cheaper rate than formerly.

And we feel an honest pride in knowing, individually, that we are members of a Society which admits our mothers, our wives, our sisters and our daughters to full and equal participation in its deliberations and transactions;

a Society which, like the family relation, can have no existence without the aid of woman.

And finally, we feel that we, as a Society, have the honor of being an integral part of that grand confederation that, as but yesterday, was only a brilliant cloud of promise no larger than a man's hand, appearing in the Eastern horizon, but now overshadowing the nation and lashing the monopolists and money changers from the temple of justice with its thunderbolts.

The necessity for this war on our oppressors was never so imperative and controlling as at the present time. Our ocean-bound Republic has grown wanton from its very excess of liberty. Dignitaries of the nation, and men distinguished by wealth and learning, commit crimes with impunity, that would have precipitated a Roman senator from the Tarpeian rock, or at the present day consign a British minister or Russian noble to a penal colony. Municipal officers of the lowest grade feel it their privilege to fleece the tax-payer, and find apologists and defenders in a venal or partisan press.

But public virtue seldom dies entirely out from among a civilized people. The requisite elements for political regeneration remain. The desideratum is to combine and render those elements effective. This, we claim, has been done by the genius of the sagacious minds whose philanthropy organized the Society of "Patrons of Husbandry."

After these remarks, the Lecturer proceeded to install the other officers elect, whose names have already been published in the RURAL PRESS.

The Music

Was certainly beautiful and the singers and organist deserve great credit for the spirited manner in which they sung. Though they were not all members of the Order, they seemed to heartily endorse the sentiment of the songs.

At the close of the ceremony of Installation, a general invitation was extended to all present to repare to Chandler's Hall, and partake of the Harvest Feast. It was estimated that 250 persons accepted the invitation.

When we arrived at the Hall we found two long tables fairly groaning under the weight of the good things spread upon them.

The use of the Hall was tendered free of charge by the generous landlord of the National, Mr. H. L. Chandler, who with his estimable wife are always ready to help in every good cause. Mrs. C., though not a member of the Order, rolled up her sleeves, helped to set the tables and assisted generally in arranging the Hall. These kind acts of assistance should and will be remembered by the Patrons.

After the Feast

The members of the Order formed in procession and marched back to the Church to receive a lecture in the unwritten work from Bro. Wright, which was very instructive as well as interesting. No, all the members did not return to the church, for while we were partaking of the feast the fact that there were three destitute families in the neighborhood was made known, and the committee of ladies who remained at the hall packed up the nicest of what was left and took it to these poor people. One poor woman, when the committee entered her house with their well filled basket, threw up her hands and with tears in her eyes implored Heaven to bless them, saying that this was really a God-send to her and her children.

In the Evening

A goodly number of the Patrons and their friends assembled at the National Hall, where they tripped the light fantastic until about 12 o'clock, when all went home well satisfied with themselves and everybody else.

If the energy and zeal displayed by the members of St. Helena Grange on this occasion is a fair sample of their work they will be successful in all their undertakings—that they may be is the prayer of
A VISITOR.
St. Helena, Jan. 18th, 1874.

Letter from Brother Wright.

EDITORS RURAL PRESS:—In spite of "wind and weather," the round of installations which I have just completed has been a most agreeable and, I trust, not a useless task.

My last notes to you told of the organization of Marysville Grange, June 9th. Next day we had a large gathering of Patrons at Yuba City, to witness the public installation of officers, and to enjoy the festivities and social converse which the snow-storm of December 4th previously prevented. Be assured we did not lose the time and opportunity to be fully repaid for our former disappointment.

The work consisted in installation, with an introductory lecture public to all, an excellent dinner, enjoyed in the most social style of Patrons, the initiation of fourteen members in the second degree and practice in the unwritten work. Yuba City Grange is one of the most flourishing Granges in the State, and has a membership of eighty-three. The meeting was a most delightful occasion, and will long be remembered with pleasure.

Next day a horse-back ride took me towards Colusa, twenty-six miles distant, over one of worst roads I have ever seen, not excepting those in the bleak limestone prairies of Mississippi and Alabama. But this mode of travel gave me an opportunity to see more of that

productive region of our State than one can by looking through the window of a car or stage coach. Everywhere along the road-side I saw continued evidences of that successful farming and prosperity to which I alluded in my last, until the shades of night closed around me among the Buttes, which stretch for twenty or thirty miles, a high and isolated ridge, near the bank of the Sacramento river. That night I spent under the hospitable roof of Mr. Moon, a part of whose family are members of Meridian Grange, four miles from them. Their place is protected by one of the highest levees along the river. Farmers there have prepared to irrigate conveniently, by simple openings in the levee. The few hours spent with this kind family passed very pleasantly. I found there the sunlight of an earnest faith.

An early start, next morning, soon brought me to Colusa, where I found our clans gathering and prepared to repeat the exercises of the preceding Saturday. Though the weather was very cloudy and disagreeable, as it has been for two weeks, and the roads were bad, we had a very good attendance. An unusual feature of the occasion was the presence of seven Masters of Granges from Colusa county and one from Sutter, five of whom were installed at once. Everything passed off nicely, and we worked till quite late at night. Next day I enjoyed a pleasure not laid down in the original programme, the installation of officers of Sutter Grange at Meridian, Sutter county, and a social meeting with a number of members of Grand Island Grange at Eddy's Landing on the Sacramento. The installation at Meridian was well attended, and was certainly one of the pleasantest of the many pleasant occasions on this trip. We have as zealous workers there as I have found anywhere. That evening passed most pleasantly in the hospitable home of Brother Ogden, newly installed Master of Grand Island Grange, and with Bro. Grimes, and other members of our Order in Colusa county.

Here I found the first regular Grange store I have seen. Thirteen members of Grand Island Grange have incorporated themselves into a joint stock company, bought out their only merchant, and opened a co-operative store, with the working of which they are very well pleased.

Brother Ogden has one of the best improved ranches in this portion of the State. Upon it, he fully illustrates the value of the Grange principles of surrounding a home with comforts and making a farm self-sustaining.

Wednesday, Woodland was reached by boat and cars, where we again enjoyed the pleasant ceremonies of installation, and continued to practice the unwritten work till after midnight.

Among many other warm-hearted brothers and sisters of our Order in Yolo county. I enjoyed the pleasure of meeting six of its Masters and Past Masters.

But this letter is becoming lengthy and I must close, reserving the visits to St. Helena and Napa City for a future sketch. There is so much I should like to say of the generous kindness and hospitality of our brotherhood in all this region of our State, and of their zeal for our cause, that I do not wish to leave it all unsaid. Through your columns allow me to return to them my earnest thanks.

Of Marysville and Woodland I must say, before taking leave of them, that they are two of the most substantially and beautifully improved, and two of the most attractive and thrifty of our inland towns.

Yours fraternally, J. W. A. WRIGHT.
Rambling, Jan. 21, 1874.

Location of Granges.

EDITORS PRESS:—I see in a late number of your valuable paper a letter from Grayson about new Granges being located above that place. The first one mentioned is the Cottonwood, which he says is ten miles above Grayson. This is a mistake; Cottonwood Grange is ten miles above Hills Ferry, and Hills Ferry is twenty miles above Grayson, and that makes Cottonwood Grange thirty miles above Grayson. Your correspondent also states there is a Grange at Crow's Landing. That is another mistake, as there is no Grange at Crows Landing, but Bonita Grange is five miles west of Crows Landing, in a farming community. Bonita Grange is fourteen miles from Grayson; Oristimba Grange seven miles west of Hills Ferry, eight miles south of Bonita Grange, and eight miles north of Cottonwood Grange.

We differ in regard to small country towns being the most desirable places to hold a Grange as they are all located on the river, and the farming community would all have to come from one side, at least that is the case of Hills Ferry and Crows Landing; and in locating these new Granges they have been placed to suit the farming community and not the small towns. I am a member of the Oristimba Grange, which is located in a thinly settled community, but then we are getting along finely, were organized November 4th, 1873, with a full list of Charter members, and now we number fifty-three or four. We have a good attendance in all kinds of weather, not more than four missing at any meeting. Our Harvest Feast comes off the last Saturday in this month [to-day], hope all will attend who can.

Yours fraternally, W. UNDERWOOD.

WISCONSIN STATE GRANGE.—The State Grange of Wisconsin met on the 20th ult., at Janesville.



Theodore Hook's Stratagem For A Dinner.

The following characteristic anecdote of Theodore Hook is given in Barham's life of that extraordinary man. One of the streets near Selho square, either Dean street or Fifth street, was a scene of action. Hook was lounging up one of those streets in company with Terry, the actor, when they saw through a kitchen window preparations for a handsome dinner.

"What a feast!" said Terry. "Jelly dogs! I should like to be one of them."

"I'll take my bet," returned Hook, "that I do; call for me here at ten o'clock and you'll find that I shall be able to give a tolerable account of the worthy gentleman's champagne and venison."

So saying he marched up the steps, gave an authoritative rap, and was quickly lost to the sight of his astonished companion. As a matter of course he was immediately ushered by the servant as an unexpected guest, into the drawing-room, where a large party had already assembled. The apartment being well nigh full, no notice was at first taken of his intrusion, and half-a-dozen people were laughing at his bon mots before the host discovered the mistake. Affecting not to observe the embarrassment of the latter, and ingeniously avoiding the opportunity for an explanation, Hook rattled on until he had attracted the greater part of the company in a circle near him, and some considerable time elapsed before the old gentleman was able to catch the attention of the agreeable stranger.

"I beg your pardon," he said, contriving at last to get in a word: "but your name, sir—I did not quite catch it—servants are so abominably incorrect, and I am really a little at loss—"

"Don't apologize, I beg," graciously replied Theodore. "Smith—my name is Smith—and, as you justly observe, servants are always making some stupid blunder or another. I remember a remarkable instance, etc."

"But really, my dear sir," continued the host at the termination of the story illustrative of stupidity in servants, "I think the mistake of the present does not originate in the source you allude to; I certainly did not expect the pleasure of Mr. Smith's company at dinner to-day."

"No, I dare say not; you said four in your note I know, and it is now, I see, a quarter past five—you are little fast by the way; but the fact is, I have been detained in the city, and I was about to explain when—"

"Pray," exclaimed the other as soon as he could stay the volubility of his guest, "whom may I ask, do you suppose you are addressing?"

"Whom? Why Mr. Thompson, of course—old friend of my father; I have not the pleasure, indeed, of being personally known to you, but, having received your kind invitation on my arrival from Liverpool—Firth street, four o'clock, family party—come in boots—you see I have taken you at your word. I am only afraid I have kept you waiting."

"No, no, not at all. But permit me to observe, my dear sir, my name is not exactly Thompson—it is Jones, and—"

"Jones," repeated the self-styled Smith, in admirably assumed consternation, "Jones!" Why surely I cannot have—yes, I must—good heavens! I see it all. My dear sir, what an unfortunate blunder—wrong house—what must you think of such an intrusion? I am really at a loss for words in which to apologise. You will permit me to retire at present, and to-morrow—"

"Pray don't think of retiring," exclaimed the hospitable old gentleman; "your friend's table must have been cleared long ago, if, as you say, four was the hour named; and I am only too happy to offer you a seat at mine."

Hook, of course, could not think of any such thing—could not think of trespassing on the kindness of a perfect stranger; if too late for Thompson, there were plenty of chop-houses at hand. The unfortunate part of the business was, he had made an appointment with a gentleman to call for him at ten o'clock. The good-natured

Jones, however, positively refused to allow so entertaining a visitor to withdraw dinnerless; Mrs. Jones joined in the solicitation; the Misses Jones smiled bewitchingly and at last Mr. Smith, who soon recovered from his confusion, was prevailed upon to offer his arm to one of the ladies, and take his place at the well-furnished board.

In all probability the family of Jones never passed such an evening before. Hook naturally exerted himself to the utmost to keep the party in an unceasing roar of laughter, and make good the first impression. The mirth grew fast and furious, when by the way of a *coup de grace*, he seated himself at the pianoforte, and stuck off into one of those extemporaneous effusions which had filled more critical judges than the Jones's with delight and astonishment. Ten o'clock struck, and, on Mr. Terry being announced, his triumphant friend wound up the performance with the explanatory stanza:

I am very much pleased with your fare,
Your cellar's as prime as your cook;
My friend's Mr. Terry the player,
And I'm Mr. Theodore Hook.

Some Sagacious Animals.

The Spottsylvania Dog.

There are few observant ones who have been long in Columbus who have not noticed the large, intelligent, and splendid dogs belonging to Messrs. Chas. Heyman, Henry Averett, and W. R. Brown. Their progenitor has a history. At the battle of Spottsylvania Court-house Mahoue's division of Confederates, in which was Gen. A. R. Wright's brigade of Georgians, was charged by tremendous lines of Federals. The attacking party was repulsed with terrible loss. In front of the advancing columns was a large dog, who advanced ferociously and barking to our lines. Not a gun was pointed at him. Of all the terrible odds advancing, eleven to one, only this dog got over the Confederate breast-works and he was captured by some members of the City Light Guard, of the Second Georgia Battalion. He was brought to Columbus—loved his Southern master better than life. His progeny embrace the smartest dogs in the country. The Yankee-Southern dog died here some months ago at a good old age.—*Columbus Sun*.

A Grateful Horse.

A curious incident occurred at Messrs. Williams & Cassidy's coal-yard at the Cevington depot a few days ago. An old black horse had just been driven into the yard hitched to a watering cart. The belly-band, an antiquated concern, gave way in an attempt to back the cart to its place, and as the water was heavier than the horse, the cart dropped and the shafts rose, the horse going with them, and, hanging by his neck, his hind feet two or three feet from the ground. The animal struggled and kicked in terror. His eyeballs became distended in the excess of his fear, and froth stood upon his lips. He was rescued from his dangerous situation after much trouble. When he touched the ground, the poor beast stood for a moment apparently bewildered, and then, recovering himself, he looked around among his rescuers, and approaching them quietly rubbed his nose against the shoulder of one of them.—*Leaving Press*.

A Very Obedient Dog.

Late Tuesday night, a stranger, just for amusement, gave several bystanders specimens of his dog's acquirements, at the corner of Perdido and St. Charles streets. The master quietly, without gesture of any kind, told his dog to walk across the street, find a little wagon and get into it. Doggy obeyed, though reluctantly, as the wagon was a cart, but he finally complied. He was then told to hunt a fire plug and mount it. His keen eyes searched a moment, and on the instant poor Tray pleased his owner. He was then commanded to hunt a lamp-post and put his fore feet on it. This done, he was told to go into a Pelican saloon, find a chair and sit in it, then to look up a beer-barrel and stand on it; then to lie down and act like a poisoned dog. These orders were given in the most common-place tone of voice, and most of the time he could not see his master, and yet he obeyed quite as readily as a willing servant, apparently understanding the English language very well. Of all the dogs that ever showed off on St. Charles street, that one is entitled to the premium. Those who witnessed the performances were not only amused, but greatly astonished; in fact, one individual [having witnessed a portion of the antics, declared that he would not and could not suffer himself to view acts that looked so altogether unnatural.—*New-Orleans Republican*.

A Horse Car "Spotter" Dog.

Among the attachés of the Fifth Street Railway Line is one who has exhibited most remarkable fidelity in his attention to the interests of the company. The phenomenon referred to is a medium-sized dog that has been for a long time kept about the car stables, and has of late become a kind of inspector or overseer of the line. Every morning he goes out on a car and rides along for some distance, when he jumps down and waits at a crossing for the next coach. This he boards, as it passes, and after a thorough scrutiny of conductor, driver, horses, and all the appointments of the outfit, he visits some other in like manner. In this way he passes the entire day, usually going over the whole line and inspecting a great many cars. Sometimes he stops at one end of the road and sometimes at the other. He is well acquainted with every conductor and driver in the employ of the company, and is a general favorite. A few days since they all clubbed together and contributed a nickel each, for the purpose of buying the sagacious canine a license and a cellar. He certainly ought to wear the popular "brass collar," for he is ahead of all his tribe so far as heard from. At night he keeps vigilant watch at the stables, and seems to have devoted his whole existence to the service of the corporation. He takes his beef with good relish, as though he had earned it, and has apparently settled down for life in his position.—*Cincinnati Gazette*.

Another Sagacious Dog.

Who has not seen a fine-developed, raven-colored tarrier dog invariably standing by the side of James K. Martin, the veterinary surgeon? On Friday night last, about the hour of 11 o'clock, the animal referred to became alarmingly uneasy, pitifully supplicating his master to allow him to go into the stable-yard. Twice he was gratified. Each time he ran to the front gate. The doctor compelled him to return to the office, when the dog became quite unmanageable, specially pleading that the office door be opened. Obtaining his wish, again he speedily rushed to the front gate, and commenced a most mournful howl that the gate might be opened. It was unlocked with speed, and the noble animal rushed out of the gate to No. 169 Orange street, occupied by Mr. Peloubet. The doctor followed his "heir at law," as he styles him, when to his astonishment he found the premises on fire, and Mr. Peloubet's family absent. As the flames were making rapid headway, the doctor aroused the neighbors. Help came, and after an hour's hard work the fire was extinguished. Thirty minutes later discovery would, no doubt, have caused a serious conflagration, as the tenement on fire was frame, as were also the adjoining buildings. The duty of this four-footed friend is to guard and protect the doctor's office.—*Newark Journal*.

A Horse With a Long Memory.

Many years ago, Mr. Abram Dodge, of the town of Ipswich, Mass., owned a beautiful horse which was the pet of the family. He was admired by all who knew his playfulness and good qualifications. In the summer it was Mr. Dodge's habit occasionally to have a frolic with his horse in his barn-yard, then let him out alone, and he would go to the river, which was about one-third of a mile distant, where he would bathe, then go to a common and roll on the grass, then with the freedom of air start for his home. His stable was renovated for him while he was gone, and his breakfast put in his crib. If he met his master he would show some coltish pranks, bound for the stable, pull out the wooden pin that fastened the door with his teeth, and rush to the manger where he expected to find his food. One night the horse was stolen from the stable. After the expiration of sixteen years Mr. Dodge was at the tavern when a man drove a horse up to the door. Mr. Dodge at once recognized his horse, and he told the driver his reason for believing it to be his; the man told of whom he bought the horse, and said that he had owned him for several years. Mr. Dodge claimed his horse, and it was finally agreed that if the horse would, on being taken to his old stable, go through the habit of bathing, rolling on the grass, and pulling the pin from the stable-door as above described, that Mr. Dodge should have him. When the horse was let out into his old yard he reviewed the premises for a moment, then started for his old bath-tub, then for his green towel on the common, then to his old stable, pulled the wooden pin, won for himself a good meal, and his old master his favorite horse. These facts are

vouchsafed for by reliable old residents of the beautiful, picturesque old town, and show conclusively the long memory of our noblest animal.—*Lowell Mass. Courier*.

The Most Remarkable of All.

It simply amounted to a necessity with us, on account of the wonderful stories our exchanges are telling about the intelligence of animals; and we have engaged a man to come in once a week and tell us a veritable history of some bird or beast, which shall enable us to keep up with our contemporaries. Walker is his name. His first story is the following: Mrs. Wilkins, who lives four miles from Point Shirley, has a tame catamount. Until last week it never displayed any extraordinary intelligence, but it seems that last Wednesday, having noticed that once a week the windows were cleaned, what did this catamount do but go out in the back yard and get a ladder; then into the kitchen and get a pail, turn on the faucet, fill the pail, go up on the ladder, and wash all the front windows, wiping them with its own fur, a portion of which it had stripped off for the purpose. Mr. Walker considers this a most wonderful case of intelligence, but hopes to beat it next week.—*Boston Traveler*.

A Modern Eve and Her Apple.

A professor's wife, who occupied herself sometimes in assisting her husband in making casts of interesting objects of geology and natural history, also for her own pleasure sometimes made flowers and fruit of wax and other materials; but notwithstanding that she had become quite a successful expert in this line, she found that almost always her efforts were criticised by her friends. Once she passed a large apple round, and stated her confidence that this time she had been quite successful in her imitation of nature's product; but her friends were, as usual, not of her opinion. One criticised the shape, saying it would be more natural if it were not so globular; another criticised the colors, and said that it was better than other imitations, but she had not quite hit that natural, indescribable peculiarity which distinguishes the natural apples from the imitations; almost every one had some fault to find. After the apple had been passed round and had come into her hands again, she ate it without saying anything. Her friends had been criticising a real apple.

THE *Quarterly Review* tells the following story about Nasr-ed-deen, "the hero of so many good jokes." When he "had assumed for the nonce of the office of imam, he one Friday ascended the *mimbar*, or pulpit, of the principal mosque of the city of Cairo, and thus addressed the assembled congregation: 'O my people! do you know what I am about to say to you?' The people naturally said: 'No, O imam, we do not!' 'Then,' said Nasr-ed-deen, 'it is useless for me to try to teach people so ignorant.' And he descended the steps of the pulpit. On the following Friday the mosque was crowded with the faithful, when Nasr-ed-deen again began: 'O my people! do you know what I am about to say to you?' And the people, mindful of their previous experience replied: 'Yes, O imam, we do!' 'Then,' said Nasr-ed-deen, 'it is needless that I should repeat it to you.' And he descended the steps of the pulpit. On the third Friday Nasr-ed-deen addressed a yet more numerous audience than before with the same question; and the people, after some hesitation, cried, in reply: 'O imam, some of us do, and some let those who know tell those who do not of us do not!' 'Then,' said Nasr-ed-deen, 'know.' And he descended the steps of the pulpit."

A SIMPLE ORNAMENT.—A pretty mantle-piece ornament may be obtained by suspending an acorn, by a piece of thread tied around it, within half an inch of the surface of some water contained in a vase, tumbler, or saucer, and allowing it to remain undisturbed for several weeks. It will soon burst open, and small roots will seek the water; a straight and tapering stem, with beautiful, glossy, green leaves, will shoot upward, and present a very pleasing appearance. Chestnut trees may be grown in the same manner, but the leaves are not so beautiful as those of the oak. The water should be changed once a month, taking care to supply water of the same warmth; bits of charcoal added to it will prevent the water from souring. If the little leaves turn yellow, add one drop of ammonia into the utensil which holds the water, and they will renew their luxuriance.

Ideas.

[Written for the RURAL PRESS.]

"Yes, I wish to borrow some ideas, cousin," said a little friend of mine, as she came bounding in from school. But I had been overtaken all day, and everything had gone wrong. My head was totally devoid of ideas; the thinking apparatus entirely run down.

My little friend seemed very much disappointed and went away with tears in her eyes, while I felt mortified and ashamed, to think I had not some ready ideas to help her along.

Evening had come, the intolerable heat of the day had passed, and I sat thinking, or trying to think pleasantly; but this one little word, "ideas," banished it all. The dear little child seemed reproving me with tears in her sweet blue eyes, and a disappointed look in her face. I sat swaying back and forth in the easy rocker, until a drowsy feeling stole over me, when the whole atmosphere seemed full of ideas—queer little figures, in quaint costumes, talking and laughing merrily; when all at once they became frightened at my presence. They seemed to know that I wished to adopt some of their number; and not knowing but I might prove a cross step-mother, they all fled in terror, and left me quite disconsolate again. But presently I heard the patter of little feet, and close beside me stood a curious little elf, named Good Nature. He turned his little head to one side and looked at me curiously, asking if I loved Good Nature; if I did, I might adopt him, as his parents thought he would be very useful to me, since I had lost my good nature. Before I had time to reply, he gave a silvery laugh and fled.

While wondering what had become of him, I heard approaching footsteps. I did not exactly like their sound, however. Presently a little figure stood before me, and a jerky little voice asked why I did not give him a seat; as he was my own brother; the same name exactly. "What name?" I asked. "Ill Nature," of course you know your own name. I was filled with astonishment; but before I had time to express myself at any great length, this unwelcome guest had departed; and I felt almost happy when I knew that he was really gone.

Again came the sound of pattering feet, and many strange little voices fell on my ear. One little figure exclaimed, "You are my own cousin, and I have come to pay you along visit. My name is Selfishness; I think you will like me. We are said to be very much alike." All this in one breath.

My senses were becoming confused, but were as suddenly rescued, by another voice exclaiming, "I am your cousin also, and you have not so much as spoken to me either, and you ought to have known me anyhow. My name is Jealousy." Other disagreeable little voices chimed in saying, "It's real mean of you not to speak to your relatives," whereupon they all seemed to have new cause for insult, and left in a body. I felt very much gratified at their departure, and was wondering if I, who was so much alone in the world, really had so many disagreeable relatives.

Sweet sleep again stole over me. I was forgetting the world and my troubles, when a clamor in the distance brought me back to a realization of the same. Presently voices close beside me made me aware that I was not entirely rid of my unwelcome visitors. A little voice piped out "Here I am at last. Your cousin, if you please. My name is I Can't. I hear you have not forgotten me, but often speak my name. This lady here is another cousin, her name is Envy. Miss Envy, if you please." Many voices filled the room, and amid great confusion these unwelcome visitors took their departure.

I am alone once more. I resolve to banish these from my mind. Soft, gentle zephyrs play with the curtains at my window, and toy with the locks on my brow. A calm sensation steals over me. Little figures flit before me; while sweet, low voices fall on my ear. A sweet faced lady comes near. "Excuse me, but I once had the pleasure of your acquaintance. Have you forgotten me? My name is Hope." And another spoke out, "My name is Courage, and I have a message for you. A dear friend of yours, whose name is Peace, will be here to-morrow to spend the day." Instantly they all disappeared, and I—well, I had been asleep, and had a dream from which I shall profit on the morrow.

MINNIE MORTON.

YOUNG FOLKS' COLUMN.

The Smallest Post-Office.

"Now, where do you suppose the smallest post-office is?" asked Uncle Clarence, one evening, as he laid down a magazine he had been reading.

"Away off in Colorado or Montana, or some of those new sections of the country," answered Lewis.

"There are some pretty small ones there, no doubt; but the one I refer to, beats them all, for littleness. It is kept in a barrel."

All the children laughed, and practical Jenny remarked, "I should not think there would be much room for the post-master to turn around."

"It has no post-master," said Uncle Clarence, "it keeps itself."

Curiosity was now wide awake, to know all about this wonderful post-office.

"It is situated, or rather hung, on the outermost rock of the mountains, overhanging the Straits of Magellan, opposite Terra del Fuego. Every passing ship opens it to place letters in, or take them out. Every ship undertakes to forward all letters in it, that it is possible for them to transmit. How many homes have been made bright by these messages, left in the barrel post-office. It hangs there by its iron chain, beaten and battered by the winds and storms but no locked and barred office on land is more secure. It is not on the track of mail robbers.

"How I should like to get a letter from it," said Jenny. "I would put it in my cabinet as a curiosity."

"Would it be the next best thing to have a letter somebody else got through it? If so I can oblige you. I have one which my Cousin Tom dropped in there for me, when he was on his long voyage. It was post-marked across one end, by the Captain of the *Gold Hunter*, whose ship brought it on to Boston. It was a pretty good letter too, and will interest you."

Jenny was delighted with the proposition, for she had a passion for collecting all sorts of curious, out of the way articles, and her cabinet was worth seeing.

Uncle Clarence did not forget his promise and the letter arrived in due time; and was read with as much interest as if it had been whisked down by the tail of a comet or dropped from the wallet of the man in the moon.—*Schoolboy Magazine*.

The Drove of Shetland Ponies.

EDITORS RURAL PRESS:—A Mr. Cory, of Suisun City, has been away across the Atlantic Ocean to the Shetland Isles, and brought back with him a drove of horses. And Oh! such horses. The largest one in the band is just a little taller than the dining table.

Many of them are so small that if you were to ride them, you would have to be careful, else they might walk under the dining table and push you off. Mr. Cory paid \$150 for the large one in Shetland. He is twice as large as many of the drove; and he is just forty inches high on the withers. This one is held by Mr. Cory at one thousand dollars.

None can be had without paying a big price. Mr. Cory sold one medium sized one for six hundred dollars, last week. They are poor and not over the voyage yet.

Can you tell me where Shetland Isles are?

[The Shetland Islands—for they are quite an archipelago—lie off the north coast of Scotland.—Eds. Press.]

INSECT MUSIC.—The chirping and singing of cricket and grasshopper are frequently spoken of; but they do not sing; they fiddle. By rubbing legs and wings together, each in a manner peculiar to the species, those insects produce the sounds which characterize them. Perhaps our best insect instrumental performer is the "Katydid." Each wing contains a little tambourine; and by the opening and shutting of the wings these are rubbed against each other, and produce the sounds of "Katy did-she-did," which can be heard at such a long distance.

THE little boy, at his first concert, innocently asked when the soprano was called back, "What's the matter, mother? Didn't she do it right?"

"WHAT is your name, little girl?" "Minnie." "Minnie what?" "Minnie Don't, mamma calls me."

GOOD HEALTH.

Hygienic Hints.

Cold Water in the Sick-Room.

Nothing could be clearer to the eye of common-sense than that thirst expresses a need of the organism. A man perspiring freely craves water because his blood is parting with its watery constituents; and drinks are demanded for a similar reason in diseases, such as cholera, attended with wasting discharges. A cholera-patient once exclaimed to me, pausing as she drank a glass of ice-water, "Doctor, every swallow is worth a hundred dollars." Cold beverages have the effect in cooling down the body directly by contact, and subsequently by affording water for evaporation from the surface. And hence it is that thirst becomes the most intolerable of all the cravings of patients laboring under fever or inflammation. Children suffer immensely from thirst when indisposed. Their moans and cries, kept up for hours together, often have their origin in this distress, which they can express by no language except these cries; and it is wonderful to behold the relief frequently afforded by a draught of cold water.

Fat Meat for Consumptives.

A taste for fat meat is unfortunately not universal among children, but when it shows itself it is often most universally repressed by parents. This taste is another expression of the wants of the living system which we cannot disregard with impunity. Without fats the organism cannot be built up in perfection. Fats counteract the tendency to consumption. Observation has established the interesting fact that persons who in early life show a taste for fat meat seldom fall victims to that disease; and, *vice versa*, that consumptives have generally shown an early repugnance to such food. There can be no question as to the lesson taught by this fact—that when the appetite exists it ought to be indulged, and that it ought, if possible, to be created, when wanting, by tonics and abundant exercise in the open air.

Why a Child Loves Sugar.

The craving of a child for sweets is well known to be one of the most imperious of their appetites. It has reference probably to that ceaseless activity which especially characterizes the age of childhood. It may be that sugar performs in their systems the part enacted by fatty substance in the bodies of adults. As it undergoes oxidation—is burnt up, circulating with the blood—it may be the source of the power which enables them to keep in motion from morning to night. Besides this, it is known that it renders easier and more perfect the digestion of the albuminous food upon which their growth depends. In respect to these offices it is therefore nearly essential to their well-being. And yet how strong, for generations, has been the prejudice against sugar! Under what difficulties, and in the face of what discouragements and protests, have our children obtained the luxury.—*Home and School*.

A NEEDED REFORM.—Dr. Hamilton, of Buffalo, New York, tersely says in regard to ventilation, diet, labor, disease, etc.: We need for our dwellings more ventilation and less heat; we need more outdoor exercise, more sunlight, more manly, athletic, and rude sports; we need more amusements, more holidays, more frolic and noisy, boisterous mirth. Our infants need better nourishment than colorless mothers can ever furnish, purer milk than our distilleries can manufacture; our children need more romping and less study. Our old men need more quiet and earlier relaxation from the labor of life. Men, both young and old, need less medicine and more good counsel. Our cities need cleansing, paving, and draining. The Asiatic cholera, the yellow fever, the plague, and many other fearful epidemics, are called the opprobria of our age, and our fellow-citizens upbraid us with feebleness and inefficiency in our resources. When will they learn that, although we do not fail to cure these maladies, the more precious secret of prevention is in our possession, and has been for these many years.

CONSUMPTION.—Dr. MacCormac, of London, advances the theory that consumption, or tubercular disease, is caused solely by breathing air that has already been breathed. The contamination of air by carbonic acid, and other organic effete substances, diminishes its power to remove these from the body, and the detritus of degeneration being retained, becomes tubercle. He attributes the superiority of Vienna and St. Petersburg, as consumption producing cities, to the universal use of close stoves, and the careful exclusion of air from rooms. M. Collet concludes, as the result of thirty experiments, that the flesh of tuberculous creatures does not produce tubercle in healthy animals to whom it is fed. He believes that when experimenters produced different results, they either experimented on animals already diseased, or allowed the admission to their lungs of tuberculous matter through the air they breathed. M. G. Colvin concludes, from experiments, that the introduction of tubercle into the digestive apparatus of a healthy animal will not produce tubercle in him.

The Law of Fatigue.

Dr. Haughton, in his "Animal Mechanics," states the law of fatigue as follows: When the same muscle (or group of muscles) is kept in constant action until fatigue sets in, the total work done, multiplied by the rate of work, is constant. Suppose a man, walking at his ordinary pace, does not become tired until he has gone thirty miles. If he walks twice as fast, then by this law he would be exhausted at the end of fifteen miles, having done only half the work in a quarter of the time. If he walks three times as fast, he will be tired at the end of ten miles, having done one-third of the work in one-ninth of the time; and so on, the total work done varying as the square root of the time necessary to produce fatigue.

Where the rate of work is very rapid, as in a boat-race, it is of course impossible to keep it up for any great length of time. The actual amount of work done in such a case is thus illustrated by Dr. Haughton: A good idea may be formed of the rate in which the muscles give out work in a boat-race, from comparing this work with the average daily work of a laborer. As many kinds of labor there are 400 foot tons of work accomplished in ten hours. The oarsman performs (this is arrived at by calculation) in one minute the 100th part of his day's labor, and if he could continue to work at the same rate, he would finish his day's task in one hour and forty minutes, instead of the customary ten hours. The work done, therefore, in rowing one knot in the seven minutes, is, while it lasts, performed at a rate equal to six times that of a hard-worked laborer.

Dangers of Well-Water.

The dangers of bad milk are engrossing so much attention just now, that there is no reason to fear lest the far greater dangers of bad water should for the time be overlooked. We trust this serious error will not be committed. For one sample of dangerous milk a thousand of dangerous water could be obtained in almost any part of the country. Let it never be forgotten that very few rivers or wells are safe sources of water supply, and that as many are unsafe as loaded fire-arms. The shallow wells of villages are among the pests of the country, and it is high time that a zealous and well organized crusade should be brought to bear upon them. It is sickening in most country places to observe the uniformity with which the cesspool and well are made to stand side by side, as though each was necessary for the other; and to think of the twenty feet or so of foul, sewerage-reeking soil through which the water percolates to its feticid bed! The question should engage the attention of every health officer, and will, in too many cases, tax his energies severely, for it is one of the hardest sanitary problems. It is always possible to provide a city or town with good water, but in a village, where houses are few, money scarce, and intelligence scarce, it is a matter of exceeding difficulty.—*London Lancet*.

THE REASON WHY YOU CRY.—Darwin says: Weeping is probably the result of some such chain of events as follows: Children, when wanting food or suffering in any way, cry out loudly, like the young of most of other animals, partly as a call to their parents for aid, and partly from any great exertion serving as a relief. Prolonged screaming inevitably leads to the gorging of the blood-vessels of the eye, and this will have led, at first consciously and at last habitually, to the contraction of the muscles round the eyes in order to protect them. At the same time, the spasmodic pressure on the surface of the eye, and the distention of the vessels within the eye, without necessarily entailing any conscious sensation, will have affected, through reflex action, the lachrymal glands. Finally, through the three principles of nerve force readily passing along accustomed channels of association, which is so widely extended in its power, and of certain actions being more under the control of the will than others, it has come to pass that suffering readily causes the secretion of tears, without being necessarily accompanied by any other action. Although in accordance with this view we must look at weeping as an incidental result, as purposeless as the secretion of tears from a blow outside the eye, or as a sneezing from the retina being affected by a bright light; yet this does not present any difficulty in our understanding how the secretion of tears serves as a relief to suffering.

COFFEE AS A DISINFECTANT.—The *Homeopathic World* says that coffee, when roasted, is one of the most powerful means, not only of rendering animal and vegetable effluvia innocuous, but of actually destroying them. A room in which meat in an advanced degree of decomposition had been kept for some time, was instantly deprived of all smell on an open coffee roaster being carried through it containing one pound of newly roasted coffee. In another room the effluvia occasioned by the clearing out of a cesspool, so that sulphuretted hydrogen and ammonia could be clearly detected, was entirely removed within half a minute on the employment of three ounces of fresh coffee. The best mode of using it as a disinfectant is to dry the raw bean, pound it in a mortar, and then roast the powder on a moderately heated iron plate, until it assumes a dark brown hue, when it is ready for use. It must, however, be remembered that the coffee, to be effectual, should be perfectly pure. Adulterated rubbish will only make matters worse.



PUBLISHED BY

DEWEY & CO.

T. DEWEY. W. B. EWER. G. H. STONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, Jan. 31, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Culture of the Cranberry; Green Corn or Alfalfa, 65. The Rural Press and the Farmers; Transplanting Trees; Flax and its Culture; Cotton Protected by Jute; Stock Gambling; The Work of the Farm, 72. Prof. Nerf's Lecture on Electricity; The State Legislature; Beers' Patent Gold Crows; Croft's Life Protector, 73. Patents and Inventions, 76.

ILLUSTRATIONS.—Culture of the Cranberry, 65. Life Protector; Tooth Crows, 73.

CORRESPONDENCE.—"Our Jute Manufactories" Again; Corn Worm and Eucalyptus; Summer Fallow and Irrigation; Gardening and Great Yield of Melons; Foreign Growths in the Body; Silk Growing as a Business; Weak Calves, 66. The Philosophy of Shallow and Deep Plowing when Applied to Sand Loam; Letter from Rochester, N. Y.; Nurseriesmen, Please Notice; White Scuppernong Grape; The Jute Duty; Graham Pie Crust, 67.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 68-9.

HOME CIRCLE.—Theodore Hook's Stratagem for a Dinner; Some Sagacious Animals; A Modern Eve and Her Apple; A Simple Ornament, 70.

YOUNG FOLKS' COLUMN.—The Smallest Post-Office; The Drove of Shetland Ponies; Insect Music, 71.

GOOD HEALTH.—Hygienic Hints; A Needed Reform; Consumption; The Law of Fatigue; Dangers of Well-Water; The Reason Why You Cry; Coffee as a Disinfectant, 71.

SMALL FRUITS.—Renewing Strawberry Beds; Hybrid Raspberries; Planting Strawberries; Can Your Fruit, 74.

USEFUL INFORMATION.—Taking Impressions of Leaves; How to Pave Streets; Purification of Tallow and Lard; A New Destroyer for the Hair; Tests for Drinking Water; Depilation of Hides with Charcoal; Bronzing Iron; Colored Starch; Cement for Meerschaum, 74.

THE ORCHARD.—Manure for Fruit Trees; Ashes in the Orchard; Beatrice Peach, 75.

AGRICULTURAL NOTES from various counties in California, 76.

MISCELLANEOUS.—Ancient Lakes of Oregon; Sugar in Organic Substances; Alaska Coal Lands; Another Perpetual Motion, 67. Ideas, 71. Leather Board; Secchi on Solar Protuberances, 74.

A WORD TO CORRESPONDENTS.—The way an American, and particularly a Californian, reads a newspaper, is this: He takes it up, gets his eye on an article, but has no more idea of reading it till he sees how long it is, than though it wasn't there. Glances downwards, and if it is a long article, passes it by, though fully intending to read it when he has more time; but he never gets the time, and the article is never read by him. But had the same length of epistle been on three different subjects he would have read every one of them. Do our correspondents see the point? We now have a host of valued contributors, such as probably no other paper on the Pacific Coast has, and we are proud to claim them as such; but if all obtain a hearing, their communications must be as short as possible and convey their intended meaning. Thanks, however, to every one of you.

A MILK-PRODUCING PLANT.—M. Gillett-Damitte has addressed a paper to the Academy of Sciences, to announce the nutritive and lactigenous properties of the plant called *Galega officinalis*. As fodder, its value is thirty-three per cent. higher than the best meadow hay. Cattle easily take to it, and chemical analysis shows that it is a milk producer. From experiments made on cows exclusively fed on galega, it appears that, in twenty-four hours, they yielded twenty-three per cent. more milk than others fed on other kinds of fodder; some, even, gave as much as fifty per cent. The same plant administered in the shape of salad, or under the form of a syrup, to nurses whose milk begins to fail, will restore them to their former lactigenous capacity.

THE LATE ROBERT BLACOW.—We have received an interesting biographical sketch of the truly eventful life of Robert Blacow, one of California's honored pioneers now dead, which, on account of its length, is deferred till next week.

The Rural Press and The Farmers.

It is our purpose to make the RURAL PRESS eventually the best journal published for the farm and fireside in the Union—East or West. Many of our friends have assured us that it has already reached that point of superiority. We are thankful for the good opinion of such; but we are not yet through with our plans of improvement. There are many ways which we can yet see in which the paper may be improved. Much, however, of such improvement must depend upon increased business—a larger subscription—although we now claim a circulation, nearly if not quite, double that of all the other agricultural papers in the State. United, there is still room and need, however, for a further increase. To reach this end, we earnestly ask the co-operation of farmers in general, and Patrons in particular.

The RURAL PRESS should be read by every farmer on the Pacific coast. It is your paper, farmers, and largely edited by you, as will be seen by the scores of communications, long and short, which we give in every issue. Its managers are merely running it as your agents—running it for you and to suit you. If it is not exactly what you wish, you will do us and your brother farmers a most important service, by pointing out wherein it may be made more acceptable, and we shall not hesitate to comply with the will of the majority.

We are not printing the RURAL PRESS for a living; we have other means of support. We are simply trying with the PRESS to see how good and useful a paper we can make, trusting to the future for our profits. All the present income for the paper is devoted to building up and improving it. Canvassing for it, adding to its list of subscribers, securing for the publishers the money with which to push on the work to still greater perfection. We are pleased to say that Patrons, throughout the State, are working earnestly for this paper as the leading advocate of their cause on the Pacific coast.

The Present Flood.

During a trip to Sacramento on Monday last, via Vallejo and Davisville, and from Sacramento on the ground to the dome of the capital, we took thence a general view of the surrounding country. To the north of the levees that guard the Yolo county side of the Sacramento river, as far as the eye can reach, and discern tule land, it is all like a lake, with trees and other objects standing up out of the waters.

It is a lamentable fact that the levees, which were intended to ward off the waters from this large area of fertile country, have proved inadequate, not fully answering the purpose intended. By reference to our agricultural notes, on another page, the locality of the different breaks in the levees can be learned, with some interesting facts relating thereto.

Five years ago we demonstrated by a lecture before the members of the Legislature, and subsequently before the Chamber of Commerce of San Francisco, the utter impracticability of successfully confining the waters of the great northern and interior basin of the State, in seasons of copious rain-falls, within levees built so near the banks of the Sacramento river, as they were then being constructed. We drew a parallel as between the mountain torrents of the Southern Alps as they flow in rivers similar to ours, and obtain their floods from similar causes; and their system of levees along those rivers, with our system of leveeing, or rather lack of system.

We pointed to the fact, that more than four hundred years ago, the people of Northern Italy had discovered that it was cheaper and better—because safer—to allow the spring floods to spread out sideways, covering surface, rather than try, between high levees, to set the river upon its edge. Every year in which we get high water, the same lesson is taught us, and we heed it not, and go on year by year piling up levees of light and unsubstantial materials so near the rivers' banks, and confining the waters in such narrow limits, that the first pressure of the swollen stream forces them from their foundation, and disaster follows.

We have not room in this week's issue for a discussion of a better system of tule reclamation than the one which thus far in too many instances has proven so nearly futile; but we believe there is a better one, and which will have to be adopted, before our attempts at reclamation will be pronounced a success.

KANSAS.—Inclosed find two dollars. Please send the PRESS, for six months, if you can; and, although California agricultural papers will do me but little good in Kansas, I am determined to leave here, and wish to post myself with a view to making California my future home.

PRESBOTT, January 20, 1874.

It is quite evident P. H. has seen the RURAL PRESS in Kansas, or some one has told him of its being the best agricultural paper on the Pacific Coast—of course, sends for it.

Flax and its Culture.

As regards the wheat crops the coming season, the prospect now is, that it will be simply enormous. Now let us suppose that Great Britain, and the greater part of the countries of Europe, instead of a short crop of wheat as was the case last year, should produce their average crops, which is no wise unlikely, and the largely increased acreage of the western Atlantic and Pacific coast States should turn out a fair crop, where would be the hopes of the California wheat grower? There could hardly be ships enough found to take it away, and this probably at a much lower figure than has ruled during the last year.

If this prediction should prove true, it would be of the first importance to our farmers that they turn their attention to some extent, to the culture of some other field crop, that while it interferes but little with the culture of the wheat crop, will really pay better. It is always important that the farmer should not rely upon a single crop, but on a variety; then he can hardly fail of success.

We are satisfied that one of the best crops that can be grown to take the place in part of all wheat, is flax. We base our calculations upon the following: It is a very safe calculation to reckon upon an average yield of fifteen sacks of 100 pounds each to the acre, though in many instances it has exceeded 20 sacks to the acre. This seed delivered in San Francisco, will readily command 3¼ cents per pound on contract. Seed will be supplied, perfectly clean and pure, at four cents per pound, and the parties furnishing it will wait and take its cost in the coming crop, so that the farmer need not be out anything in procuring his seed.

From 30 to 50 pounds of seed are required per acre. It costs no more to prepare the land and get in the crop, or for the harvesting and marketing, than wheat. Reckoning on the above basis, the farmer can make his own calculations of profit as near as we could do it for him, and having done it, will find that with the ordinary yield, flax will give him more real profit per acre than wheat, even at the present high price of the latter.

But in addition to this there is the value which attaches to the lint or fiber for textile fabrics or paper making, which is not brought in to account of profit, in the foregoing ground-work of estimate. If our farmers, as a local community, would get together and agree to raise, say 50 or 100 acres each, so that the same harvester—suited to the purpose—could do the work for all, it would lessen the expense and insure its being well done. It will do to sow flax seed till the first of March, it is not often that it does as well sown later. In our next we shall give a few practical directions for the culture of this important and valuable farm product.

Cotton Protected by Jute.

In the various experiments made in jute cultivation, an important fact has been incidentally observed, in the antagonistic influence exerted over insects by the plant and its flowers. Flies and butterflies never visit the field, and all the lepidoptera seem to have such an aversion for it, that they keep far away from the growth. It has been remarked and reported that cotton surrounded by, or only in the vicinity of jute, was *indemne* from the voracious criminal. A special experiment made on the subject this season seems to be conclusive in favor of the protective power of jute. It corroborates the record of the same observation in the monthly reports of the Department of Agriculture some time last year.

Dr. A. Landry, New Orleans, publishes the following in the *Carillon*, regarding that special experiment: "We have seen on the farm of the Ramie Planting Association, Gentilly Road, a cotton field surrounded by a jute growth. On the first of October the cotton was still green, flowery, loaded with bolls; no insect had touched one leaf; while cotton fields of adjacent plantations were partly or entirely destroyed by the worms, according to the distance over which had circulated the noxious odors of the jute flower." That corroborated fact has an importance which deserves attention.

Of all means employed to combat the army worm or its congeners, *Paris Green* has been successful wherever it was properly applied. But as this application is uncertain and expensive, under the actual disorderly system of labor, jute would be the simplest and cheapest method. A row of jute for every section of fifteen rows of cotton would be amply sufficient to protect the crop, and would give, in same time, provision of seed for future development of the jute cultivation, which, as predicted by Hon. F. Watts, Commissioner of the Department of Agriculture, is going to be one of the important products of certain Southern sections.

Our *Home Journal*, of October 11th, gives full particulars regarding this cheap and promising culture, which many planters are going into, especially sugar growers, inasmuch that their apparatus is available for jute production.

TOBACCO.—A Whatcom county, W. T., correspondent asks us for the Gilroy Tobacco Co.'s process of curing tobacco. From any knowledge of our own, we are unable to give it. It is a patented process.

Stock Gambling.

We believe it perfectly legitimate to purchase the stock of any mining or manufacturing company or organization, with a view of realizing reasonable or even large profits or dividends, from development, or increased value given to products, by the labor bestowed upon their manufacture. But when we see men of probity and character, men whom it might be expected would lend all reasonable aid to enterprises which alone can give wealth and permanent prosperity to the State, turning their attention to, and using their means in simply buying one day and selling the next, the stock of some wildcat mining or other company, with no other object than buying low and selling high, building their own fortune on the ruin of their friend who may chance to be the loser, it becomes a matter of doubtful propriety if not of morality, and scarcely deserves a milder name than public gambling.

We would not, however, interpose objections solely on this ground, every man being the keeper of his own character and conscience, and the city of San Francisco is the protector of its reputation as against gamblers. But look at the ability, the energy, the business talent, the capital in money, and the great good to the industries of the State that might accrue, all withdrawn, locked up in the brains and pockets of four or five hundred men daily assembling at the corners of California and Montgomery streets.

Is it any wonder that San Francisco should lose her prestige as the queen commercial city of the Pacific, or that interior projects for the development of the State's industries and interests should languish? The wonder only is, that with so much of the cash capital of San Francisco entangled in the meshes of hazardous stock speculations, there is enough left for the development of even the few industries which are now and then inaugurated in our midst.

TREE FERNS AND OTHER TROPICAL PLANTS FROM THE SANDWICH ISLANDS.—Messrs. Miller & Sievers, florists, at 27 Post street, have inaugurated a novel enterprise in the introduction to this State of tree ferns and other tropical plants from the Sandwich Islands. They have sent out a special agent to collect and ship, and have already received two shipments—one by the *D. C. Murray* and another by the *str. McGregor*, which are now potted at their gardens, on Lombard street, and which will be placed on sale as soon as they have sufficiently recovered from the effects of their removal. Several hundred are now doing well and may be seen as above. The enterprise is a novel and interesting one, and one which we trust will be profitable to the originators.

ON FILE.—We are obliged to ask the indulgence of several of our correspondents whose articles have not yet appeared. Too good to be lost, we shall finally make room for them. Among them are—Alfalfa; Osage Orange; A many-sided question; Peanut raising; The great Comstock lode; Sphere of the farm laborer; California grown seeds; Letter from Compton; Farm help; Rural homes among the foot hills; Reply to "Dora Darmoore"; Farmhouse chat; Potato yield, Cambria; C. A., textile fiber; Best grapes for raisins.

METROPOLITAN NURSERY.—We have received from Miller & Sievers, proprietors of Metropolitan nursery, their general and descriptive catalogue of new, rare, ornamental and flowering plants, bulbs and seeds. Their nurseries are on Lombard and Chestnut streets, between Polk and Larkin streets. Their floral and seed depot is at No. 27 Post street, between Montgomery and Kearny, San Francisco.

AGRICULTURAL REPORT.—We have received from J. N. Bagg, Secretary, the 29th annual Report of the Hampden county, Mass., Agricultural Society, containing an able address from Hon. Chan Laisun; a beautiful agricultural hymn; report of committees on farm stock, agricultural products, etc.

SEED CATALOGUE.—We have received the illustrated annual Catalogue of seeds, and gardeners' Almanac of B. K. Bliss & Sons, New York, Dealers in garden, field and flower seeds, agricultural books, implements, etc.

RECEIVED.—We have received from F. M. Shaw, now in London, a paper read at 55 Castle street, before the Social Science Reform Club of London and Los Angeles, California.

MASSACHUSETTS HORTICULTURAL SOCIETY.—We have received Schedule of prizes offered by the Massachusetts Horticultural Society for the year 1874.

WINTER CHICKENS.—We have an interesting communication in this number on the growing of chickens in winter; it will suggest a new idea to many an early chicken grower.

CATALOGUE.—We have received the finely illustrated seed catalogue of Kern, Steber & Co., 214 Market street, St. Louis, Mo., for 1874.

Prof. Neri's Lecture on Electricity.

The second of the series of lectures on electricity, by Prof. Neri of St Ignatius College was given at the hall on Jessie street, on Thursday evening of last week. It was in the main, according to previous announcement, a repetition of the first, which could not be accompanied by the usual demonstrations on account of the condition of the atmosphere at that time. A very large and most attentive audience was present, a fact which speaks well for the growing taste for scientific information in San Francisco.

The History of Electrical Science.

Electricity was but little known to the ancients. It was originally detected in amber—the electron of the Greeks, and hence the name of electricity. It was also long afterwards found to exist or be developed by friction in several other substances. The phenomenon was originally explained by regarding it as the soul of amber; hence it was regarded with awe. No progress however, was made either in determining its character, or utilizing its existence for some 2,500 years—or until about 200 years ago, when the attention of scientists first began to be especially attracted to its study. The result of this study soon developed the fact that this strange principle was the cause of some of the most important phenomena of Nature; that it extended its influence throughout the universe, and that it had an intimate connection with both animal and vegetable vitality. It also led to many developments in kindred sciences, in the introduction of new means of wealth, and in the furthering the general progress of civilization. The lecturer introduced various experiments with glass rods, sticks of sealing-wax, etc., and demonstrated the existence of two kinds of electricity—vitreous and resinous or positive and negative, and attracting and repelling.

What is Electricity—Its Nature, Etc. ?

Notwithstanding the progress which has been made in modern times in studying the various phenomena of this wonderful agent, we are still quite as unable as were the ancients to answer this question. All we have been able to do is to collect and systematize facts. For a long time it was thought to be an imponderable fluid, or rather a compound of two different fluids; but that theory is now fully exploded, and the idea is only kept up for the convenience of illustration. Electricity is, probably, simply a condition of the molecules of matter. [A mode of motion—the molecules in a certain condition of motion?—REPORTER.] It is also found that this condition exists only on the surface of bodies—everywhere alike on the surface of a sphere, but tending to the points of elongated bodies. This fact was shown in various ways. In a hollow sphere—no matter how thin—there was no electricity on the inner surface; it was all on the outer. When a given, insulated sphere was encased in another and outer one, the electricity instantly left the surface of the first and arranged itself on that of the outer sphere. Even a cotton net with open meshes was electrified only on the outer side, and the electricity was reversed if the net was turned wrongside out. These facts were very distinctly demonstrated with suitable apparatus. Very delicate instruments were shown for detecting the presence and measuring the intensity of the electric fluid upon any given body.

The Principle of Induction

Was explained and beautifully demonstrated with elegant and costly apparatus. The simple apparatus first used by Volta in demonstrating this principle was shown. Inductive electricity is that which has been generated by friction, etc., and then conducted to another body by a suitable conductor. This discovery we owe to our own Franklin. The charging of the Leyden jar is made possible through this principle of induction, multiplying which, a battery is formed capable of killing by a single discharge the strongest ox. The simple experiments in this direction lead to gradual improvements in instruments for generating electricity, until from the tiniest spark which was all that Franklin or Volta could produce, we have now machines that will develop a continuous chain of sparks six or seven inches long—miniature chain lightning, which in a darkened room falls with almost blinding influence upon the eyes. Several of the various electrical machines were shown, exhibiting the gradual progress which has been made in this direction from Franklin's time to the present day—the latest of which is a novel and powerful machine lately devised by Carré of Paris, and which was received here only a few days previous to the date of this lecture. This machine combines both the frictional and inductive principle, and possesses a means of greatly intensifying the current, which was shown but not explained by the lecturer.

During the last century, as such machines have been gradually improved, experimenters have been at work with great earnestness and success. At first such experiments were conducted quite privately, and the experimenters were regarded with a species of awe and admiration. Men of learning and influence esteemed it a great favor to be admitted as spectators. Our own Franklin was one of the most successful of such experimenters. Spirits (alcoholic) were set on fire, gas was lighted and guns were fired by this mysterious agent. [The lecturer might have mentioned here, as one of the most

important experiments, that performed by Franklin of drawing lightning from the clouds, thus proving, by actual demonstration, what was only suspected before—that the electricity produced by friction was identical with that developed in the thunder cloud.]

Several Beautiful Experiments

Were here shown by the aid of the same machine, one of which consisted in causing the electric current to pass through a long glass rod, and repeatedly around a glass globe by means of a detached conductor, whereby the fluid assumed the appearance of a glowing chain of fire. The profile of Franklin was also flashed out in electrical fire by means of a similar device. The electrical chimes were also another pleasing feature. But perhaps the most interesting experiment of all was a demonstration of the power which the human body possesses of becoming an accumulator of electricity—a living Leyden jar.

Lighting Gas with the Fingers.

A young lad, standing upon a stool insulated with glass legs, when placed in connection with the same machine, was able, by merely pointing his finger near a gas burner, to light



LIFE PROTECTOR.

the same; eight or ten jets were thus successively lighted; and small dishes of naphtha were also set on fire by the same means, sparks were also drawn from any part of his body wherever the professor brought his knuckles in close proximity to the same. The power and influence of points was here explained by the virtue which of Franklin's invention of the lightning rod was suggested and made practical.

Electricity from a Steam Boiler.

Another interesting and quite novel experiment consisted in the demonstration that electricity is generated by escaping steam, and, when the boiler is properly insulated, diffused throughout every portion of the boiler and iron-work connected therewith. A small boiler, of locomotive construction, holding some eight or ten gallons, was put under a steam pressure of 100 pounds to the inch, and the steam allowed to escape through some three or four small tubular openings, whereby considerable steam friction was produced. Soon after the steam commenced escaping, sparks could be drawn from any part of the boiler or iron-work connected with it, thus demonstrating the interesting fact which was first discovered through accident by Sir William Armstrong—that a steam boiler may, by proper insulation, be converted into an electrical machine.

The experiments, as well as the lecture, throughout, were eminently pleasing and instructive, and were made possible, in all their completeness, in this city, only by means of the superior character of the apparatus connected with the St. Ignatius College, which is the most complete and costly of anything of the kind elsewhere on the Pacific coast.

Prof. Neri gave another lecture, which is to be considered the second of the course of six on electricity, on Thursday evening of this week, when an entirely different series of experiments was presented.

The State Legislature.

Nearly two months of the session have already passed, and nothing of the really important business which has been introduced has yet been put upon its final passage. The friends of reform and honest legislation have generally been active and vigilant; but their opponents have also been active. Finding themselves in a hopeless minority, they are employing every artifice known to the legislator to stave off important work, and, if possible, drive it so far into the session, that it will be impossible to get much of it through before the day of adjournment arrives.

The No-Fence Bill.

The no-fence bill appears to be attracting the largest share of attention just now. It is almost or quite equal in importance to the sub-

ject of irrigation. With such a law the counties most interested will have to spend nearly or quite as much money for fences as would be required to introduce a thorough system of irrigation. The bill introduced by Representative Ferguson passed the Senate a few days since, but with so many changes that it was hardly recognizable, and the Assembly did well on Monday in refusing to accept the amendments. It is to be regretted that Senator Edgerton, who has thus far made such a manly fight for the people, should go back on them in this particular, and we also regret to find San Francisco's Senator, Roach, in the same boat. The sympathy of the whole State, outside of the cattle interest, is undoubtedly with the bill substantially as it stood. The farmers in the San Joaquin valley are most certainly entitled to protection; but it should at the same time be given in a manner to work the least hardship to the cattle interest.

Fares and Freights.

A question of still greater magnitude, also remains to be disposed of. The latest action on the bill (Freeman's) was to postpone its farther discussion in the house, until Monday next. There is little doubt but the bill will pass substantially in its present form. The Railroad company has exhausted its expedients to defeat the measure. There is an evident determination on the part of a majority of the Legislature to carry out the wants of the people, by the establishment of a scale of prices which shall protect their rights. The only available plan now left to defeat the measure is to delay its passage in the House to so late a day that when it goes to the Senate it may be kept there long enough, and so skillfully amended that it will be impossible to find time to give it another round.

The Apportionment Question

Is another measure of great importance to the farmers, as under the present rate, they and their allies are fully one-half disfranchised. Fifty-five days of the session have already passed, and the unnecessary delay in considering this question is beginning to look quite suspicious.

San Benito County.

The bill to create this new county bids fair to meet with strong opposition in the Senate. The points in its favor are being prepared for presentation to the Senate committee.

Fees of Office.

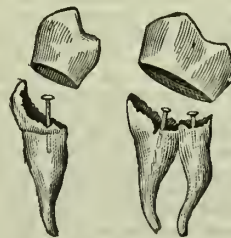
Senator Gibbons has commenced a greatly needed reform, which looks to the abolition of fees to salaried officers. Every officer shall receive a salary commensurate with his services, and that shall suffice. If fees must be taken, let it be for the benefit of the State, county or municipality. The fee system as a perquisite to officers, exerts a most vicious and pernicious influence, and should be abolished at once. The Senate has adopted a resolution to convert

The Governor's Mansion.

Which has already cost some \$50,000, into a State Armory. It would furnish a costly edifice for such a purpose; but is perhaps the best one that can be made of it unless the State can sell the property as it stands, for a fair price. It is to be hoped that we have at length reached the end of this and similar foolish extravagances. The people are tired of them.

Swamp Land Frauds.

Another astounding series of frauds connected with the swamp land frauds, amounting in the aggregate to over \$200,000, is reported, which will call for a searching investigation by the Legislature. The present appears to be a bad time for public swindlers, for the metaphorical whitewash wherewith they may be



TOOTH CROWNS.

coated, seems to be remarkably scarce just now. There is good reason to believe that the public money will be looked after a little closer in future than has been the case in times past. The people have got their eyes open and are determined to give no quarter to the harpies who have heretofore fattened upon them. Neither past reputation, position, nor ill-gotten wealth will shield them now.

We may remark in this connection that a report has been published that the Regents of the University intend commencing a suit against Dr. Merritt, of Oakland, in connection with his expenditure of money for the University building. Whether this is true or not,—there seems to be a strong feeling on the part of the people for more light on this subject.

The Irrigation Question

Seems to be slumbering just now. The only reference to it which we have noticed the past week has been the presentation of a petition by Mr. Venables, of Los Angeles, from 1,700 practical farmers, asking for a general system of irrigation; that the State be divided into irrigation districts, and that the said districts be authorized to issue bonds for the prosecution of said work. Referred.

Beers' Patent Gold Crowns.

While it is the province of the skillful operator to save and not destroy, yet he is often called to extract the ruins of a once fine molar, or other organs of mastication, that have been so broken down by decay, or whose walls are so fragile as to be beyond the reach of all former modes of restoration; in such cases, especially, this invention must be hailed with delight, for if skillfully applied it restores them again to usefulness and beauty. These caps or crowns are made of 20 carat gold, highly finished, of assorted sizes, and in shape, exact representations of the natural teeth.

Our cuts explain themselves. In applying the new process, the operator first removes the decayed portion of the old tooth, until nothing is left but a sound and firm basis on which to build. The stump is then filled in the usual manner. A crown is next selected of approximate size and shape, and it is accurately fitted and trimmed, care being taken to obtain a close articulation with the natural tooth, or what is left of it. Into the gold filling a small gold screw is inserted, and its head is made to project, so that when the crown, or shell, is filled with cement, of oxichloride of zinc, or other suitable material, the whole will form a compact and lasting tooth.

The advantages of this process over the old method, of building up by hammering on gold foil, as in ordinary fillings, until a sufficient size has been obtained, are the increased stability secured, and the greater ease in working. This latter point is an important one, as frequently and usually the old tooth is not firm enough to bear the incessant hammering which is required to solidify the mass.

Dr. Beers has, in this invention, added largely to the scope and utility of the science of dentistry, which is shown in many other ways to be a truly progressive one. New and improved tools are daily making their appearance, and the tendency is to shorten the duration of operating, and to lessen pain, while in every respect the workmanship of dentists is far superior to that of years past. One thing remains to be discovered, and many are now engaged in its search, and that is, a composition which shall be as satisfactory as the material of which false teeth are made, which can be easily applied, and which will not require heat to fix and glaze it. When this is found, sugar, acids and old age may be defied, and society will be perpetually on a broad grin.

Croft's Life Protector.

Geo. A. Croft, of *Croft's Western World*, while in this city last week showed us an invention of his which is intended, in case of fire, to protect the eyes from heat and smoke and the respiratory organs from the effects of suffocation. This "Life Protector," of which an illustration is given herewith, is a new invention, and it is claimed that it will entirely justify the opinion of practical men who have seen it, and who agree that it will prove of incalculable benefit, needing but a simple trial to convince one of its utility and value. As shown in the cut, the invention consists of a shield or guard of hard rubber, with flexible edges, which fits the conformation of the head and face so nicely that no smoke can enter while the exhalations of the breath are at the same time excluded. While thus shielded, the eye-sight is kept unimpaired by strong pieces of glass. The nostrils and mouth are protected from smoke, heat, vapor or gases, by a curtain of suitable material, depending from the rubber frame-work, and fastened closely around the throat and at the sides. The whole is confined by a band which passes over the head. To increase the efficiency of the "Protector" as a respirator, a wet sponge is placed inside the curtain which covers the mouth.

It is quite simple and cheap, \$5 at retail, and may be rolled up and put in the pocket easily. With fire-extinguishers they are very convenient, as the use of one will enable a person to carry an extinguisher into places where he could not otherwise go. It will greatly increase the value of the extinguishers, now so generally used. There are many uses to which it will be put. Persons living in hotels will keep them for their own safety, remembering that suffocation often causes death where escape would otherwise have been easy; for miners and others it will obviate danger from noxious gases; with it apiarists can have their bees without danger; and the ways indicated suggest but a tithe of those in which the "Protector" will prove beneficent in the salvation of life and property.

SHEEP-RAISING IN TEXAS.—Mr. T. L. Grigsby of Napa, started last week for Texas, where he goes in aid of establishing his sons in the sheep growing business. Their location is about one hundred and thirty miles from San Antonio. They start in with between five thousand and six thousand Mexican ewes, which they will cross with full blood Eastern rams of the Merino, South Down and Cotswold breeds. Mr. Grigsby will return to his home in Napa valley after seeing the business properly established. An old and constant subscriber to the *RURAL*, we wish him success.

YOUNG FOLKS' COLUMN.—It is our intention to give additional interest to our young folks' column, in succeeding numbers of the *RURAL*.

SMALL FRUITS.

Renewing Strawberry Beds.

In setting out strawberry beds, either for family or market, to come into bearing the next year, that is, about fifteen months after setting, we should certainly prefer to pursue the common practice of setting out single plants, of one season's growth. But there may be cases, where an old bed has become so unproductive as to render it impolitic to retain it another year, and yet to plow it under might leave the family without any supply for the current season. In such a case a resort to the method recommended by a correspondent of the *Garden* an English paper for a temporary supply, might be justified. But at the same time we would start another bed, with single plants, for the next year. We copy the plan of the Englishman:

Having read of a new method for forming strawberry beds, I thought I would try it, and it proved a great success. In previous years our crops have been very poor, considering the attention they have had; but this year, with the new method, we had abundance of fruit. The way in which I planted my bed is as follows: I did not cut any runners off the old bed, but allowed them to run into a mass. In the autumn I lined strips about 9 inches wide and 2 feet apart through its length, and put them in squares of 9 inches. These I took up with a spade at 3 inches deep. In the bed prepared for them I had trenches dug 2 foot apart, and placed the squares of strawberry roots in them at a distance of 18 inches from each other. The roots were not injured in the least, and the crop was excellent. I had the trenches that were made in the old bed filled with one part well-rotted manure and two parts stiff loam, and the bed was soon covered with plants. Thus by degrees you can renew the old bed as well as from new ones. Certainly with the old plan of only single roots we obtained finer specimens of fruit, but unless fruit for show is required, I advise every one to try the above plan for quantity, and they will not be disappointed. A market gardener near here, who grows large quantities of strawberries for sale, mows the tops off as soon as they have done fruiting, covers them up with longish manures, and rakes it off in the spring. This is rather rough treatment, but he always has an immense quantity of fruit.

Hybrid Raspberries.

Mr. W. Saunders, of London, Ontario, has been trying experiments in hybridizing the black and red raspberry. He thinks that he has succeeded in obtaining an undoubted cross between the Doolittle and Philadelphia which combines the qualities and habits of both. In a letter to the *Gardener's Monthly*, he says:

"I send you by mail samples of the fruit of the first one to ripen, which I think shows undoubted evidence of the blood of both parents. In habit and manner of growth all these seedlings resemble the Black-Cap, and they root from the tips although not so readily as the Black-Cap. The foliage shows some resemblance to that of the Philadelphia. The fruits of these seedlings will vary much in their period of ripening, some of them are not more than half grown. The fruit is of a dark red color, and seems to me, without doubt, to blend the flavor of the red raspberry with that of the Black-Cap. If you examine the receptacle on which the fruit sets, you will see that it is intermediate in form between that of the Black-Cap and Red Raspberry."

We have but little doubt that such crosses between the red and black raspberries are often effected without the aid of man. The new variety, called *Ganargua Hybrid* bears strong evidence of being such a hybrid, and if it is, must have been produced without the intervention of human aid. The great difficulty, in our opinion, lies in the fact that the offspring of such unions are generally inferior to both parents, whether they are chance hybrids or artificially produced.

PLANTING STRAWBERRY BEDS.—Mr. I. shells-well, in *Collage Gardener*, has tried the following method with great success: The way in which I planted my bed is as follows. I did not cut any runners off the old beds, but allowed them to run into a mass. In the autumn I line strips about nine inches wide and two feet apart through its length, and cut them in squares of nine inches. These I took up with a spade at three inches deep. In the bed

prepared for them I had trenches dug two feet apart, and placed the squares of strawberry roots in them, at a distance of eighteen inches from each other. The roots were not injured in the least, and the crop was excellent. I had the trenches that were made in the old bed filled with one part well-rotted manure and two parts stiff loam, and the bed was soon covered with plants. Thus, by degrees, you can renew the old bed as well as form new ones. Certainly with the old plan of planting single roots we obtained finer specimens of fruit, but unless fruit for show is required, I advise everyone to try the above plan for quantity, and they will not be disappointed.

CAN YOUR FRUIT.—We believe fruit ought to be the commonest, cheapest and most universally-used article of diet. It should be more general than bread, vegetables or meat; for it should be eaten with them all and at all meals; and in order that we may have a good variety of it though the year, the process of canning should begin when the first fruit ripens, and kept up through the fruit season.

A few cans of strawberries, gooseberries, currants, raspberries, cherries, blackberries, peaches, pears and plums, will afford a fruit luxury every day in the year. Those who have choice apples may can a portion and so preserve them through the year. To be canned, the fruit must be cooked and put up hot. Let the can be filled full when heated to the boiling point, and then sealed. The process is very simple with the self-sealed cans. They are filled and then sealed with a screw stopper, which screws in air-tight. —N. E. Homestead.

LEATHER BOARD.—Fish glues, or gelatines, are used to a very limited extent in the manufacture of those universally-used accessories to the production of cheap boots and shoes, commonly known as paste soles and heels. Of course in this, as in the boot and shoe business, the busiest season has gone by, but many hands are still employed in the conversion of the various refuse discarded by the tanners and curriers, and known as "paste roundings, shoulder splits, and skivings," into heels and soles of all kinds of boots and shoes. These materials are cleaned, damped, cut by dies, pasted into molds, compressed in a powerful press, and dried, and the refuse of this business in its turn is turned over to the manufacturer of what is known as "leather board." This smooth, hard, leather-lined material is largely used in the heels, inner soles, and for the inner stiffening of heels and box toes, and some twenty mills are engaged in its manufacture, turning out from one to five tons daily. About one-third of leather, with varying proportions of canvas, old rope, straw, and other "hard stock," is used in its composition. It is manufactured like straw board, which is itself extensively used, especially in cheap slippers and children's shoes, offered in any quantity to a discriminating public at ruinous prices. As many as eighty hands are kept busy in a single establishment in the manufacture of "paste heels," and the stamping of heels and soles from leather and straw board. —Boston Commercial Bulletin.

SECCHI ON SOLAR PROTUBERANCES.—At a meeting of the French Academy, on the 3rd ult., P. Secchi presented another of his valuable notes on the solar protuberances. It tabulates observations made during the six last rotations of the sun, from the 23d of April, to the 2d of October. These show a continual decrease in the eruptions throughout the period, and whereas in the early series of 1871, the number of eruptions was, on an average, fourteen or fifteen daily, with maxima of 20 to 23, and minima which rarely fell to ten, the recent rotations give an average of only eight to nine, with maxima of twelve, and minima of four or five. P. Secchi finds something like a diametrical distribution of protuberances; opposite parts corresponding. The metallic eruptions have been few and very intermittent, one on the 18th of September was very memorable, and gave rise to a group of spots. As regards direction of protuberances the law has not been so well marked, but it has always held good, that in high latitudes, the dominant direction is towards the poles, and in low, towards the equator; the change of direction being at about 40°. In periods of calm, there is a somewhat different system of direction from that in periods of activity. Dr. Rudolph Wolf has lately published an important series of sun-spot observations in various parts of Europe during 1872.

PROF. REYNOLDS, London, states that the rate of condensation of steam is in inverse proportion to the quantity of air it contains; that the only limit to the condensation of pure steam is the power of the surface to carry off the heat that mixing air with steam before use greatly diminishes the condensation at the surface of a cylinder, thus increasing the inefficiency of the engine; and that the maximum effect will be obtained when the pressure of the air is one-tenth that of the steam. But the Professor does not state whether the ratio has been exactly ascertained.

USEFUL INFORMATION.

Taking Impressions of Leaves.

Rub vermilion, ultramarine, chrome green, or their equivalents well up with castor-oil to a thick paste or kind of printing ink, then take thin strong paper and cover it very thinly with the paint thus obtained, by means of a stiff brush. It is well to do this on a warm stone slab, so as to be able to put the paint on thin enough; then put the back of the leaf of which you wish to take the impression on this paper, put another paper over it, and rub down. This causes the paint to adhere to the projecting parts of the leaves; place the leaf thus prepared with paint on the clean sheet of paper on which you wish to make the impression, place another clean paper over it, rub down, and you will be surprised how the markings of the leaves will be printed in detail. Lace does not take the printing-ink so well, and would besides be spoiled by it; but you can make an impression of it by placing it between two sheets of thin, smooth, and strong paper; place this on top of the sheet prepared with the color as described, and this again on the sheet to be printed upon. Then you may by rubbing down form a good impression on the lace, on the principle of the multiple writer. If your prepared paper dries the clean paper on which it lays, you have too much color on it, which you must remove by laying several times on it a clean sheet of paper, and rub. Observe that the operation requires a hard smooth table, or better, a stone slab, in order to obtain fine impressions. The above inks are indelible on paper. To make it indelible on cloth, which may be washed, rub some nitrate of silver in the black ink. If you want it to dry quick, you may mix some luscious oil with your castor oil, but then your prepared paper will not last so long, as this retains its efficacy only as long as the paint is not dried up. —Manufacturer and Builder.

HOW TO PAVE STREETS.—In Manchester, England, there is a street, subjected to heavier travel than any Philadelphia thoroughfare, that has not been repaved or repaired for twenty years, and yet it is in better condition than most of our newly paved streets. The process by which such good paving is secured has not been patented, and is, in fact, no more of a novelty than the process of laying foundations for a building. Although the streets of Manchester are not subjected to the sudden changes of temperature by which in this city the road bed is expanded and contracted until well-laid surface stones are thrown from their position, yet before this Manchester street was paved the natural earth was dug away to a depth of two feet. Upon this bottom, which was considered below the penetrating power of frost, a layer of small stones, and on that successive layers of stones, of different sizes, from that of a man's head to the size of a walnut, were spread and carefully compacted together. Upon this macadamized roadway cubical granite blocks were laid, with small interstices between each stone, into which small gravel stones were put and well rammed down. The whole street was then covered with asphaltum, making it as nearly as possible waterproof. Any water which should get below the surface or rise from below would find a course between the larger stones of the foundation. The first cost of preparing such a roadway would be proportionally heavy, but would in the end be much less than the cost of relaying the pavement every year or two, to say nothing of the inconvenience arising from the tearing up of roadways at frequent intervals. —Public Ledger.

PURIFICATION OF TALLOW AND LARD.—Dr. Dotch states that tallow and lard may be kept from getting rancid by the following process: The tallow or lard is first treated with carbonate of soda in the proportion of 2 pounds of soda to every 1,000 pounds of lard, and is then subjected to a digestion with alum in the following manner: 10 pounds of alum are dissolved in 500 pounds of water, and 1 pound slaked lime added to the solution and boiled. This solution is stirred well with 1,000 pounds of lard at a temperature of 150° or 200° Fah. for about half an hour. The liquor is then separated from the lard, and the lard is treated with the same amount of pure water again. This lard will keep for an exceedingly long time. The fact is that the alumina in the alum applied acts very readily in a disinfecting manner upon those compounds which are liable to give rise to rancidity. The lime is added to the alum in order to render the alumina more active by its giving up some of the acid to the lime. This treatment has also the advantages of restoring the original flavor and of producing a lard of a greater whiteness.

A NEW DESTROYER FOR THE HAIR.—Under the above title Dr. Boettger says that we possess a new material for destruction of hair, of a most suitable description, in a mixture of one part of crystallized sulphate of sodium, with three parts or fine carbonate of lime mixed and reduced to a very fine powder. This mixture may be kept any length of time without alteration in well closed bottles. When moistened with a drop of water and laid by means of the back of a knife on the part of the skin covered with hair, we see in a few minutes and find the thickest hair turned into a soft mass, easily removed by means of water. If it remain on the part long, it will cause a slight irritation of the skin.

Tests for Drinking Water.

In Breslau, the Government have taken some wise precautions to prevent the introduction and spread of cholera, and among these they strongly urge the chemical analysis of drinking water. The following tests are the most important, and quite easily applied: 1. Testing for ammonia with Nessler's solution. Fresenius prepares this reagent by dissolving 3.5 grams potassic iodide in 10 c. c. water, and afterwards dissolving 1.6 grams mercuric chloride (corrosive sublimate) in 30 c. c. water, then adding the latter solution to the former gradually, till a permanent precipitate is produced. Then add a solution of potash until the fluid measures 100 c. c., and filter. A few drops of this solution added to water containing ammonia gives a yellow or brown color. If only a slight turbidity is produced, or a white precipitate, it indicates a hard water, and is caused by carbonate of lime present. 2. Testing for nitrous acid. To 100 or 200 c. c. water are added 2 c. c. dilute sulphuric acid and freshly prepared starch paste, containing potassic iodide. If a blue color is produced at once, it is due to incomplete putrefaction. 3. Testing for nitric acid. To 25 c. c. of the water is added 50 c. c. pure concentrated sulphuric acid (60° B.), and, while still very warm, an extremely dilute indigo solution is allowed to drop into it. If the color of the indigo disappears immediately, even when repeatedly added, the water may be considered as suspicious, if not dangerous. —Artisan.

DEPILATION OF HIDES WITH CHARCOAL.—Andersen discovered that pulverized charcoal applied to sheepskins produces the depilation of the hair. Charcoal, as is well known, has the property to take up large quantities of oxygen from the atmospheric air, and the oxygen in this form seems to exert a chemical influence on the fatty substance present in the neighborhood of the glands of the hair roots. An oxidation takes place in the pores of the skin, which destroys the glands and loosens the hair. Finely powdered charcoal is mixed with sufficient water to make a thin paste, and the hides immersed for 4 or 5 days and well turned over in the meantime, when the hair can be taken off at once. Hides treated with charcoal do not require further treatment, as is the case now with the lime process; and after being washed with water, they are ready for tanning. This will be a great advantage to the tanning trade, as leather treated in this way possesses more toughness, solidity, and flexibility. The other advantages of this treatment are great saving in time and labor, each hide weighs ½ to 1 pound more, and has less spots, the work is more pleasant and healthy, the splitting with the machine is more easily accomplished, and the cost price is the same as with lime, as the charcoal can be used over again. Animal or vegetable coal can be used in any quantity, having no deleterious property whatsoever; and for each hide 6 or 10 pounds, with the necessary quantity of water, are sufficient. The temperature should be 61° or 70° Fah., and can easily be maintained by introducing steam into the vats. The tanning process is facilitated, as no lime is left behind to neutralize the tannic acid.

BRONZINO IRON.—To one pint of methylated finish, add four ounces of gum shellac and half an ounce of gum benzoin, put the bottle in a warm place and shake occasionally. When the gum is dissolved, let it stand in a cool place two or three days to settle, then pour off the clear into another bottle; cork it well, and keep for finest work. The sediment left in the first bottle, by adding a sufficient quantity of spirit to make it workable, will do for the first coat or coarser work when strained through a fine cloth. Next get half a pound of finely ground bronze green, the shade of which may be varied by using a little lampblack and red or yellow ochre. Let the iron be clean and smooth, then take as much varnish as may be required, and add to the green color in sufficient quantity. Slightly warm the article to be bronzed, and lay a thin coating over it with a soft brush; when that is dry, if necessary, lay another coat on and repeat until well covered. Take a small quantity of varnish and touch the prominent parts with it, and before it is dry, lay on a small quantity of gold powder with a dry pencil, after which varnish all over. —Spon's Workshop Receipts.

COLORING STARCH.—To impart a temporary color to light tissues a German chemist proposes mixing a coloring matter with the starch in "doing them up." If a red shade is desired, take three parts of magenta and twenty of glycerine. The magenta is rubbed down in a mortar with a little water, and the glycerine added by degrees. Well pulverized starch is then thoroughly incorporated with the color in greater or smaller quantity, according as a pale or deep shade is desired, and the mass is allowed to dry in the air upon a piece of unsized paper. It is then applied to the tissues precisely in the same way as common starch. If a blue, violet, or green shade is desired, suitable colors are substituted for the magenta. Great care should be taken never to use any arsenical green colors in this way, as the dust of the highly poisonous material, becoming detached, may occasion serious mischief.

CEMENT FOR MEERSCHAUM.—Make fine freshly calcined plaster of Paris into a cream with water, by sifting or dusting the plaster into the water, and apply as a cement to the broken parts. It sets in a few minutes, but takes a few days to become dry. It is fire-proof.

THE ORCHARD.

Manure for Fruit Trees.

It is clear that animal manures are not what is wanted for fruit trees, including grape-vines, berries, etc. There may be benefit, and usually is at first, but the quality of the fruit will suffer, and the wood and foliage are not of that healthy character which is desired. This has been noticed by Liebig and others. We have known prolific grape-vines to bear more fruit, but at an expense of quality, where the contents of the privy were freely used for manuring. We have always found the best success when the leaves, the weedings of the garden, chip-manure and forest mould, either singly or combined, have been freely applied. These seem to contain the different materials in proper proportion, that is, the organic, the carbonaceous, and nitrogenous, the mineral needs to be supplied, and nothing does this so satisfactorily as wood ashes. It supplies largely potash, which is needed. The best success, and it has been fully achieved, which we ever attained, was by applying a coat of leaves in the fall, worked into the soil in the spring, followed by weedings from the garden, clippings of the vine with other vegetable refuse, as a mulch, sprinkled over with wood ashes, leaching or unleaching; if the latter, more were required. This made a healthy, not excessive growth, and increased both in quality and quantity of the fruit. It makes a sounder and better keeping fruit. This was a variety of soils, but particularly a clay soil. There should be a good drainage and exposure to air, or else with a green mulch kept moist by the ashes there might be too much humidity. For grapes this will not do. Nor will it for fruit trees if there is a close, heavy top, reaching well down, holding thus the moisture which evaporates, and inviting parasitic lodgments, which will appear in masses, mildew, rusted fruit, etc. Herbaceous material and ashes, with occasional bone-dust, we have found the best application for fruit trees in general, for berries and for the grape. Apply yearly where the soil is not rich; and in the spring when the ground is dry enough to spade it well. Use sparingly, if any, the strong, nitrogenous manures.—*Ulica Herald.*

Ashes in the Orchard

D. W. Kauffman of Des Moines, Iowa, writes to the *Iowa Homestead* that ashes are worth one dollar per bushel to put about fruit trees, and that he would not sell his ashes at that price and do without their use in the orchard. He has used ashes about fruit trees for fifteen years, and during that time has never seen a borer where ashes were used. The borer is a terrible pest to the fruit grower, and if all other impediments to successful growing were as easily overcome and completely controlled as the borer, then fruit-growing would be very successfully practiced. At the recent meeting of the Fruit Growers' Association of Ontario, Mr. Moodie stated that he had been in the habit of using unleached ashes as a manure for his fruit trees, and that he values them more highly for this purpose than barn yard manure. If our farmers knew the value of wood ashes for the garden, orchard and farm, they would not sell them for a few cents per bushel. The ashes that they barter for a few pounds of soap, would, if applied to the soil, so increase their crops of fruit and grain as to yield ten times the value they now get for them.—*Canada Farmer.*

BEATRICE PEACH.—We have not heard of this peach being yet introduced to California. It would doubtless be a valuable acquisition to our list of very early peaches. It stands at the head of early peaches in the Southern States.

Encaustic & Geometrical Tiles.

BEAUTIFUL DESIGNS.

Reproduction of Ancient Work.

IMPERISHABLE PAVEMENTS

—FOR—

CHURCHES, INSTITUTIONS, HALLS, SCHOOLS, CONSERVATORIES, CORRIDORS, CLUBS, VESTIBULES, DAIRIES, ETC.

Suitable for All Climates.

Manufactured of the celebrated Jackfield and Broseley Clays, and arranged in the most beautiful patterns.

GLAZED HEARTH TILES. WALL AND BATH TILES.

Designs and Estimates on application to

CRAVEN, DUNNILL & CO., (Limited),

JACKFIELD WORKS, NEAR IRONBRIDGE, SHROPSHIRE, ENGLAND. ja17-6t

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street, (Rue House Block), San Francisco. Wholesale and retail dealer in Mens', Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods; also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of Stoves and Metals, Tanners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission St., S. F. C. H. Gruenhausen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Oshmann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Trademen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GEESE,

58 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List. The *Poultry Bulletin*, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address: M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage. 3v7-3m-16p-sp

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.
San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,

Subscribed, \$3,000,000. Paid in, \$1,500,000.

Remainder subject to call.

DIRECTORS IN LONDON.—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Schofield, Isaac Seligman, Julius Sington.

MANAGERS:

R. G. SNEATH and IGNATIUS STEINHART, SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v7t-cowbp

SAN FRANCISCO

Pioneer Screen Works,

John W. Quick, Manufacturer,

203 FREMONT ST., (near Howard) SAN FRANCISCO.

Screen Punching of all kinds and qualities for

QUARTZ AND FLOUR MILLS,

AT EASTERN RATES.

I would call special attention to my slot cut and slot punched screens, which are attracting much attention and giving universal satisfaction. I was the first manufacturer who introduced these Screens to the Millmen on this Coast. This is the only establishment on the Coast devoted entirely to the manufacture of Screens.

Mill Owners using battery Screens extensively can contract for large supplies at favorable rates.

Orders solicited and promptly attended to. 2v7ns-cow-ly

CALIFORNIA LAND AGENCY.

Will attend to the Location, Purchase and Sale of Lands and Farms, the Examination of Titles, and the Payment of Taxes.

1,000,000 Acres of well selected Lands in California, Oregon, and Washington Territory for sale. Also, buy and sell property in the city and vicinity.

W. M. BRANDON.

20v6-1y-16p 535 California street, San Francisco.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to ELWOOD COOPER, President Board of Directors. 22v6-ly

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO.

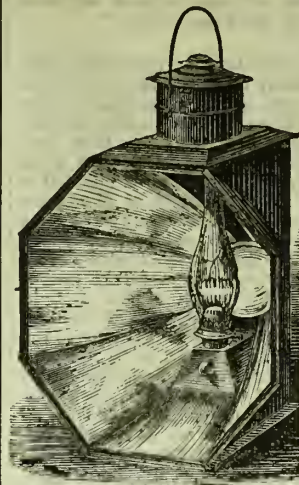
21v2-1y

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F. de27-1f

PACIFIC LAMP MANUFACTORY.



EMILE BOESCH, PATENTEE AND MANUFACTURER OF LAMPS, LANTERNS AND REFLECTORS, 802 MONTGOMERY STREET SAN FRANCISCO.

New Mining & Mill Lights.

21v27-cow-3m

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily operated Sewing Machine in the market.

Always in order and ready for work.

In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m

Grand Hotel Building, S. F.

SAN JOSE INSTITUTE

— AND —

Business College.

A Day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department

Is under the supervision of James Vinsonholler, who for many years was at the head of Business Colleges of San Francisco.

The Twenty-fourth Session commences January 19th, 1874.

For circulars address

3v7-2m

JAMES VINSONHALLER.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.



M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California.

ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS.

7v6-1f-16p2

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,

San Francisco.

SEEDS!

SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,

ENGLISH RYE GRASS,

RED TOP,

ORCHARD GRASS,

TIMOTHY,

MESQUIT,

RED CLOVER,

WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street.....San Francisco,

WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE and RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE.

BULB CATALOGUE new ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th. R. J. TRUMBULL, 15v6-6m-16p 427 Sansome st., San Francisco.

Improve Your Poultry.

It Costs No More to Keep Good Fowls than Poor Ones!



SEND STAMP FOR ILLUSTRATED CIRCULAR

Containing a full description of all the best known and most profitable Fowls in the country to

GEORGE B. BAYLEY.

Importer and Breeder of Blooded Fowls, and agent for the *POULTRY WORLD*, a monthly magazine devoted entirely to Poultry—tells how to keep Fowls for pleasure and PROFIT. Subscription only \$1.25 per year.

Address GEO. B. BAYLEY,

ja24-1f

Box 659, San Francisco.

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100,000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 21v6-1f

DR. ABORN, OCUList.

AURIST.

Catarrh, Throat and Lung Physician.

The Most Difficult Cases are invited to call.

Offices and Laboratory, 213 Geary street.

Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M.

21v6-3m-16p

AGRICULTURAL NOTES.

AMADOR.

FRESH GRAPES.—*Dispatch*, Jan. 24: We were somewhat agreeably surprised last Wednesday, the 21st inst., upon being presented with several bunches of nice, fresh grapes, by Mr. C. J. Ruffner, who lives about two miles from town, and upon whose ranch they were raised. The grapes were as solid and fresh and as delicately flavored, and the stems were as green as if they had just been plucked from the vine in the middle of August. Mr. R. would not explain the process by which he preserved the freshness of the grapes, but he informed us that he had 800 pounds put away, and was perfectly confident that he would be able to keep them perfectly fresh through the entire winter, and until the next crop of grapes were ready for the market, and from the sample shown us we are confident that he is not mistaken. Should his experiment prove successful—as it undoubtedly will—we may expect to see our fruit stands, in future, adorned with fresh grapes all the year round.

CONTRA COSTA.

COST OF VINES PER ACRE.—*Gazette*, Jan. 24: At a late meeting of the Sonoma Vinicultural Society, statements of the cost per acre and the yield of vines were made by several of the members in accordance with an invitation by resolution of the Society at a previous meeting, and the result is thus reported by the Secretary:

Attella Haraszthy, \$224.50 per acre without staking or cost of stakes, for a four-year old vineyard.

Mr. McPherson Hill, that every acre of his vineyard costs \$300 at four year old without the value of the land.

Wm. Hood stated that his vineyard cost per acre \$225 without the value of the land.

Leonard Goss stated that the cost of his vineyard per acre was \$195.62, with no cost for draining or clearing land, or removing stumps; the land having been cleared and cultivated when bought.

Mr. Craig stated that his vineyard cost more than the estimate made per acre by Major Snyder \$225.

Mr. Goss said that the estimate made by Major Snyder was below rather than above the actual cost, as stated by him.

Mr. Haraszthy reports the average quantity of grapes per vine on his land was 8 pounds.

Mr. Craig reports his vineyard producing 8 pounds per vine on an average.

Mr. Hood reports 8 pounds per vine as the produce of his vineyard.

Mr. Hill gave 10 pounds per vine as the average of his vineyard.

Major Snyder gave the average of his at 8 pounds per vine, and upon that his estimate was based.

COLUSA.

DAM GONE.—*Colusa Sun*, Jan. 24: About four o'clock on Monday evening, while the water in the basin above the dam was yet rising, the celebrated Parks-Roberts dam gave way at the flood-gate, just the other side of Butte Creek. This, in all probability, settles the plan of reclamation. The water at Colusa was about four inches above ordinary high water, but the rise had not been of sufficient duration to fill up the basin above it, and as a consequence the maximum strain upon it had not been reached when it gave way. The river fell at Colusa about a foot during the night. A full force of men were working on the dam when it gave way. It is said that about fifty yards of it moved bodily out, and was carried down several hundred feet before it went out of sight. There had been much damage done on the east side of the river before it went out, and had it not gone off itself, it would have been cut by the citizens next day. The washing away of the dam was fully as opportune as the sinking of the Virginias, and will save a vast amount of trouble. If any further attempts are made at the reclamation of the lands in the district, it will be by means of a levee from the head of the overflow, and if the river will not then carry all the water, the canal system can be added. We take no pleasure in the destruction of property or the thwarting of legitimate enterprises, but we are glad our citizens were saved the trouble of cutting it, and the endless litigation that would have followed such an act.

HIGH WATER.—The water at Colusa on Monday evening was about four inches higher than it had ever been before. The different high water marks around the town front have been somewhat disturbed, but at Scoggins' place there was a stump which marked former high water, and which showed some four inches greater flood now. The back water on the east side of the river ran higher in three days than it had on former occasions with three weeks of high water in the river.

LARGE FARM.—*Enterprise*, Jan. 16: "H. J. Glenn, an enterprising farmer of Colusa county, will put in on his little farm, near San Jacinto, this year, 40,000 acres in wheat, from which we make the following estimate: At 25 bushels per acre—which is not a high estimate for the prospect of the present season—the yield will be 1,000,000 bushels, or 60,000,000 pounds. At 137 pounds to the sack, it will require 430,000 sacks. At 300 tons per barge load, on the Sacramento river, it will take one steamer two years to deliver it in San Francisco, allowing one trip per week, and will take 20 ships, of 1,300 tons each, to deliver it in England. But the most important calculation still remains to be made, especially to Mr. Glenn, and

that is, the calculation of the net profit accruing from the 1,000,000 bushels that it will bring him on the ranch, at \$1 per bushel."

EL DORADO.

STORM.—*Democrat*, Jan. 24: The storm which set in on Wednesday night of last week and has continued with slight intermissions ever since, has rarely been equalled in this section. During the night of Thursday, the 15th, and Friday, the 16th, the wind blew with great violence. On Friday afternoon the rain fell in torrents. The classic waters of Hangtown creek, in which no iron horse has yet bathed fiery nostrils, flowed in river-like proportions and with arrow-like speed. On Tuesday evening, the 20th inst., there was a lovely fall of light, dry snow, to the depth of six or eight inches, and during the greater part of Wednesday many of our beaux and belles enjoyed the luxury of snowballing to their hearts' content. Our people are joyous, for all this gives assurance of abundance of water and a prosperous season for miners and ranchers. For both of these industries the season seems more prosperous than any with which this State has been blessed since its settlement by our people. Every glimpse of fair weather has been availed of by prospectors, which has led to numerous finds of surface gold, and armfuls and backloads of handsome "float" quartz are frequent sights. In its present effects and probable future consequences this has been a glorious storm.

LAKE.

THE LAKE.—*Bee*, Jan. 22: Engineer Middleton informs us that the lake has risen 4 feet 9 inches above low water mark, and is still rising.

WORSE THAN EVER.—Since our last issue, we have had the hardest storm of the season. During the latter part of last week, it came down in torrents accompanied with high winds—driving the rain into every unguarded crevice, washing out the roads, knocking down fences, etc. The streams are now higher than at any other time this winter. Scott's Creek was reported higher than ever known before. McCracken, on his last trip, found many of the bridges floating and the water in places high enough to rise several inches into the coach bed. The mail, of course, was perfectly saturated and had to be laid out to dry, before it could be distributed.

MARIN.

Journal, Jan. 22: The weather is still an oppressive subject, but for the sake of our non-resident readers we devote this paragraph to it. It is damp all the time, and wet almost all of it. So emphatically is rain king this winter, that a clear sky and a bright sunshine are no security against it. If the sun is directly overhead, and shining down from a clear sky, a strong wind is sure to come up and blow the rain under from a cloud on the side; and if the sun has passed the meridian, and is slanting its coveted rays down upon us, overhead comes an envious cloud, and pours out its unwelcome contents. Rain, mist, drizzle, showers of hail, torrents of water, tempests of wind and rain prevail. A sou'-easter of great violence prevailed on Thursday and Friday of last week, but it has done no damage to speak of. Here and there a rickety shutter skeddaddled, and in many instances the moisture nestled persuasively into albums and gift books, or stole under carpets through bay windows looking south. These sou'-easters are so insinuating. The rainfall has been excessive, and the season so far unpleasant. Indeed we have had one storm which commenced the week after Thanksgiving, and ended—well, if we live till it ends we will tell it. But it is a good season nevertheless. The amount of rain that has fallen this week, ending yesterday morning, is 6.48 inches, and the total amount for the season 28.31 inches.

MARIPOSA.

Snow.—*Gazette*, June 23: A succession of snow squalls encircled Mount Bullion all day Wednesday, and finally appeared to unite their forces for a raid on the surrounding country. There was about four inches of snow in Mariposa yesterday morning.

MENDOCINO.

SHEEP DYING.—By note received from Ukiah, Jan. 24th, we are informed that sheep are dying of cold and storm. Thermometer on the 19th 27°. Roads bad.

Sheep don't usually die of cold and storm if they have enough of good food. Are not the farmers of Mendocino Co. starving their sheep to death?—[Eds. Press.]

MERCED.

FROST.—*Tribune* Jan. 24: Friday morning last, we experienced the heaviest frost of the season. It almost rose to the dignity of a snow storm, thickly coating every object exposed during Thursday night, or rather Friday morning.

MONTEREY.

THE SEASON.—*Enterprise*, Jan. 24: The season thus far, in this section, is admitted by the "oldest inhabitant" to be the most favorable of any in its history, at least so far as the memory of the oldest American citizen runneth not to the contrary. Rain in abundance has fallen to saturate the ground thoroughly; not fierce storms and accompanying freshets, but mild, soaking, warm showers, which have caused vegetation to spring up all over the surface of the country, falling at convenient intervals, scarcely interfering with seeding or out-door work in any degree. So favorable has it been that the large majority of the land is already plowed and much of it sown in grain. This month will perhaps witness the last of the

seeding in this valley, and a far larger area of grain will have been put in than ever before. The last rain, which fell in the fore part of this week, was the heaviest as well as the coldest of the season. The summits of the Gavilan mountains and Coast Range, were dressed Wednesday in heavy mantles of snow. The rain-fall this season thus far, in this locality, will exceed six inches.

Advance, Jan. 24: We learn that one of the young Butterfields, of the firm of Butterfield & Son, was to leave yesterday in the D. C. Murray for Honolulu with a fine stock of first-class goats, that enterprising firm having taken a joint interest with the owner of a tract of 17,000 acres of land in Hawaii for the purpose of breeding goats and sheep of superior class. This is a noticeable fact in the progress of the times, and the active part taken by Messrs. Butterfield & Son in this specialty of producing the finest grades of wool. The Hawaiian Islands are a promising field for this enterprise and cannot fail to benefit by such a movement.

NAPA.

FAIR WEATHER.—*Reporter*, Jan. 24: At last we may look for a fair spell of weather, and our farmers and vine growers may return to the occupations which the late storms for some time interrupted. Wheat that has been sown is already up, and the hay land looks green and fresh.

WILD PIGEONS.—We understand that the fields are full of these pests to the farmer, and that they are eating up what little wheat is yet uncovered on Napa farms. Parties are out after them and their numbers from the array of shot-guns they have with them will soon be less.

NEVADA.

WEATHER.—*Union*, Jan. 21: The waterfall for 24 hours ending yesterday afternoon at 4 o'clock was nineteen one-hundredths of an inch. That moisture came down in the shape of snow, but was measured as water by Mr. Loutzenheiser. At the same hour the thermometer was at the freezing point. The barometer indicates fair weather and plenty of sunshine all through today. The snow will soon disappear from off the ground, so that a fellow can walk home at night without slipping two steps back to every one he takes forward. The new moon last night appeared full-breasted in an unclouded sky.

SACRAMENTO.

SEEDING.—*Telegraph*, Jan. 24: While we have glowing accounts as to the prospects of the wheat crop in some other parts of the State, it is to be regretted that the outlook at present, in this immediate region, is not over-flattering. Most of our farmers summer-fallowed, but the ground was so hard, dry and lumpy, that the grain, when sown, could not be properly harrowed in. Hence those who sowed before the rains, lost most of the seed, part not being sufficiently covered to germinate, and part being devoured by birds. While, since the rains set in, they have been so incessant and have so completely flooded the ground, that it has not been practicable to sow a great deal, and even part of that has rotted, in consequence of the excessive cold and dampness of the soil. But it is not yet too late for hope. Should the rains soon hold up long enough to allow our farmers a chance to sow a large breadth of spring wheat, they may yet be blessed with an abundant harvest.

SAN BERNARDINO.

WHEAT.—*Argus*, Jan. 22: Stalks of wheat, measuring three feet high, nicely headed out, and almost ready for harvest, were brought in to our office yesterday. It was raised in the valley. "Pass the buck." Ante up.

SAN JOAQUIN.

WEST OF THE SAN JOAQUIN—CROPS.—*Independent*, January 24th: Farmers residing on the west side of the San Joaquin, in this county, inform us that the prospect for crops was never more favorable. The soil is sufficiently moistened for the present and everything in the agricultural line is lovely.

TERRIFIC STORM IN THE MOUNTAINS.—Parties who came down from Tuolumne, report that a fearful storm of rain, accompanied with wind, visited Sonora, Jamestown and vicinity. It extended as far as Knight's Ferry, Stanislaus county. Thorin fell almost in a solid volume, and seemed more like a cloud-burst than an ordinary storm. In some instances people became so frightened that they rushed out of doors.

A BEET weighing forty-seven pounds, is on exhibition at the store of Shippee, McKee, & Co., Odd Fellows' building. It was produced on the farm of Mr. Kuhl, a few miles from the city.

SAN LUIS OBISPO.

Tribune, January 24th: Weather cold and clear during the last few days, but rainy during the fore part of the week. All the gang-plows are hard at work, and farmers are all as busy as bees. Vive la Grange!

SANTA BARBARA.

COTTON.—*Press*, Jan. 17: We received a small box of cotton bolls to-day (Thursday) from Mr. John P. Walker, of Carpinteria. This cotton was raised on Mr. Walker's place, and as an experiment, fully demonstrates that a new industry can be established in Southern California. These bolls, while not as large as some we have seen elsewhere, contain just as fine cotton. Those who desire to see this product of our wonderful soil may call at the Press office.

SOLANO.

Chronicle, Jan. 24: The high tide of the other day, together with the rains, have flooded the

country around Suisun; the water standing around the Court house in considerable quantities.

It is stated that the Sacramento river at Colusa, on Saturday, was within two inches of the highest water mark.

SONOMA.

WHEAT YIELD.—*Democrat*, Jan. 24: The land surrounding Santa Rosa is unsurpassed as farming land in this or any other State. We have often claimed it and will give a further proof. On the farm of the late Jacob Smith, immediately adjoining the town, 48 bushels of wheat to the acre was harvested last season, from forty acres. After the ninth of March but one light shower fell upon it. Everybody cannot do it. Mr. Smith had studied closely the climate and capacity for production of the soil in California. He possessed the faculty of utilizing the experience gathered by his naturally quick and active mind.

STANISLAUS.

Snow.—*News*, Jan. 23: The foot hills of both the Sierra and Coast ranges of mountains were white with snow last Monday, consequently the atmosphere was chilly and disagreeable.

HIGH WATER.—The San Joaquin river was higher last Tuesday than it has been the present year. In many places it was out of its banks. Thus far, however, we have heard of no damage to live stock or property.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Jan. 27, 1874.

FOR WEEK ENDING JAN. 13th, 1874.

PUMP.—Edward J. Delaney, S. F., Cal.

BRIDGE TRUSS.—Benjamin F. Graham, San José, Cal.

BUCKET FOR WINDLASS WATER ELEVATOR.—John P. Christensen, San Diego, Cal.

MITERING MACHINE.—John H. Rowland, Denver, Colorado.

DENTAL PLUGGER.—George H. Chance, Salem, Oregon.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

Note.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with greater security and in much less time than by any other agency.

IMPORTANT!

I have for sale an imported Kentucky-English Berkshire Boar; is now two years old, weighs some 350 pounds, lean; is strong and vigorous. Has proved himself a super-excellent stock setter. Is to be sold for want of use. Will be sold for \$50; is richly worth \$100, and would cost that, or more, in Kentucky. PETER SAGE. N. B.—Was sired by "Old Bob Lee," who cost \$100 in England (a pig), and is the Prize Boar of Kentucky. Full written guaranteed pedigree. His dam was imported also. P. S.—At Cosmopolitan Hotel. Jan 31-74

AGENTS WANTED FOR MONOPOLIES AND THE PEOPLE.

Being a full and authentic account of the struggles of the American Farmers against the extortions of the Railroad Companies, with a history of the rise and progress of the Order of Patrons of Husbandry; its objects and prospects. It sells at sight. Send for specimen pages and terms to Agents, and see why it sells faster than any other book. Address, A. L. BANCROFT & CO., 721 Market St., S. F. Jan 31-74

FOR SALE OR TRADE,

689 acres fine farming or grazing land, with frontage of three-quarters of a mile, on a fine stream of water. Located in Shasta valley, Siskiyou county, within three miles of a large town. Commanding a back range of from 50,000 to 60,000 acres, well adapted to sheep or cattle. Will sell for cash, or trade for city property, or a small improved farm in any of the bay counties. Apply to McLAREN, JONES & CO., 605 Clay Street, Room 10, S. F. Jan 31-74

DAIRY PRODUCE DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE, P. O. H.

414 & 416 Sansome St., Cor. Commercial, SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Farm, Dairy and Orchard Produce, except live stock and vegetables.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current.

ALL SALES GUARANTEED.

Jan 31-74

429 Montgomery street, San Francisco. 2V1-64

AGRICULTURAL ARTICLES.

THE "VICTOR" GANG PLOWS IS THE BEST.

His Patent, with all improvements to '73, and with "JONES" Plow Bottoms, the "VICTOR" is the best GANG PLOW in the world. It is simple, strong and durable, and does its work effectually. Don't fail to see it before buying. Price, \$75. Sold only by TREADWELL & CO., San Francisco. Send for circulars. We have also a large stock of Single Plows, including the "JONES," COLLINS, Boston Clipper, Peoria, etc., etc. Cultivators, Harrows, Seed Sowers, Drills, etc., etc. TREADWELL & CO., San Francisco. 16v6-3m

MATTESON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m MATTESON & WILLIAMSON, Stockton, Cal.

C. CREGO. S. O. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkeys, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship. We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:
C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, 24v5-3m San Francisco.

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS, PIECE MILK-PANS,

STRAINER PAILS,

CREAM PAILS, MILK PAILS,

ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m SAN FRANCISCO.

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it. WILLIAMS & MOORE, Proprs. 8v7-3m Stockton, Cal.

DIVIDEND NOTICE.

SAVINGS AND LOAN SOCIETY, 619 CLAY STREET. At a meeting of the Board of Directors, held January 6th, 1874, a dividend was declared, free of Federal Tax, of nine (9) per cent. per annum on all deposits, for the six months ending December 31st, 1873, payable on and after the 15th instant. CYRUS W. CARMANY, Cashier. ja10-hp-2w



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the

THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

3v6-3m

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

HIGHEST HONORS AWARDED TO THE WEEB SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

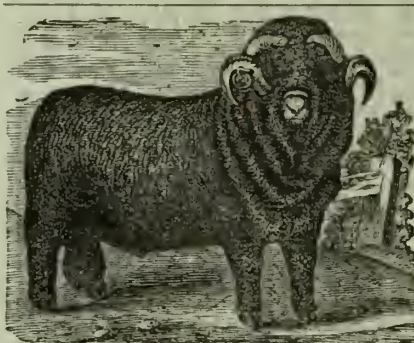
Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centreville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.

12v5-3m



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.

Address N. GILMORE, El Dorado, El Dorado County, Cal.

Fine Grade

SPANISH MERINO SHEEP.

25,000 head are now owned by this association, and we are in constant communication with parties all over this State, who buy and sell SHEEP and SHEEP RANGES. Parties wishing to purchase or sell are invited to call at the office of the San Joaquin Valley Wool Growers' Association, 15 Stevenson's building, 331 Montgomery street, San Francisco. ja10-1m

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,

Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, imported last year, and bought of Hammond.

J. H. DODGE.

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal. ja24-1f

CYRUS JONES. GEN. GILES A. SMITH. L. H. HICKS.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Duchesne, Rose of Sharon, Booths, Miss Wilkes, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara avenue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO.,

San Jose, Cal.

2v7-3m

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull, "DANDY JIM."

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured. 4v7-3m

WAKELEE'S

SQUIRREL EXTERMINATOR.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time. The squirrels die in their holes from its effects.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is scented so that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger of fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed.

3v7-3m

SQUIRRELS.

For Game Traps, none are better than the

"Newhouse Traps,"

Nos. 1 and 1½ being the best sizes for Squirrels.

For sale by CONROY, O'CONNOR & CO.,

Nos. 167 and 169 Front street, San Francisco.

19v6-ow-3m

100 AGENTS WANTED.

\$5 to \$25 per day, selling the attractive little "C.O.'s Washers." Great inducements offered. Send for Circulars. Address, 20v6-3m G. E. CODDING, Petaluma, Cal.

LANDS & HOMES FOR SALE

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho.

Apply to

ALFRED ROBINSON, Trustee. 642 MARKET STREET, N. E. corner of Montgomery.

BIBBINS & CO.,

LAND EXCHANGE,

402 Kearny street.....San Francisco. (SUCCESSORS TO BRANDON & BIBBINS.)

Deal extensively in Country Property.

WANTED—FARMS TO SELL AND LEASE.

FOR SALE:

Farms, Grazing Lands and Tule Lands 5v5-1y Throughout the Coast.

FOR SALE.

A Well Improved Farm of 160 Acres,

FIVE & A HALF MILES FROM SACRAMENTO.

The improvements include two Dwelling Houses, large Barn, Blacksmith and Carpenter Shops, Tool Shed, Poultry Houses, a good sized Orchard and a Vineyard of 20 acres; most of the vines produced grapes the past season. For terms, apply to ja17-1m L. UPSON, Sacramento.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP.

On Gift Map 4.

Forming about half of a block fronting on the broad ship channel of Islais Creek, will be sold as low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

Valuable Dairy and Grain Ranch

FOR SALE,

In San Mateo County, comprising 900 acres, 400 acres under cultivation, and all well watered and substantially improved. Inquire of

20v6-3m JOS. W. JORDAN,

N. E. cor. Clay and Front sts., San Francisco.

A RANCH OF 160 ACRES.

With Barn and House, thirty or forty tons of hay, and with all the necessary farming implements, to be let for a term of years, either by the acre or on shares; situated between Midway Station and Moore's Landing, 2½ miles from either place. For particulars, enquire of CHAS. ALPHEUS, 23 Bush street, at 1 P. M. 1v7-2m

Friel's Patent Paragon Vapor Stove.

PATENT GRANTED MAY 20, 1873.

The Great Labor Saver of the Household.

ECONOMY, CONVENIENCE AND SAFETY COMBINED.

JUST THINK OF IT—

No Wood, no Coal, no Coal Gas, no Stove Pipe, no Chimney, no Smoke, no Ashes, no Dirt, no Wood Boxes, no Coal Scuttles, no Kindling Wood, but a Friction Match, and the FIRE IN FULL BLAST IN HALF A MINUTE.

Oven Hot in Two

Minutes.

Steak broiled in seven

minutes! Baked Beans in

thirty minutes! The fire

extinguished in a moment

and the house unheated!

It has no rival in all

kinds of Cooking and Flat

iron Heating, and com-

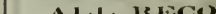
bine Economy, Conven-

ience, Neatness, Safety

and Durability! The La-

diest welcome it; a little

Child can operate it, and



ALL RECOMMEND IT.

Prices from \$5 to \$25, according to size. Manufactured and sold by

WM. FRIEL, 69 and 71 Fourth street, San Francisco.

N. B.—Agents wanted in every town in the State. On

payment of \$5 one Stove will be sent as sample. 5v6-3m-2am

San Francisco Cordage Company.

Established 1856.

We have just added a large amount of new machinery of the latest and most improved kind, and are again prepared to fill orders for Rope of any special lengths and sizes. Constantly on hand a large stock of Manila Rope, all sizes; Tanned Manila Rope; Hay Rope; Whale Line, etc., etc.

TUBBS & CO.,

de20 611 and 613 Front street, San Francisco.

Horse Clipping—Price, \$6 per Horse.

Our friends and patrons are hereby notified that we are prepared with the Best Horse CLIPPING MACHINES in the country to do and guarantee first-class work.

20v6-3m PRINCE & CHANTRY,

Norfolk Stables, Cor. Ellis and Mason, S. F. PURCHASERS please say advertised in Pacific Rural Press.

NURSERY NOTICES.

ESTABLISHED 1853.

Stock for Nurserymen and Florists.

TERMS CASH.

Cherry Seedlings—Mazzard.....	\$12 per 1000
“ —Mahaleb.....	20 per 1000
Apple Seedlings.....	12 per 1000
Pear Seedlings.....	15 per 1000
Walnuts, English, 4 to 6 ft.....	15 per 100
“ California bl'k, 4 to 6 ft.....	15 per 100
Spanish Chestnuts, 6 to 12 in.....	15 per 100
Cork Elm, 4 to 6 ft.....	15 per 100
“ 6 to 8 ft.....	20 per 100
Blue Gums, or Eucalyptus, in variety..	\$3 to 10 per 100
Magnolia, Grandiflora, 3 to 5 in.....	3 per doz.
“ 6 to 12 in.....	6 per doz.
“ 12 to 18 in.....	12 per doz.
Golden Arborvita, 8 to 12 in.....	6 per doz.
“ 12 to 18 in.....	6 per doz.
Heath-leaved Arborvita, 12 to 18 in.....	2.50 per doz.
Crataegus Arbores, 12 to 18 in.....	2.50 per doz.
“ 2 to 4 ft.....	6.00 per doz.
Enonymous Reptans, Variegata.....	2.50 per 100
“ Pulchella.....	2.50 per 100
“ Argentea Marginala.....	3.00 per doz.
“ Japonica.....	3.00 per doz.
“ Aurea.....	3.00 per doz.
Swedish Juniper, 12 to 18 in.....	3.00 per doz.
Heath, Mediterranean “Hardy”.....	2.50 per doz.

Will only sell in quantity specified at these prices. If less, 10 per cent. added; if more, 10 per cent. discount.

BERNARD S. FOX,
San Jose, Cal.

Fruit Trees! Fruit Trees!

AND WHERE TO PURCHASE THEM.

The Santa Clara Valley Agricultural Society has awarded:

Largest collection of Pears, first premium....	B. S. Fox.
Best twelve varieties of Pears.....	B. S. Fox.
Largest collection of Apples.....	B. S. Fox.
Best twelve varieties of Apples.....	B. S. Fox.
Best collection of Plums.....	B. S. Fox.
Largest collection of Nuts.....	B. S. Fox.
Best soft-shelled Almonds (Languedoc).....	B. S. Fox.

Forest Trees, Shade Trees, large and small, in quantity.

BERNARD S. FOX, San Jose, Cal.

Agent, Mr. THOS. MEHERIN, Battery street, San Francisco. oc18

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices. Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care. Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE
Address THOMAS MEHERIN,
516 Battery Street,
SAN FRANCISCO.
P. O. Box 722. 24v6-3m

FRUIT AND ORNAMENTAL TREES.

GLEN GARDENS,

ONE MILE EAST FROM SACRAMENTO.

My stock embraces all the most desirable varieties known, including several new Peaches, among which are the Beatrice, Louise, Early Rivers, Rivers' Early York, Stanwix Early York, Victoria, Prince of Wales, and several others, all hybridized by S. Rivers of England and fruited on my grounds this year for the first time in California.

The Louise and Beatrice are 15 and 20 days Earlier than the Hale's Early.

Being the first to import these new fruits, including many sorts not mentioned, purchasers may rely upon getting trees true to name. Also, the FREEMASON and SALWAY, the most valuable late peaches in cultivation. Blackberry, Raspberry and Strawberry Plants; fresh Locust Seed—CHEAP FOR CASH.

E. F. AIKEN,
Proprietor.

AUSTRALIAN GUM TREES.

250,000 on hand for this season, at rates to encourage forest culture. Also, 50,000 Cypress, in shipping order. Nursery on 12th street, one block north of Tubbs' Hotel, East Oakland, Cal. Or address, Box 80, Oakland. BAILEY & CO., Proprietors.

Beautiful fresh Cypress Seed, \$3 per pound, sent by mail, warranted pure and of the finest quality. 25v6-3m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of
NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A
CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,

(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.
Nurseries on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.
Letters by Mail or express will reach us.

ja10 MILLER & SIEVERS.

PRYAL'S NURSERIES.

Fruit, Ornamental and Evergreen Trees,

SHRUBS AND PLANTS,

Vegetable and Flower Seeds, Greenhouse and Bedding Plants, embracing all of the most desirable kinds, are now ready and for sale.

BLUE GUM & OTHER VARIETIES OF EUCALYPTUS.

Boxwood Plants for Garden Walks.

Roses of all the New and Old Varieties.

Correspond with me, and, if possible, come and see my trees, etc. All orders will receive prompt attention.

Address: A. D. PRYAL,
Oakland, Alameda Co., Cal.

DEPOT AND SEED STORE—Broadway, opposite the City Hall; Nursery and Greenhouse, 3 1/2 miles north of Oakland, and one mile from Oakland Horse Railroad depot at Temescal.

Botanical collectors in all parts of the world are requested to correspond. 25v6-tf

TREES, TREES, TREES
—AND—
PLANTS.

In any quantity from one tree to 100,000, both wholesale and retail, at lowest market rates. Fruits guaranteed true to name. I have many new varieties of fruit in my collection which are far superior to the old standard varieties. Among them is the celebrated Beatrice Peach, guaranteed true; this Peach is 20 days earlier than the Hale's Early, and in every respect a fine peach. My stock of Shade Trees and Grape Vines is the largest in the State, and a fine assortment. Have also small fruits, hedge plants and hop roots.

Send stamp for printed Catalogue, Price List and directions for planting and training, or come and see the stock, at the CAPITAL NURSERIES, Office and tree depot U street, between 15th and 16th streets, Sacramento, Cal.

ROBT. WILLIAMSON, Prop'r.
Special rates to Patrons of Husbandry. 24v6-3m

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;
ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees. Send for priced Catalogue. 24v6-6m

ALMOND TREES.

40,000 Brier's Languedoc Almond Trees,

One year old from the bud—CHEAP FOR CASH.

Liberal deductions to the trade and to those planting large numbers. The tree grows rapidly, bears young and constantly, blooms late, is hardy. The almond is large and sweet, with a soft shell.

Send your orders for these and all kinds of fruit and nut trees, to

W. W. BRIER,

24v6-2m Alvarado, Alameda Co., Cal.

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental Trees, Shrubs, Roses, GREEN HOUSE PLANTS, ETC.

We are constantly adding to our varied stock the NEWEST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call.

LANDSCAPE GARDENING attended to. ja24tf

PEPPER'S NURSERIES,

Petaluma, Cal.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER,
Petaluma, Sonoma Co., Cal. 21v6-1y



BAY NURSERY,

OAKLAND, CAL. (Established in 1832.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESALERS AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Daphnes, Arancasias, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Eucalyptus Acacias, Peppers, Cypress, Pines, Junipers, Cedar of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tube Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine. 2v7-3m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway,
Oakland, Cal.

GREEN HOUSE PLANTS,

EVERGREEN TREES,

SHRUBS, ROSES, ETC.

100,000 MONTEREY

CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM TREES, including:—EUCALYPTUS GLOBULUS (Blue Gum)—extra fine street and shade trees. EUCALYPTUS VIMINALIS—both sorts very popular. ACACIAS in variety. Monterey Pines, Lawson's Cypress, etc., etc. Orders attended to. Address:

M. KING, Nurseryman,

23v6-3m OAKLAND, CAL.

TREES FOR SALE.

The undersigned offer for sale at their
Nurseries,

Near Niles Station, Central Pacific Railroad, Alameda county, Cal., a fine stock of STANDARD FRUIT TREES of the orchard varieties, best adapted for California. Our Trees are one and two years old, and all well grown and well rooted, and true to the label.

We invite Planters and Dealers to examine our stock before purchasing. Send for a Descriptive Catalogue and Price List. Trees can be sent by regular freight routes or by Express, at reduced rates. Careful attention given to packing for shipment. Local Agents wanted, to whom a liberal commission will be paid. Address the undersigned, either at Centerville, Alameda Co., Cal., or at 418 California st. San Francisco, Cal. 18v6-4m

SHINN & CO., Proprietors.

T. CORLEY,

NURSERYMAN & FLORIST.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned, being a PRACTICAL NURSERYMAN, offers his services for laying out of gardens, plots, etc.

T. CORLEY,

4v7-3m No. 315 Washington st., San Francisco.

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedars, Deciduous, or De-vine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubbs' Hotel. ja10

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN TREES, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good reference must accompany all orders. Lombardy Poplars, 1 1/2 to 2 inch trees, 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists,

K street, between 8th and 9th, SACRAMENTO, CAL. 4v7-3m

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD.

SEVEN OF THE BEST VARIETIES
Of Peaches and five of Plum. The Finley Peach, Georgia Freestone Seedling, the first offered in the State. Its flavor being richer and superior to the finest of the old varieties; it is the best for raising and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

BRYAN & DOMINGOS,

4v7-2m P. O. Box 151, Sacramento, Cal.

Brooklyn Nursery,

13th AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cypress, (\$3 to \$15 per hundred), 10,000 Australian Blue Gums, and about 3,000 assorted Roses. Also a choice selection of the various kinds of ornamental shrubbery, etc. Special attention given to the laying out of landscape Gardens. Orders received at the Nursery, or at the office of J. P. SWENY & CO., Seedsmen, Nos. 409 and 411 Davis St. S. F. 24v6-3m

JOHN CAREY, Proprietor.

THOS. A. GAREY'S Semi-Tropical Nurseries,

San Pedro street, two miles below the Court House, LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit Trees in Southern California,

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor.

Priced catalogue sent free. Address P. O. Box 265.

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy BLACKBERRY SETS, for sale at LOWEST RATES. Orders may be addressed through DEWEY & CO., of the Rural Press, San Francisco; ROBT. WILLIAMSON, Capital Nurseries, Sacramento; or to me,

25v6-3m CALVERT T. BIRD,
San Jose, Cal.

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF
EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California. My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS -

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnice & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS
EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,
Red Clover, White Clover,
Musquit Grass, Timothy,
Redtop Grass, Orchard Grass,
Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk. My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.
1v7-3m

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a rates that, with proper cultivation on suitable land, will make them among the most profitable crops grown. For further particulars address

PACIFIC OIL AND LEAD WORKS,

3 and 5 Front street, San Francisco.
12v6-3m P. O. Box 1443.

WESTERN GROWN SEEDS.

Save Time and Money. Buy direct of the GROWER. Vegetable, Field and Flower, fresh and true to name.

Catalogue for 1874 sent FREE, by
GEO. S. HASKELL & CO., Seed Growers,
25v6-2m Rockford, Ill.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.
19v6-tf

SEED WAREHOUSE.

(Established in 1850.)

ALFALFA—Pure California, Cheap, in lots to suit.

Timothy, Blue Grass, Red Top, Rye Grass, Red and White Clover, Mangel and Sugar Beet, and all other varieties for Field and Garden Culture.

S. W. MOORE & CO., Seedsmen,
ja24-1m 420 Sansome St., near Clay.

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who raise

Vegetable, Flower and Tree Seeds of all kinds.

Long experience, extensive practice, and the abundant production of this year's seed crop, enables us to offer a selection of Superior Seeds for California and Foreign Soils, and also places us in a position to maintain the lead in the market for Pure Seeds, and much cheaper than those sold by other seedsmen.

A large assortment of Imported DUTCH BULBS and GLASSES just arrived.

ALFALFA, CLOVER, TIMOTHY, KENTUCKY BLUE GRASS, ORCHARD GRASS, and all other varieties.

FRUIT TREES, SHADE TREES, HARDY SHRUBS, and a general assortment of all kinds of VEGETABLE PLANTS.

NOTICE.—We will send, free of postage, on receipt of order, 25 varieties of garden seeds in small packages price, \$1.25; or the larger size packages—price, \$2.50. Send for Catalogue and Price List.

SEVIN VINCENT & CO.,
18v6-4m 607 Sansome st., San Francisco.

H. K. CUMMINGS,
1858.

H. H. RALSTON,
1873.

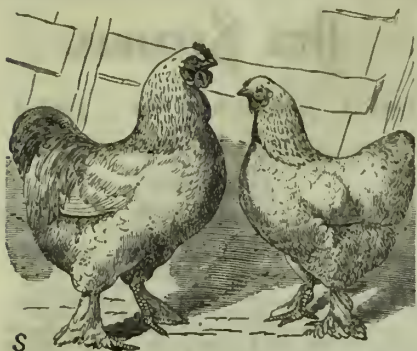
HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer, 4v23-1y



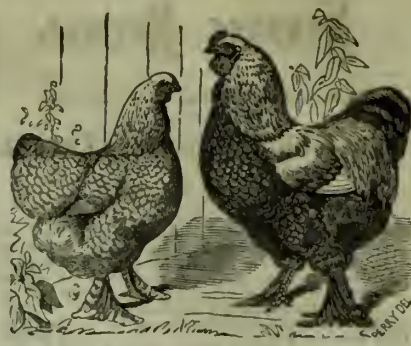
LIGHT BRAHMAS.

Improve Your Poultry!

IT COSTS NO MORE TO

KEEP GOOD FOWLS THAN POOR ONES.

Blooded Fowls! Fowls for Pleasure! Fowls for Profit!



DARK BRAHMAS.

OAKLAND POULTRY YARDS,

CORNER OF 16TH AND CASTRO STREETS,

OAKLAND, CAL.

Constantly on hand and for Sale, the following varieties of land and aquatic Fowls, viz.:

Light Brahmas, Dark Brahmas, Buff Cochins, White Cochins, Partridge Cochins, White Leghorns, Brown Leghorns, Houdans, Golden Spangled Polish, Silver Spangled Polish, White Polish, White Crested Black Polish, Golden Spangled Hamburgs, Silver Spangled Hamburgs, Aylesbury Ducks, Rouen Ducks and Bronze Turkeys. Also, Golden Sebright Bantams, Black Red Game Bantams, Silver Duckwing Game Bantams

AND THE FOLLOWING VARIETIES OF PIGEONS, WHICH HAVE JUST BEEN RECEIVED FROM ONE OF THE FIRST FANCIERS AT THE EAST, VIZ.:

Black Carriers, White Carriers,
Almond Tumblers & Yellow Fantails.

The above varieties of Fowls can be seen on any day at my yards, where there is a keeper in constant attendance to conduct visitors around the premises, and I should prefer all persons wishing to buy stock to select their own birds if practicable.

I wish to say to my old patrons that I have this year imported new stock of each of the varieties of Fowls mentioned in this advertisement, and can furnish to those desiring to introduce "NEW BLOOD" into their stock, fowls which I guarantee to be no kin to those bought of me previously. Parties buying of me may be assured that they will be dealt with liberally, and that every Fowl or Egg leaving the premises will be guaranteed true to name. If found to be otherwise the money will be refunded im-



WHITE LEGHORN COCK.

mediately. My advertisement will be found constantly on the last page of this paper, and all new varieties of stock received will be duly announced.

GAME FOWLS!

Warranted to Stand Steel!

BLUE PILE GAMES,

RED PILE GAMES,

BLACK RED GAMES,

WHITE GEORGIAN GAMES,

HEATHWOOD GAMES,

EARL OF DERBY GAMES.

Eggs, \$12 per dozen.

These games have just been received from the East, and have won 1st prizes wherever exhibited. The Blue Piles won 1st premium at Hartford, St. Louis and Buffalo, 1872; the Heathwoods at Detroit, 1872; the Derbys at Hartford, 1873,

This is No Humbug.

THE DOCUMENTS CAN BE PRODUCED.

SEND IN YOUR ORDERS EARLY IF YOU DESIRE EGGS FROM SOME OF THE FINEST GAME BIRDS IN AMERICA.

BRONZE TURKEYS.

I am this year breeding from my Prize Gobbler, "COLOSSUS," weighing 47 1-2 lbs, and 4 Hens, averaging 22 lbs. each. Eggs, \$12 per doz.

EGGS PACKED CAREFULLY in my Patent Handled Boxes with Elastic Bottoms, and guaranteed to carry safely to any part of the country.

FOWLS CAREFULLY COOPED AND DELIVERED,

WITH SUFFICIENT FOOD FOR THE JOURNEY, AT THE OFFICE OF WELLS, FARGO & CO., IN OAKLAND.

NO FOWLS OR EGGS SENT C. O. D. EXCEPT TO OLD CUSTOMERS.

For further particulars send stamp for Illustrated Circular to

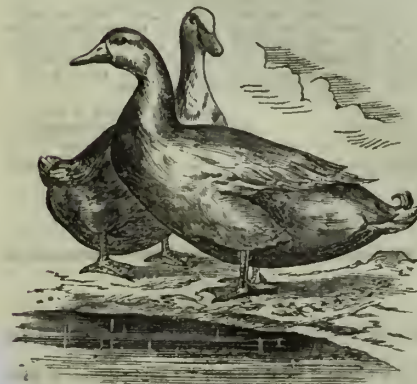
GEO. B. BAYLEY,

P. O. Box 659, San Francisco,

GENERAL AGENT FOR THE "POULTRY WORLD,"

A monthly magazine devoted entirely to Poultry; tells how to keep Fowls for pleasure and profit. Subscription, \$1.25 a year. Send 10 cts. for a sample number.

PLEASE STATE WHERE YOU SAW THIS ADVERTISEMENT.



AYLESBURY DUCKS.



BRONZE TURKEYS.



Volume VII.]

SAN FRANCISCO, SATURDAY, FEBRUARY, 7, 1874.

[Number 6.]

A California Lily.

In our engraving we present another of our beautiful native wild flowers, for which California is so famous. The technical name of the plant is *Lilium Bloomerianum* var. *ocellatum*, Kellogg. It was illustrated and described in the proceedings of the California Academy of Sciences for the year 1873, by Dr. A. Kellogg.

There are two varieties of *L. Bloomerianum* found growing together in the interior; one with bold, distinct and well-defined dark dots and spots, with longer sepals more attenuated above; the other with ocellate or nipple-like blotches, being broader and of more continuously oblong form. The same distinction into masculine and feminine forms is observed among these maritime lilies. The Island lily has slightly scabrous stems, and more discoidly-scabrous under surface to the leaves, and are always scabrous along the mid-rib beneath; whereas the Sierra Mountain lilies are mostly glabrous—sometimes pubescent on both mid-rib and nerves, but never scabrous; they also sport more leaves in the whorls, etc.; these also are broader, hence the greater number of nerves; the numerous flowers are usually (if not always) alternately distributed on longer and more divaricate peduncles. The slightly purplish scales of those of the mountains become very remarkably purple on the islands. The enormous gregarious bulb, with its numerous stems, is a peculiar feature not observed in the thousands of specimens hitherto examined.

Found by Mr. W. G. W. Harford, of U. S. Coast Survey, on Santa Rosa Island, growing on the west side of deep sheltered ravines, trending nearly north and south, hence, only where they get the morning sun; but are shaded from the ardent meridian, or post-meridian heat, which burns the leaves and kills them out on opposite exposures of the same locality. They are found growing in loose gravelly detritus of sweet, freshly made soils, on the high and dry well-drained or leaching benches, or steeper declivities; where thus sheltered they thrive the best, mid fogs and fierce cold winds.

The seeds of this lily can be procured of Miller & Sievers, florists, 27 Post Street, S. F., by those desiring them.

SOVEREIGNS OF INDUSTRY is the name of a new secret order, patterned after the Patrons of Husbandry, and occupying the same field as the Patrons of Industry, the organization of which we announced some three months ago. Both the S. of I. and the P. of I. have been established to furnish for the mechanics, miners and working men, other than farmers, an organization which shall do for them just what the P. of H. has done and is doing for the agricultural portion of the community. The P. of I. and the S. of I. seem to be rival institutions, the latter claiming to some extent, at least, to be countenanced by the Patrons of Husbandry. Measures have been taken looking to the establishment of both the new orders on this coast. We shall probably be advised of the earliest step in either direction, and shall keep our readers as fully posted thereupon as the nature of the movements will admit. We fully believe some such organization is needed among our mechanics everywhere; but regret that it should come in the form of rival enterprises.

TROPICAL FRUITS.—It appears that the suspension of import duties on tropical and semi-tropical fruits grew out of a clerical blunder in enrolling the Tariff Act of 1872. It is now stated that the duties will be strictly enforced hereafter.

Transplanting Trees.

We do not expect to teach the scientific orchardist or nurseryman how to transplant a tree; but there are some in this State intending to set out entire orchards of fruit trees this spring who never transplanted a tree in their lives; it is to such persons that we now speak. Having

the tree is shaken up and down, these small roots are badly displaced and injured. But having filled the hole, tread firmly the whole surface and then fill again without tramping—this last filling answering as a mulch—and the operation is finished and success is nearly certain.

If the tree should have lost much root in the taking up, a corresponding shortening in of the branches is advisable, or a judicious trimming up



CALIFORNIA LILY.

procured your trees with all the roots possible and these as nearly uninjured as may be, if your holes have been prepared beforehand and the ground is sufficiently dry, shape the hole by re-digging the bottom and sides so that when the tree is set in, the roots will be allowed as near as possible their original position.

If it has a tap-root don't plunge it into a hole no bigger than the root will make by being thrust into the soil, but take out a full spade-ful, and having trimmed the end of every root smoothly, with a sharp knife, set the tree in position not more than an inch deeper than it grew in the nursery row. Give every root its former position as near as may be; fill lightly with fine soil, and as some of the smaller roots bend down from the weight of the soil, with the fingers gently raise them to their proper position again and fill in as before, and continue the operation till the roots are covered and the hole is filled.

Never shake a tree up and down while filling, if it has one or more large vertical roots; because upon these roots are a great many small fibrous roots running out horizontally. If

of a few of the lower limbs will suffice, if a standard tree is desired. If a low head is preferred, let the pruning be of some of the superfluous upper limbs, or the heading back of the top.

FOREMAN'S WHIFFLETREE HOOK.—The object of this invention is to provide a whiffletree hook which will obviate any danger of the cock-eye of the trace becoming accidentally unhooked, when the trace is slackened and the whiffletree inclined downwards, as in backing, descending a hill, plowing, etc. The hook is designed to fit any size cock-eye. The stud or spur is so formed on the end of the hook, that when the trace is slackened, the whiffletree drops down, thereby securing the desired result.

THE jute market is now attracting attention in India, and it appears to be now conceded in Calcutta circles that the fiber, rather than cotton, is destined to be the permanent staple of India. In the two years between 1870 and 1872, the shipments of jute from Calcutta rose from 910,000 to 1,500,000 bales.

Methods of Preserving Fruits.

A year or more ago we urged upon our fruit growers the importance of converting their surplus fruits into a valuable marketable commodity by canning them, saving to themselves a handsome profit over the cost of putting them up. This canning of fresh fruits, using very little or no sugar at all, was a great improvement over the old method of making "preserves," the standing rule being a pound of sugar to a pound of fruit. By the new process we preserve the flavor of the fruit almost perfect while before, in the "preserve," it was almost completely masked by the excess of sugar.

But there are serious objections to the canning process which we would be glad to overcome. There is a large expense for the cans in the first instance, then the trouble of preparing the fruit, bringing it to just the proper temperature for canning, with the proper—though small—quantity of sugar best for each variety of fruit, the sealing of the cans, the running over of more or less of the wax into the fruit, imparting a disagreeable taste to the latter, and finally a loss more or less from the collapsing of a considerable percentage of the cans, attended with an almost certain loss of the fruit if not immediately observed and speedily consumed.

Still all manner of canned fruits are in great request for both interior and marine use. The amount that is sent forward into all the vast mining and mountain districts, between the Pacific shores and the Rocky mountains is simply immense, while the quantity required for our fleets upon the seas is such that California has never been— with her world of fine fruits, and often with a surplus—able to supply, and a million of dollars would hardly cover the amount of canned fruits and meats annually imported to California.

Now of all these fruits shipped abroad, the can is the most expensive part of the package, and is for the most part lost to the consumer of the fruit, though he must pay for it.

These are the main objections to the canning process, though one other and a very serious one stands prominently forth, and is found—in all the interior shipments—in the weight of the article, can and fruit. All these together had become so serious a matter that thinking men put their wits to work to remedy it if possible. First, to get rid of the can, it seemed necessary to go back to the drying process, and back they went, only to find by the old processes of drying, a very inferior product, generally a dingy mass of dried fruit pulp and fly specks. It seemed to them, however, that only certain improvements were wanting to bring about grand results; and this path of discovery was the one

taken by those who were giving their attention to the subject. All sorts of drying machines and apparatus were invented and put upon trial, by which all kinds of fruits and animal substances might not only be dried quickly, but more cleanly and perfectly in every respect. The attempt resulted in success; and now our fruits are dried at far less cost than canning them, occupying in weight and space less than one-fourth that of canned fruits; and, what is of the greatest importance, preserving, in a wonderful degree, the original flavor of the fruits; and, of course, dispensing wholly with the can, the dried product being susceptible of package and storage in bulk. The perfection to which the drying process is now brought, gives large additional value to our surplus of many common summer fruits, besides giving employment to many persons, and to the public a healthy and highly desirable commodity.

FRUIT CULTURE.—We have received a copy of an address on Fruit Culture read before Napa Grange on the 24th ult., by Mr. Wm. H. Nash, which will appear next week.

CORRESPONDENCE.

An Appreciative Reader of the "Press."

EDITORS RURAL PRESS:—Having for many years been a constant reader of your valuable paper and before its publication, a reader of the *California Cultivist*, *California Farmer*, and *American Agriculturist*, I consider myself entitled to be called a judge of the excellence of agricultural publications, and also to the right to inflict upon you and my fellow readers a column or so of my lucubrations.

First,—For the Pacific Coast farmer, I consider the RURAL PRESS the best publication on the face of the world, for the simple reason that it is the epitome of our individual successes and failures, in actual farm work, and not merely the opinions and theories of a city editor never outside of his sanctum. The system of correspondence, inaugurated by you in the management of the RURAL, leads to an interchange of ideas and experiences never before attained to the same extent in any paper that it has been my fortune to peruse, though for the last fifteen years I have never had less than five regular publications to hand constantly.

Secondly,—Nothing is truer in our State than the old saying that "one man's meat is another's poison." With our diversified climate and soils the advice that seems good to one farmer, to another is ruinous in the extreme.

For instance, in nearly every number of the RURAL is an article, or paragraph, comparing the profits of alfalfa culture with other crops or native pasture. No doubt alfalfa is good; so is flax; so also blue grass, timothy, white clover, mesquit, etc. But can each everywhere be raised profitably, is the question? Let me give you

My Experience in Alfalfa.

On the 15th of November, 1872, I sowed eight acres of black loam land in alfalfa. The land had been plowed twice in the spring, and cultivated in corn, and pastured after the corn was off. When the rains had softened the surface, I harrowed it well, sowed the seed, and brushed it in. No one could have asked a better stand to start with; but the rains and frosts came; the alfalfa scarcely grew at all, while the tongue grass realized the good culture bestowed, and gratefully flourished and grew apace. The frosts did not injure a leaf of the clover, but raised it up in places, and circled close to the surface. What the frost did not thus kill, and the tongue grass did not choke out, lived, but was no larger in October than it was in February.

Now my account with it stands—Seed, \$40; labor, \$10; use of land, \$25; total, \$75. Profits, nothing. Perhaps I sowed it at the wrong season. So thought my neighbor, so he put in 20 acres of similar land adjoining in March; plowing it up, and carefully cultivating. His crop came up well, but most all died out. And he is worse off than myself. We each had a good crop of mustard and wild turnip, etc., but I pulled mine up, and his went to seed. Any of the land sown will produce good corn, and the cultivation of each was unexceptionable through the summer; and whose fault was the failure? Our climate seldom is so extreme as to cause the mercury to go below 20° and that only once in twelve years.

I think of trying it again, but do wish it were possible to get clean seed.

Linnets and Larks.

Another thing; ought not the farmers to take some decided steps to cause the repeal of so much of the game law as protects linnets and larks? In this county we can scarcely save early apples and peaches, and cherries and plums are never allowed to get ripe. Both are essentially seed birds, the linnet never touching insects, and the lark preferring seed wheat and oats to anything else on the face of the earth. Perhaps around the Bay counties they need protection from the sportsman, but here they need it not, for no one thinks of wasting ammunition upon them except in desperation. Yours,

C. O. A.

Ukiah, Jan. 27, 1874.

Alfalfa—Osage Orange.

EDITORS PRESS:—I have a small piece of alfalfa on the ranch which I purchased last July, which grows nicely and yields tolerably well, but stands too thin on the ground, so that it grows in bunches, and the stalks too coarse. Is there any way by which it can be resown or more seed sown so as to procure a thicker stand?

Can you advise me where I can procure some osage orange plants for hedge fence, and the price? I do not see them advertised by any of the nurserymen. Are they not adapted to this climate and soil? This shrub is used extensively for fencing, in Illinois; and in about three or four years makes a hedge that nothing from the size of the largest ox to a common rabbit will pass through or over.

D. CLAPP.

Sow the bare patches at once, upon the surface, and scratch in the seed with a sharp, iron-toothed harrow. It is better than to wait for it to spread by the scattering of such seed as may be grown on the other portions.

Osage orange plants can be procured of E. E. Moore in this city, one and two years old, for six, eight or ten dollars per hundred, depending on size. They do well in all places where tried, in a suitable soil.

A Many-Sided Question.

EDITORS PRESS:—Among the many topics of interest which have engaged the public mind for some time past, is the question of Chinese immigration and Chinese labor.

We will leave the problem of Chinese immigration to politicians to solve as best they can, and will deal only with the subject of Chinese cheap labor (which, as far as any experience of it goes, is anything but cheap) in its practical bearings.

Any person who has lived in the interior portions of California must have had some experience in the difficulty of getting hired help for either out-doors or in, particularly household help. And those who have escaped the actual experience of the difficulty must have had the subject forced upon their observation.

During the time of harvesting and threshing grain, hired men for the farm are paid from \$2.50 to \$6 a day. But even at these prices they are so scarce that much of the grain goes to waste for want of help to cut it. Scarcity of men was the great difficulty throughout the country two years ago; and as the same difficulty is anticipated the coming harvest, measures are being taken to secure Chinese help for the fields.

A girl to do general housework, or any part of it, for that matter, is something almost unknown in the country. So next to impossible is it to get a girl or woman of any age to do the work of a house in the country, that for all practical purposes it may be said to be out of the question.

I have never met with but one girl in California who "works out" in the country, and if she is a specimen of the kind of help we may expect this State to produce in her rising generation, I hope never to meet with another. Chinese are the only class of people then who can be depended upon for doing house-work; the only source from which such help can be obtained. And in the face of this fact, in a country like this, where there is so much hard work to be done in the house, where farming is carried on so extensively that some portions of the year there are from twenty to thirty men to cook for, the question naturally arises as to what element in society is to supply this need, if Chinese immigration be cut off? If Chinese immigration could be stopped at once, and every heathen banished from the State and sent to the land of his nativity, where he hopes at last to rest his weary bones, no matter where he may draw his final breath, it might be a benefit to the working classes left. But still the question presents itself as to who would be found to do cooking and washing then. The Chinese are the only class who can be hired to do such work in the country at any price, and though they do it but indifferently well, it is better than not having it done at all.

My introduction to country life in California was in a valley twenty miles from the railroad, and perhaps a hundred or more from San Francisco, to a good sized farm house, with a moderately small family part of the time and an immoderately large one the busiest portions of the year—"seed time and harvest."

Though so far in the country, I found the table as well supplied as it would have been from the best city market. Vegetables and fruit were brought to the door three and four times a week; a town, a short distance away furnished good meat; the rivers yielded their fish, and the choicest wild game was plentiful and easily procured. While the traditional farm luxuries were produced in abundance, the difficulty seemed to be to get the food which was bountifully supplied—cooked. A man had come in from his work in the garden, and was helping to do the work of the house for a few days for accommodation, until a cook could be hired.

Three trips to Stockton, a distance of thirty miles, brought a cook at last—a sleek, smooth-faced Chinaman, who carried a roll of red blankets neatly tied up across his shoulders, and whose name was Letung. He was duly installed; was neat and clean about his work to all appearances, and cooked passably well, better than any of his successors. But a crosser, more ill-natured, disagreeable heathen than he proved to be never breathed.

We—the feminine portion of the family—were cautioned by the lord and master of the house, not to interfere with cook's household arrangements; but to let him manage things to suit himself. "They don't like to be bossed around by the women," said the lord and master, "they believe women have no souls, and think it beneath the dignity of a Chinaman to be dictated to by women." Knowing as I did that the opinion of the lord and master on the woman question did materially differ from those of the heathen cook, I said nothing.

The first difficulty that arose between his cookship and the lady of the house was on the question of scrubbing the floors. "No!" he insisted, "me hired to cook, me no sabe scrub." I suggested that he be made to scrub his kitchen floor or be turned out of doors.

But again I was reminded that "they" would not be controlled by a woman, in other words, that cook was master of the situation. "Don't interfere with him," admonished the gentleman of the house, "let him have his own way."

"But," I remonstrated, "look at these floors." "Never mind," he answered, "let them go, and say nothing about it, if the Chinaman will only cook."

The next cause of dissension which arose be-

tween the cook and the lady of the house, was as to who should wash table cloths and towels. This he refused to do at first, but by various methods of persuasion, he was induced to perform this part of the work.

Finally, a mutual understanding was established between this heathen and the rest of the house. He was systematic about his work, served his meals at regular hours, and never failed to indulge in his forenoon and afternoon nap.

But when some half dozen men were added to the family and harvest was approaching, he gave notice that he should leave. Would he not stay for 50 or 60 dollars a month (he had been getting 40 dollars) and a boy to assist him? No! he would not stay for any price. He did not mind the work, pay was good; but—"too much women, me no like him." So he took his bundle and departed; and another heathen was set down at the door by the accommodating stage on this road, who bore the civilized name of Jack. Unlike the other, he was pleasant and willing, but the poor fellow was old, half crippled, and altogether unsuited for the situation. He was so slow getting along with his work that he was heard plodding round at eleven o'clock at night, and again at three in the morning.

Another cook was sent for, and there arrived one as young and active as the first had been; and good-natured, with all. He "no sabe wash anything," and no amount of persuasion could induce him to learn; but aside from this he gave tolerable satisfaction. He kept his dominions in good order, and found time to walk to town, a mile distant, every day, and spend two or three hours. But this caused no complaint; if he chose to pass the time the other cooks had spent in sleep, in visiting his friends, it was his privilege, said the master. He stayed with us a month, when a letter arrived addressed in Chinese characters. Its contents held out inducements for the cook to leave. He could get more money some other place. "Forty dollars too little." So Tom left us after getting another cook to take his place, and Sam appeared as his successor. A veritable John was hired to help him, and he was a treasure! He did his work exceedingly well, for the modest sum of \$1.50 per day. Sam was the fourth Chinaman who had been hired to cook within three or four months.

A week after his arrival, the master of the house gave orders that Sam was to reign supreme over the kitchen. "Show him where everything is, and let him have free access to all the cooking commodities about the house in the quantity. Give him his own way in everything, and, if he insists upon frying ham, sausage and steak in butter, never mind; so long as the men don't complain." Such was the decree, and it was obeyed.

Sam's orders for provisions were handed over to the master, and supplied with unquestioning promptitude for a month, when one morning there came an order from the kitchen for more flour. "What! more flour?" answered the master, "I have brought flour into this house at the rate of seventy-five pounds a day for the past two weeks, and the family during the time has numbered but ten!"

The last sack is empty, was the answer. The sugar, tea and coffee are all gone, cans and jars of fruit, etc., have disappeared from the cellar as though by magic, and there is not an ounce left of the provisions that were expected to last six months.

Both Sam and John were paid off that morning and discharged without ceremony; and the master swore an oath that not another Chinaman should ever again cross his threshold.

Then there commenced such a search for a girl as was never before made. Stockton was explored, but without success. All the advertisements under the head of "Wanted—A situation as cook or to do general work," which appeared in the leading San Francisco papers for a month, were answered, and all to no effect. The country for fifty miles round was visited in hopes of coming across a woman cook, but none were to be found.

Finally, a letter came from a girl who had heard of the situation, and who would accept it conditionally. Negotiations were concluded on her own terms, and she came, stayed a month, was satisfied with the situation, but at the end of that time, gave notice that she should be obliged to leave for a six weeks' vacation including the holidays. The next morning after making this announcement, she left. The six weeks have not yet expired, nor has she returned.

If, among the hardworking women of San Francisco who are seeking work and cannot find it, there be one who is willing to cook or to do general housework, she can find steady employment with good wages.

HAGAR.

When we were young, mother and sisters, sometimes with the help of one of the older boys for a few hours one or two days in the week, performed all the kitchen and household work for the family easily and cheerfully. And we would ask Hagar in the case referred to—during the intervals in which no help was in the house, and "too much woman me no like"—Who did the work then? And would it not be better for all concerned that no kitchen help be called in? It is a crying evil of the times that women of the period are altogether above doing the kinds of work their mothers were able and willing to do, and do cheerfully, because contributing largely to the prosperity of the household.

Peanut Raising.

EDITORS RURAL PRESS:—I see in your paper of Jan. 10th, an article from a subscriber asking for information concerning the care and cultivation of peanuts. We also note your reply to him, with which in some items we agree.

But we will venture to make a few remarks concerning the subject; premising we have labored in the cultivation and shipping of peanuts for quite a number of years. A sandy loam or loose gravelly soil is best suited for their cultivation.

Plant as early as the frost will permit and the weather is uniformly warm enough for vegetables, generally, to grow thriftily, as the peanut plant appreciates a long season and continues to grow and perfect nuts, under favorable circumstances, as long as the season lasts.

Pulverize the soil five or six inches deep. Break the pods with a light wooden hammer if you have many bushels to hull, but be careful not to bruise any of the kernels. Reject all that are not fully matured.

There are two distinct varieties of peanuts; the white and the red. The white variety seems to be the kind referred to in the aforementioned article. The white variety branches out and runs along flat on the ground. The red variety grows upright in a bunch, except when grown upon very rich soil, and its growth is unusually rank.

The red peanuts should be planted in drills 12 to 18 inches apart, two kernels together, and the rows should be from 3½ to 4½ feet apart, depending upon the fertility of the soil; the poorer the soil the closer they may be planted, and they will grow on soil too poor to produce weeds. Yet a soil of medium strength is to be preferred.

Harrow the land level; lay it off with a coulter or bull-tongue plow; cover rather lighter than corn. To plant white peanuts, prepare the land as before, check it off 4 to 4½ feet one way to 2½ the other, with same plow as before. Put two kernels in each check. They should be well cultivated, keeping the soil loose and clear of weeds, and put a little soil around each plant, until they get to spiking; that is, shooting out small straight roots from each joint of the vines into the ground, on the end of which you will notice the young peanuts forming. They should now be left to themselves, at least as far as the vines are concerned; and if they grow well they often shade the space between the rows so that no weeds will grow there.

In cultivation there should not be a large high hill or ridge made around the plants, but only a low, broad, flat hill or ridge. And none of the blooms or vines should be pressed down or covered up with soil, as we learned by repeated experiments, made in different soils, and with different varieties, that such procedure is injurious to the plants, and greatly injures and curtails the crop of nuts. They should be gathered before the frost bites the vines. One of the best ways of gathering them, is to run a furrow on each side of the row with a bull-tongue plow, close enough to loosen the soil around the plants. Then take a narrow, light grubbing hoe and loosen up the vines that the plow did not, and dig up the vine and turn upside down to dry. If they are of the red variety, after the plow has been run deeply on both sides, they may be pulled up by hand. They should never be gathered in rainy weather or when the ground is very wet.

After they have been turned up for one day in the sunshine, and while the vines are entirely free from dew, they should be put up in small hand stacks; which are made thus: Put a stake, 4 or 5 ft. long, firmly in the ground, put something such as dry grass, weeds or straw around it to keep the peanuts from the dampness of the ground; then proceed to stack the vines around the stake, with the roots to the center, leaving a small space in the center for ventilation, and when the stack is made as high as desired, cap it with grass or straw, to protect it against the weather and birds. Let them remain in the stack three or five weeks, when they will be ready to pick, stack and send to market. If the crop is large, and any prospect of rain, they (vines and all) should be hauled up and put under shelter, where they may be picked off at leisure. None of the premature nuts should be picked off, as they greatly injure the sale of the good ones, and they add greatly to the value of the vines as hay, which is choice food for milk cows, greatly increasing the quantity and quality of their milk.

The red peanuts are much easier cultivated than the white; both usually sell for about the same price in market. The white peanuts are more oily than the red and usually have only two kernels in one pod, while the red has often three or four. Sixty to seventy-five bushels is considered a fair crop, but sometimes more than a hundred bushels are raised per acre.

As soon as the peanuts are gathered in from the field and the vines put away for hay, turn the hogs into the field and they will glean it well, and sometimes get fat. The land is then in good fix for plowing for wheat.

I have thus given a brief outline of peanut culture, and hope it may be of service to some one who is earnestly following the noblest of labor—farming. And often amid the weary duties of professional rounds do we feel:

"How brightly through the mist of years,
My quiet country home appears!
My father busy all the day
In plowing corn or raking hay;
My mother moving with delight
Among her milk-pans, silver bright;
We children, just from school set free,
Filling the garden with our glee,
The blood of life was flowing warm
When I was living on a farm."

Q. C. SMITH, M. D.

Sphere of the Farm Laborer.

EDITORS PRESS:—"A Granger's Wife," in the *RURAL PRESS* of Dec. 10th. gives an interesting account of her experience in dealing with farm laborers. In my humble opinion, her views upon this important subject are very sound. She says that she objects to having her family circle intruded upon by the farm hand. Now this is very good as far as it goes, but I contend that the hired men should be entirely removed from the family; they should not occupy the same house, should not even take their meals under the same roof. Give them a house entirely to themselves, let them eat and sleep there, and you will find, as a general thing, that both parties will be better satisfied. It is true that some men will consider themselves insulted if they are not admitted to the same table with the family. My advice, as to the manner of dealing with such a man, is to discharge him as soon as possible, for he will cause more discontent among the other men than his services are worth, even though he were to give them gratis. When you employ a man teach him his place at once. Tell him what you wish him to do, exactly as you want it done, and then see that your orders are carried out to the very letter. If your order are not strictly obeyed, don't fly into a passion, and "raise Cain" generally, but quietly inform him that his services are no longer needed. One great evil among hired men, is the disposition of some to tyrannize over the rest. They like to be looked up to, and considered as a kind of "boss" by the other men, when in reality they stand upon exactly the same footing. This should never be permitted. If you have a man of this kind, give him his "walking papers," and fill his place with a man who knows his place and willing to keep it. RANCHERO.

California Grown Seeds.

EDITORS PRESS:—I lately read with much interest an excellent article in your paper on "California Raised Garden Seeds." The writer, of San José, says: "We are not willing to admit that our favored clime and soil will not produce as good seeds as can be raised on any other portion of the cultivated land."

My opinion, the result of many years' experience in floriculture, coincides with his. For the first few years I was impressed with the idea that eastern seeds must be obtained every spring, to insure fine flowers, but meeting with some disappointment, and possessing considerable of the Yankee desire of experimenting, I concluded to raise my own, and the result has been [very satisfactory, none of my varieties having degenerated, while not a few have greatly improved, some of which last summer were perfect marvels of beauty. But in raising good seeds, much care is required, and none but the finest flowers allowed to remain and ripen. I believe that in her productions of fruits and flowers California has no rival. Her elevated mountainous localities; her warm, bright, ever-blooming valleys, are especially favorable to endless variety; and her long summers and rich soils, to an almost fabulous yield. Our initiation into the real agricultural resources of California is only in its infancy, so much have we yet to learn, and so many of our preconceived opinions to cast aside; prominent among which is the erroneous idea that California cannot grow her own garden seeds.

Pentz, Jan. 11, 1874.

M. P.

Scenes in the High Sierras.

[Written for the Press by J. G. LEMMON.]

No. VI.—The Great Comstock Lode.

Again, and for the last time on this excursion, we invite the reader who has accompanied us thus far to step upon a cage at the mouth of one of these shafts, and together we will descend into these deep mines and take a journey through their labyrinthian streets.

Down, down we drop, nearly as fast as gravity would drag us, if unresisted. The hot vapors rushing past cause immediate perspiration at every pore. They are so loaded with effluvia as to be nearly suffocating. Our lanterns light up the clean-walled shaft with its continuous iron rods—one on each side—directing our gaze. Our guide declares all is secure, but our hearts beat a lively tattoo for a few seconds, ere the welcome slackening of speed is followed by a sudden stop, which, nearly settling us in a heap, informs us that the first level is reached—400 feet down.

Stepping out of the cage, our guide nimbly leads the way along a rock-strewn passage, opening into a long, straight, seven-foot square gallery, timbered on all sides by heavy, squared pines.

Through the crevices our lights reveal above, below, to right and left, similar long, symmetrically arranged galleries—all empty, silent and gloomy, with their massive timber supports slowly crumbling before the constantly acting, irresistible force of swelling rocks exposed to the air.

This is the part of the mine first worked, from which as the rock was removed these galleries of sturdy pines cut in the forests around Tahoe and hauled here at great expense, were built, one under another and one tier beside

another, forming story after story until the whole ledge 60 to 80 feet wide was honey-combed with galleries to a depth that required the sinking of the shaft some hundreds of feet deeper in order to facilitate operations.

Away our guide scurries over dilapidated floors and down worn-out ladders, slippery with grime and velveted with mould, turning, zig-zagging and diving, still hurrying, but always talking interestingly of shafts, drifts, tunnels, inclines, dips, breasts, adits, stopes, etc., till you think he is a vocal digging machine just wound up, and you shout for it to stop and define that last word.

A half hour of such meandering over many miles of dismal galleries, down innumerable shattered ladders, and through a still thickening and higher tempered atmosphere, brings us to the second level—800 feet down—and where a few miners may still be seen busily picking low grade ore from the white walls—the higher grade having been removed from this level before. Here our guide pulls a telegraph wire by the side of an incline that passes eastward under the city of Gold Hill, and in a moment a roaring sound in the far upper end, augmented and intensified every instant, approaches with deafening din and from the gloom emerges a sliding iron box car, like a huge road-scraper, back foremost, and, hushing its noise, carefully stops exactly on our level. "Jump in and keep your heads down," shouts our guide and telegraphing again, away we slide through the thick, hot air, accompanied by a cavernous roar that reminds of the story of the naughty school-boys who took a ride with old Pluto to his sulphurous, noisy dominions.

Down, down, "will we ever stop? Really I'm not prepared," yelled the school master in the ear of our grim guide. At length, stunned, bewildered and nearly breathless, we are landed at the 1,200-foot level amidst a busy throng of miners, a glinting of lights and clinking of picks and sledges in every direction. Our guide says cheerfully, "Now, we have just reached the inhabited portion of our busy underground city." We approach the nearest group of miners and make a minute inspection. They are mostly thorough Englishmen from Yorkshire, a hardy race, whose brawny arms, full breasts and sinewy legs are fully displayed by their manner of dress—the upper part of a pair of drawers, or often a mere towel fastened tightly about the middle, being the only garment worn.

Their round, barrel chests, resembling the pouter pigeon, are made so by the necessity of inspiring large quantities of gases about them in order to obtain sufficient oxygen. The character of their work—very hard and performed in every variety of position—calls into play and develops every muscle. Perhaps no human beings at the present day are finer built as a class, or more beautifully proportioned than these underground miners. The statues of gladiators and athletes in our art galleries cannot be finer.

Each wears a cap for the purpose of holding a candle, the sweat constantly streams from their bodies, and whatever the occupation, whether yielding the pick with quick stroke, hammering a drill, either hand forward, with careful aim, or hoisting the heavy ore-lumps into the cars, all is done in an abstracted, determined manner that tempts no inquiries, nor brooks interruption.

Every five or six minutes they drop their tools and hasten away to where casks of ice-water stand in wide passages, through which passes pure air, driven down by blowers above ground; the ice-water being furnished and partaken of, in unlimited quantities. A large portion of the time is spent in respiring the welcome pure air, and cooling off beside the ice-water casks, yet the day is divided into three parts or "tricks" of 8 hours each, and one such "trick" spent in the mine entitles a workman to a day's wages—\$3 to \$5.

As far as the eye can reach in two directions, and for 60 to 80 feet sideways, the glinting of myriads of lights tell where the miners are stationed. Some "breasting" the ore out of the ledge at the end of the galleries, some deftly fitting the timbers in continuation of the latter, others manning the ore-cars; here, there, everywhere, the clean, white, stalwart bodies and limbs of the workmen are seen posturing like animated statuary. The number of these human beings, expressionless gnomes toiling here away from the influence of the blessed sun, and in this stifling atmosphere, is almost incredible. You may travel for two miles north and south, and mount or delve for $\frac{1}{4}$ of a mile through the honey-comb work—the skeleton of the gutted Comstock—and in every place, on every hand, lights are flashing and labor strokes resounding. Some companies on the Comstock employ 600 and 800 hands, and altogether there are not less than 7,000 souls disemboweling the wealthy Mt. Davidson.

To us, as might be expected, the whole journey through this subterranean city was like wandering in a labyrinth, with no idea of directions or distances. The close, hot atmosphere weakened us excessively; but our guide hurried along, discoursing learnedly of argenteiferous and auriferous ore, of cleavage, dips, stratifications, country rock, calcareous tufa, limestone horse, black dyke, crystals, pyrites, mica-schist, feldspar, hornblend, porphyry, silice, conglomerate, amygdaloid, etc., until you are sure he is but a talking geological cabinet, and feel like chiseling him for specimens.

Leading us to the side of the incline again, he pointed downwards and said: "There is a lower level down there, 1,700 feet from the surface, that is only visited by the superintendent and a few workmen under heavy bonds not to

reveal what they had seen. It is hot enough down there, from the internal heat of the earth, to boil eggs"—a statement reiterated by the superintendent upon our ascent.

At last, after the lapse of two hours, tired, suffocated and also deeply humiliated at sight of so much unattainable riches, we beg to be taken out where the pure air and blessed sunlight were never more welcome. Conducting us at once to bath rooms, our guide directed us to remove our saturated garments, then filling the tubs with warm water, and supplying soap, towels, etc., he left us to luxuriate and meditate upon the wondrous trip we had made—and to fix at last upon the true description of our guide—a genial, well-bred, educated, communicative gentleman.

Mining Statistics.

I cannot forbear a few general statistics before leaving this last of the grand "Scenes in the High Sierras." The Comstock silver lode, extending for 2 miles nearly north and south under the eastern side of Mr. Davidson, was discovered in 1859. Its discovery caused an immense reflux of the tide of emigration that for ten years had flowed past it to California, and, as if by magic, uprose large towns with all the appurtenances in a mining region, of mills, saloons, theaters, dance-houses, etc., some of them furnished with a splendor unexcelled on this continent. The mines, worked now for 14 years, have yielded over \$150,000,000, weighing 4,418 tons, if silver, or 276 tons if gold; and the product of these mines is both.

The average annual yield has been \$10,714,000, but is increasing. This year it will amount to \$15,000,000, and in all probability will average, or exceed that high figure for the next fifty years. No other lode in the world has done so well. The best one of the Mexican lodes has yielded about \$666,000,000; but to raise it required 284 years' time. The lode that has yielded most of all others, the Potosi of Bolivia, in 250 years has yielded the incomprehensible sum of \$1,200,000,000; but that is less than \$5,000,000 a year. Our Comstock lode averages three times that amount already, and the improvements in machinery, aided by the monster Sutro Tunnel, may multiply that average by a high figure soon. The Sutro Tunnel, fast approaching completion, a stupendous enterprise, that a half-crazed miner only would project, is to be eight miles long; and to burrow into the base of Davidson 2,000 feet below the croppings of the Comstock, and ramify into all its lower mines. Ore-bearing ledges may be found on the way, as is most probable; then, with trains of steam-propelled ore cars, running on trestle-work over an out-flowing river of water draining the mines, and utilized at its mouth by crushing machinery, a magnificent agglomeration of mining operations may be seen here in the near future, the magnitude of which it hath not yet entered into the mind of man to conceive.

Conclusion.

The remainder of the homeward trip was concluded without other event of interest, except one of absorbing moment to the writer at the time: a severe, but brief illness, occasioned by the great difference in the labor of the lungs, between the cool, expanded ether of Davidson, so suddenly changed for the hot, dense effluvia of the mines.

We glided gently down the famous Geiger grade, made a brief visit to the startling Steamboat springs, thoughtfully wended our way through the new city of Reno, since reduced to ashes, and almost as quickly rebuilt, and along the historic old Dutch Flat road, with its ruins of hotels every mile, where once rolled the tide of commerce, now transferred to the railroad. Turning northward, through Sardine Pass, the beautiful Sierra Valley soon comes gladly to view, the largest of the emerald gems, a central brilliant in the glorious galaxy of glossy valleys that indent the eastern slope of the high Sierras.

Kind reader, your hand—I have done. I can guide you to no grander scenes, however imperfectly they have been depicted. Lake Tahoe, the Big Trees, Yo Semite Valley, and the Comstock Mines. What a quartette of wonders! Each matchless of its kind, and all connected by a pleasant ride of 200 miles.

Next season we travel northward to Shasta, Scott and Hood. Then you may witness more "Scenes from," not "in the High Sierras."

NEW AGRICULTURAL IMPLEMENT.—English patents have been granted for improvements in agricultural apparatus for thinning turnips, or other roots or plants. In these the frame is supported on a pair of wheels fixed on an axle, and there is loose on the axle a bevel wheel which is in gear with a bevel wheel on the front end of a longitudinal shaft having fixed on its back end a wheel center on which the hoes or other thinning parts are fixed. A transverse bar is fixed on the underside of the frame, and carries a pair of paring coulters or small shares for paring or slicing the sides of the drill. The hake is fixed on one side, so that the horse may walk along the furrow on one side of the drill that is being thinned, and the handles are also set to the same side, so that the agriculturist may follow in the same furrow. A light wheel is fixed adjustably to one of the handle bars to regulate the depth at which the thinners work.

The number of industrial establishments in France at present is 150,000, employing two million of hands and steam power equal to 650,000 horses. The business done amounts to twelve thousand millions of francs.

Enameling Paint.

One of the most recent inventions for painting or coating surfaces is a new paint brought out by Mr. Griffiths of Liverpool; which has, according to the *Furniture Gazette*, the property of forming a firm, impenetrable enamel on the surface of the article to which it is applied. By this means, the surface is rendered absolutely water-proof, however porous it may be. The material is consequently intended, not only for decorative purposes, but to be applied as a water-proof coating to the walls or foundations of dwelling-houses, railway arches, bridges, tunnels, viaducts, and other structures of brick, plaster, wood or iron. It is also stated that the paint is well adapted for covering the bottoms of vessels, or submerged structures of any description. Various trials have at different times been made of it. At Portobello it was tried on some iron plates, and these were immersed for three months in sea-water. At the expiration of that time the plates were taken up and examined, when it was found that they looked fresh and clean as ever, and quite free from seaweed; and, on some of the enamel being scraped off, the metal showed no signs of rust, although similar plates, treated with other kinds of paint, and immersed in the same way, were both foul and greatly oxidized. As a second test, some of this paint was applied to the steamers trading to Africa from Liverpool, and these also showed no signs of corrosion on their return. It is also said that its smooth surface gives it considerable sanitary value, and for this reason, as well as that it defies the attacks of white ants, the huts used for the soldiers in the Ashantee expedition are to be coated with it. The walls of the huts, which the paint will make smooth, and polished like glass, can be washed with soap and water, or disinfecting fluid. This enamel is also available for painting the walls of hospitals, fever wards, etc., as the porosity of the plaster is entirely stopped, thus preventing infection from lodging. It can be made of any color. White and chocolate are generally used. Various processes for the preservation of ships' bottoms from fouling have, from time to time, been brought before the public, and the patents on the subject are very numerous. The earliest of these was taken out in 1695, (No. 311), by Charles Ardesoif, for "A new invented composition, which will preserve ships from the worms, insoemuch that any ship may, by virtue of the same, continue at sea for four or five years without receiving any damage from the worms." Since that time very various methods have been employed, with greater or less success. The chief merit claimed by Mr. Griffiths for his invention, is that of simplicity of application, as it is simply spread on with a brush, like common paint, and sets quite firm in about an hour, even on wet surface.

Such descriptions are certainly very inviting, but we confess, that by dint of constant reiteration, and breaking of similar promises, usually made by interested parties, we have become somewhat skeptical. We are not told what is the composition of the new paint—we presume it to be an adaptation of slate dust, or of soluble glass—these have both been long used, and in many cases with good results. But Mr. Griffiths' paint is entirely too good.

"IMPROVED" METHOD OF PROPELLING BOATS.—We notice the following description of a propelling apparatus in general circulation. We recollect having seen already several models of this most valuable idea, and do not understand how it can be patentable: To the bar or lever of the paddle are hinged two blades in such a way that when moving forward through the water the pressure of the water will close them. These are kept from closing against each other by one or more stops, interposed between them and attached to the bar, so that as the paddle begins to make the stroke the pressure of the water may open or spread the blades so as to present the greatest possible surface. The upper ends of the bar are designed to be attached to the shafts, which are arranged so as to be operated independently of each other. The shafts are placed in line with each other, and a pintle may be attached to the end of one shaft to enter a socket in the end of the other shaft. Levers are attached to the inner parts of the shafts, extending above and below said shafts, and having handles attached to their upper ends and foot rests attached to their lower ends, so that the operator can apply hand and foot power.

COUNTIES OF CALIFORNIA.—There are over fifty-one counties in California. They range in size from 42 (San Francisco) to 23,472 (San Bernardino) square miles; and in population, by the census of 1870, from 430 to 150,000, Mono being the least and San Francisco the most populous. The average area is 3,725 square miles, which is nearly twice the size of Delaware. Their average population is about 11,000. San Bernardino is larger than West Virginia.

The estimated capacity of all the blast furnaces in the United States is 4,371,217 tons per annum.

AUGUSTA turns out yearly over one hundred thousand dollars' worth of tools for cutting granite. They are used all over the country.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 3, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

California Subordinate Granges.

[This list contains the names of Masters and Secretaries, so far as reported to us, elected to serve during the year 1874. Secretaries and others will greatly oblige us by making needful corrections.]

ALAMEDA COUNTY.

CENTERVILLE GRANGE, Centerville, Alameda Co.: JAMES SHINN, Master; J. L. BEARD, Sec'y.
EDEN GRANGE, Eden, Alameda Co.: THOS. HELLER, Master; WM. OWEN, Sec'y.
LIVERMORE GRANGE, Livermore Valley, Alameda Co.: DANIEL INMAN, Master; F. R. FASSETT, Sec'y.
TEMESCAL GRANGE, Oakland, Alameda Co.: E. S. CARR, Master; JOHN COLLINS, Sec'y.

BUTTE COUNTY.

CHICO GRANGE, Chico, Butte Co.: W. M. THORP, Master; J. W. SCOTT, Sec'y.
NORD GRANGE, P. O. Nord, Butte Co.: G. W. COLBY, Master; ALBERT CARMEN, Sec'y.

COLUSA COUNTY.

ANTELOPE GRANGE, Colusa, Colusa Co.: H. A. LOGAN, Master; A. T. WELTON, Sec'y.
CENTRAL GRANGE, P. O. Colusa, Colusa Co.: J. P. KIMBLELL, Master; W. G. SAUNDERS, Sec'y.
COLUSA GRANGE, Colusa, Colusa Co.: W. K. ESTELL, Master; R. JONES, Sec'y.
FRESHWATER GRANGE, P. O., Colusa, Colusa Co.: I. H. DUBILAM, Master; R. A. WILSEY, Sec'y.
GRAND ISLAND GRANGE, Sycamore P. O., Colusa Co.: J. J. HOOK, Master; J. D. HARRIS, Sec'y.
PLAZA GRANGE, Olimpo, Colusa Co.: F. C. GRAVIS, Master; W. F. GREEN, Sec'y.
PRINCETON GRANGE, Princeton, Colusa Co.: A. D. LOGAN, Master; R. R. RUSH, Sec'y.
FUNK SLOUGH GRANGE, Table Bluff, Colusa Co.: E. C. HUNTER, Master; GEO. B. HARDEN, Sec'y.
SPRING VALLEY GRANGE, Spring Valley, Colusa Co.: D. H. ARNOLD, Master; L. T. HAYMAN, Sec'y.
UNION GRANGE, P. O., Princeton, Colusa Co.: M. DAVIS, Master; ISAAC L. McDaniel, Sec'y.
WILLOWS GRANGE, P. O., Princeton, Colusa Co.: J. W. ZUMWALT, Master; GEO. T. HICKLIN, Sec'y.

CONTRA COSTA COUNTY.

ANTIOCH GRANGE, Antioch, Contra Costa Co.: J. P. WALTON, Master; J. D. DABBY, Sec'y.
DANVILLE GRANGE, Danville, Contra Costa Co.: CHAS. WOOD, Master; JOHN B. SYDNOR, Sec'y.
POINT OF TIMBER GRANGE, Antioch P. O., Contra Costa Co.: R. G. DEAN, Master; J. E. W. CAREY, Sec'y.
WALNUT CREEK GRANGE, Walnut Creek, Contra Costa Co.: NATHANIEL JONES, Master; WM. K. DALY, Sec'y.

EL DORADO COUNTY.

PILOT HILL GRANGE, Pilot Hill, El Dorado Co.: P. D. BROWN, Master; A. J. BAYLEY, Sec'y.

FRESNO COUNTY.

ADAMS GRANGE, Big Dry Creek, Fresno Co.: T. P. NELSON, Master; W. H. WRIGHT, Sec'y.
BORDEN GRANGE, Borden, Fresno Co.: J. W. A. WRIGHT, Master; J. S. PICKENS, Sec'y.
FRESNO GRANGE, Fresno City: H. W. FASSETT, Master; F. DRY, Sec'y.
GARRETSVILLE GRANGE, King's River: W. J. HUTCHINSON, Master; W. W. PHILLIPS, Sec'y.

HUMBOLDT COUNTY.

KIVELATTI GRANGE, Arcata, Humboldt Co.: LEWIS R. WOOD, Master; D. D. AVERILL, Sec'y.
TABLE BLUFF GRANGE, Table Bluff, Humboldt Co.: JACKSON SAWYER, Master; B. H. C. POLLARD, Sec'y.
FERDALE GRANGE, Ferndale, Humboldt Co.: F. L. BOYNTON, Master; G. W. GIFFITH, Sec'y.
ELK RIVER GRANGE, Eureka, Humboldt Co.: THEODORE MEYER, Master; D. J. HERRITT, Sec'y.
ROHNERTVILLE GRANGE, Rohnertville, Humboldt Co.: B. T. JAMESON, Master; H. S. CASE, Secretary.

KERN COUNTY.

BAKERSFIELD GRANGE, Bakerfield, Kern Co.: S. JEWETT, Master; JEROME TROY, Secretary.
KERN ISLAND GRANGE, P. O. Bakerfield, Kern Co.: P. D. ROSS, Master; J. F. GORDON, Sec'y.
NEW RIVER GRANGE, P. O. Bakerfield, Kern Co.: JOHN G. DAWES, Master; JAR. DIXON, Secretary.

LAKE COUNTY.

GUENOC GRANGE, Guenoc, Lake Co.: H. A. OLIVER, Master; A. A. RITCHIE, Sec'y.
KELSEYVILLE GRANGE, Kelseyville, Lake Co.: D. P. SHATTUCK, Master; T. OMMONT, Sec'y.
LAKEPORT GRANGE, Lakeport, Lake Co.: C. CUTTER, Master; N. PHELAN, Sec'y.
LOWER LAKE GRANGE, Lower Lake, Lake Co.: A. E. NOEL, Master; H. R. STANLEY, Sec'y.
UPPER LAKE GRANGE, Upper Lake, Lake Co.: D. V. THOMPSON, Master; D. Q. MCCARTY, Sec'y.

LOS ANGELES COUNTY.

ALLIANCE GRANGE, El Monte, Los Angeles Co.: S. S. GEEVER, Master; W. Marshall, Sec'y.
LOS ANGELES GRANGE, Los Angeles Co.: T. A. GAREY, Master; T. D. HANCOCK, Sec'y.
AZUSA GRANGE, El Monte, Los Angeles Co.: W. W. MAXEY, Master; J. C. PRESTON, Sec'y.
COMPTON GRANGE, Compton, Los Angeles Co.: C. W. COLTREN, Master; J. A. WALKER, Sec'y.
EL MONTE GRANGE, Los Angeles Co.: G. C. GIBBS, Master; P. O., Los Angeles, J. H. GILBY, Sec'y; P. O., El Monte.
ENTERPRISE GRANGE, Los Angeles Co.: A. M. SOUTHWORTH, Master; W. T. HENDERSON, Sec'y.
EUREKA GRANGE, Spadra, Los Angeles Co.: T. O. TANNER, Master; JOSEPH WRIGHT, Sec'y.
FAIRVIEW GRANGE, Anaheim, Los Angeles Co.: EDWARD EYER, Master; D. EDWIN MILLER, Sec'y.
FLORENCE GRANGE, Los Angeles Los Angeles Co.: JOHAR RUSSELL, Master; WILLIAM PORTER, Sec'y.
FRUIT LAND GRANGE, Tustin City, Los Angeles Co.: A. B. HAYWARD, Master; E. R. NICOLE, Sec'y.
LOS NELTOS GRANGE, Los Angeles Co.: E. B. BRANDON, Master; P. O., Los Angeles; J. F. MARQUIS, Sec'y; P. O., Anaheim.
NEW RIVER GRANGE, Los Neltos P. O., Los Angeles Co.: R. B. GOTHRIE, Master; D. S. WARLOW, Sec'y.
ORANGE GRANGE, Los Angeles Co.: JOSEPH BEACH, Master; J. W. ANDERSON, Sec'y.
SILVER GRANGE, Los Neltos, Los Angeles Co.: H. L. MONTGOMERY, Master; W. P. McDONALD, Sec'y.
WESTMINSTER GRANGE, (Anaheim), P. O. M. B. CRAIG, Master; HENRY STEPHENS, Sec'y.

MARIN COUNTY.

NICASIO GRANGE, Nicasio, Marin Co.: H. T. TAFT, Master; J. W. NOBLE, Sec'y.
POINT REYES GRANGE, Point Reyes, Marin Co.: A. H. STEVENSON, Master; JOHN A. UPTON, Sec'y.
TOMALES GRANGE, Tomales, Marin Co.: WM. VANDERBILT, Master; R. H. PRINCE, Sec'y.

MENDOCINO COUNTY.

POTTER VALLEY GRANGE, Pomo, Mendocino Co.: J. MEWHINNEY, Master; T. McCOWAN, Sec'y.
UKIAH GRANGE, Ukiah City, Mendocino Co.: W. D. WHITE, Master; A. O. CARPENTER, Sec'y.

MERCED COUNTY.

HADGER FLAT GRANGE, Kreyenhagen's P. O., Merced Co., via Gilroy: W. W. PARLIN, Master; ALFRED F. MERRITT, Sec'y.
COTTONWOOD GRANGE, Hill's Ferry, Merced Co.: J. L. CRITTENDEN, Master; J. J. DOYLE, Sec'y.
HOPETON GRANGE, Hopeton, Merced Co.: JOHN RUDDEL, Master; T. EAGLESON, Sec'y.
LOS BANOS GRANGE, Kreyenhagen's P. O., Merced Co., via Gilroy: WM. M. VINEY, Master; H. C. WAINWRIGHT, Sec'y.
MERCED GRANGE, Merced, Merced Co.: W. E. ELLIOT, Master; F. TADLOCK, Sec'y. Agent, W. P. FOWLER.
SNELLING GRANGE, Snelling, Merced Co.: DANIEL YEIZER, Master; W. L. HAMLIN, Sec'y.

MONTEREY COUNTY.

HOLLISTER GRANGE, Hollister, Monterey Co.: J. D. FOWLER, Master; S. F. COWAN, Sec'y. Agent, J. D. FOWLER.
PAJARO GRANGE, P. O., Watsonville, Santa Cruz Co.: D. M. CLOWEN, Master; G. W. ROADHOUSE, Sec'y and Agent.

SALINAS GRANGE, Salinas, Monterey Co.: N. L. ALLEN, Master; SAMUEL CASIDY, Sec'y. Agent, W. L. CARPENTER.

NAPA COUNTY.

CALISTOGA GRANGE, Calistoga, J. N. BENNETT, Master; I. HOPKINS, Sec'y.
NAPA GRANGE, Napa City, Napa Co.: W. H. BAXTER, Master; J. WALTER WARD, Sec'y. Agent, W. A. FISHER.
ST. HELENA GRANGE, St. Helena, Napa Co.: J. H. ALLISON, Master; J. L. EDWARDS, Sec'y.
YOUNGVILLE GRANGE, Youngville, Napa Co.: J. M. MAYFIELD, Master; FRANK GRIFFIN, Sec'y. Agent, J. M. MAYFIELD.

SACRAMENTO COUNTY.

ELK GROVE GRANGE, Elk Grove, Sacramento Co.: OBADIAH S. FREEMAN, Master; DELOS GAGE, Sec'y.
ENTERPRISE GRANGE, P. O. Brighton, Sacramento Co.: J. M. BELL, Master; MORRIS TOOMEY, Sec'y.
FLORIN GRANGE, San Joaquin Township, Sacramento Co.: CALDER ARNOLD, Master; WILLIAM SCHOFIELD, Sec'y.
FRANKLIN GRANGE, Georgetown, Sacramento Co.: AMOS ADAMS, Master; P. K. BEARLEY, Sec'y.
SACRAMENTO GRANGE, No. 12, Sacramento, Sacramento Co.: W. S. MANLOVE, Master; A. S. GREENLAW, Sec'y.

SAN BERNARDINO COUNTY.

SAN BERNARDINO GRANGE, P. O., Riverside, San Bernardino Co.: E. G. BROWN, Master; J. F. GOULD, Sec'y, San Bernardino.

SAN JOAQUIN COUNTY.

ATLANTA GRANGE, Morano, San Joaquin Co.: W. T. CAMPBELL, Master; PUTMAN VISHES, Sec'y. P. O., Morano, San Joaquin Co.
CASTORIA GRANGE, Lathrop, San Joaquin Co.: SEWALL GOWER, Master; L. J. EDWARDS, Sec'y.
LINDEN GRANGE, Linden, San Joaquin Co.: JOHN WARLEY, Master; JAMES WARLEY, Sec'y.
LIBERTY GRANGE, Acampo, San Joaquin Co.: JUSTUS SCHOMP, Master; J. J. EMBLE, Sec'y.
LODI GRANGE, Lodi, San Joaquin Co.: J. W. KEARNEY, Master; MRS. NELLIE BOUCH, Sec'y.
LOCKFORD GRANGE, Lockford, San Joaquin Co.: G. O. HOLMAN, Master; SOL. S. STEWART, Sec'y.
RUSTIC GRANGE, Lathrop, San Joaquin Co.: J. A. SHEPHERD, Master; J. A. WILCOX, Sec'y.
STOCKTON GRANGE, Stockton, San Joaquin Co.: WM. L. OVERHIER, Master; WM. G. PHELPS, Sec'y.
WEST SAN JOAQUIN GRANGE, Ellis, San Joaquin Co.: M. LAMBERS, Master; GEO. E. MCSTAY, Sec'y.
WILLOW GRANGE, Willow, School House, San Joaquin Co.: JOH. LEIGHTON, Master; A. B. MUNSON, Sec'y.
WOODBRIDGE GRANGE, Woodbridge, San Joaquin Co.: J. L. HUBSON, Master; A. S. THOMAS, Sec'y.

SAN LUIS OBISPO COUNTY.

ARROYO GRANDE GRANGE, Arroyo Grande, San Luis Obispo Co.: W. H. NELSON, Master; D. F. NEWSON, Sec'y.
CAMBRIA GRANGE, Cambria, San Luis Obispo Co.: G. H. IVINS, Master; HERBERT OLMSTEAD, Sec'y.
MORO CITY GRANGE, Moro, San Luis Obispo Co.: A. J. MOTHERHEAD, Master; H. Y. STANLEY, Sec'y. Agent, A. J. MOTHERHEAD.
OLD CREEK GRANGE, Old Creek, San Luis Obispo Co.: ISAAC FLOOD, Master; R. M. PRESTON, Sec'y.
SAN LUIS OBISPO GRANGE, San Luis Obispo, San Luis Obispo Co.: WM. JACKSON, Master; E. L. REED, Sec'y.

SAN MATEO COUNTY.

PESCADERO GRANGE, Pescadero, San Mateo Co.: B. V. WEEKS, Master; H. B. SPRAGUE, Sec'y.

SANTA BARBARA COUNTY.

CARPENTERIA GRANGE, Carpinteria, Santa Barbara Co.: O. N. CADWELL, Master; G. E. THURMAN, Sec'y.
CONFIDENCE GRANGE, Guadalupe, Santa Barbara Co.: A. COPELAND, Master; J. T. ARSTIN, Sec'y.
SANTA BARBARA GRANGE, Santa Barbara, S. B. Co.: O. L. ARBOTH, Master; C. KENNEY, Sec'y.
SANTA MARIA GRANGE, Santa Barbara Co.: P. O. Suey Station, San Luis Obispo Co.: JOEL MILLER, Master; M. D. MILLER, Sec'y.

SAN BERNARDINO COUNTY.

RIVERSIDE GRANGE, Riverside, P. O. E. G. BROWN, Master; W. W. KIMBALL, Sec'y.

SANTA CLARA COUNTY.

SAN JOSE GRANGE, No. 10, San Jose, Santa Clara Co.: G. W. HENNING, Master; MISS JETTORA WATKINS, Sec'y. San Jose. Agent, J. W. HERNDON.
SANTA CLARA GRANGE, Santa Clara P. O., Santa Clara Co.: J. W. HENNING, Master; L. A. WILCOX, Sec'y.
SARATOGA GRANGE, Saratoga, Santa Clara Co.: FRANCIS DRESSER, Master; MISS JENNIE FARWELL, Sec'y.

SANTA CRUZ COUNTY.

GEORGIANA GRANGE, Georgiana, Solano Co.: F. M. KITTBELL, Master; GEO. A. KNOTT, Sec'y.
SANTA CRUZ GRANGE, Santa Cruz: G. C. WARDWELL, Master; J. V. MORGAN, Sec'y.
WATSONVILLE GRANGE, Watsonville, J. McCALLAM, Master; A. F. RICHARDSON, Sec'y.

SOLANO COUNTY.

DENVERTON GRANGE, Denverton, Solano Co.: J. B. C. BRINGTON, Master; G. C. ARNOLD, Sec'y.
DIXON GRANGE, Dixon, Solano Co.: J. C. MERRYFIELD, Master; JAMES A. ELON, Sec'y.
ELMIRA GRANGE, Vaca Station, Solano Co.: J. A. CLARK, Master; M. D. COOPER, Sec'y.
ROCKVILLE GRANGE, Cordelia, Solano Co.: W. A. LATTIN, Master; J. R. MORRIS, Sec'y.
SUISUN VALLEY GRANGE, Suisun, Solano Co.: R. C. HAILE, Master; A. T. HATCH, Sec'y.
VACAVILLE GRANGE, Vacaville, Solano Co.: E. R. THURBER, Master; OSCAR DOBBINS, Sec'y.
VALLEJO GRANGE, Vallejo, Solano Co.: G. O. PEARSON, Master; CHAS. B. DEING, Sec'y.

SONOMA COUNTY.

BENNETT VALLEY GRANGE, Santa Rosa, Sonoma Co.: J. H. DE THURM, Master; H. H. PRANK, Sec'y.
BLOOMFIELD GRANGE, Bloomfield, Sonoma Co.: WM. H. WHITE, Master; A. B. GLOVER, Sec'y.
BODEGA GRANGE, Bodega, Sonoma Co.: J. H. HEGLER, Master; W. SMITH, Sec'y.
CLOVERDALE GRANGE, Cloverdale, Sonoma Co.: CHAS. H. COOLEY, Master; J. B. COOLEY, Sec'y.
GEYSERVILLE GRANGE, Geyserville, Sonoma Co.: CALVIN M. BOSWORTH, Master; R. R. LEIGH, Sec'y.
HEALDSBURG GRANGE, Healdsburg, Sonoma Co.: CHARLES ALFENOR, Master; MISS S. A. PECK, Sec'y. Agent, T. H. MERRY.
PETALUMA GRANGE, Petaluma, Sonoma Co.: L. W. WALKER, Master; D. G. HEALD, Sec'y. Agent, W. M. HILL.
SANTA ROSA GRANGE, Santa Rosa, Sonoma Co.: GEO. W. DAVIS, Master; J. A. OBIEN, Sec'y.
SONOMA GRANGE, Sonoma Co.: P. O., Sonoma, Sonoma Co.: WM. MCP. HILL, Master; W. A. BERRY, Sec'y.
SEBASTOPOL GRANGE, Sebastopol, Sonoma Co.: M. C. HICKS, Master; GEORGE FORKINGTON, Sec'y.
TWO ROCKS GRANGE, Two Rocks, Sonoma Co.: JOHN R. DOSS, Master; JOHN H. FREEMAN, Sec'y.
WINDSOR GRANGE, Windsor, Sonoma Co.: A. B. NALTEY, Master; J. H. MCCLELLAND, Sec'y.

STANISLAUS COUNTY.

BONITA GRANGE, Oro's Landing, Stanislaus Co.: J. W. TREADWELL, Master; A. B. CROOK, Sec'y.
OERES GRANGE, Westport Precinct, Stanislaus Co.: W. B. HARR, Master; L. N. WHITMORE, Sec'y.
GRAYSON GRANGE, Graysen, Stanislaus Co.: I. G. GARDNER, Master; GEO. H. COPELAND, Sec'y.
ORISTIMBA GRANGE, Hill's Ferry, Stanislaus Co.: W. J. MILLER, Master; THOS. A. CHAPMAN, Sec'y.
SALIDA GRANGE, No. 8, Modesto P. O., Stanislaus Co.: J. D. REYBURN, Master; A. H. ELMORE, Sec'y.
STANISLAUS GRANGE, Modesto, Stanislaus Co.: J. D. SPENCER, Master; VITAL E. BANOS, Sec'y.
TURLOCK GRANGE, Turlock, Stanislaus Co.: A. S. FULKEITH, Master; JOHN A. HENDERSON, Sec'y.
WATERFORD GRANGE, Waterford, Stanislaus Co.: R. R. WARDER, Master; W. C. COLLINS, Sec'y.

SUTTER COUNTY.

SUTTER GRANGE, Meridian, Sutter Co.: W. C. SMITH, Master; M. C. HUNGERFORD, Sec'y.
YUBA CITY GRANGE, Yuba City, Sutter Co.: T. B. HULL, Master; S. R. CHANDLER, Sec'y.

TEHAMA COUNTY.

RED BLUFF GRANGE, (Red Bluff, R. H. BLOKSON, Master; JOHN CURTIS, Sec'y.

TULARE COUNTY.

CHRISTMAS GRANGE, P. O., Visalia, Tulare Co.: A. B. COREY, Master; W. H. STUART, Sec'y.
DEEP CREEK GRANGE, Farmersville: W. G. PENNEBARE, Master; F. G. JEFFERSON, Sec'y.
FRANKLIN GRANGE, Kingston, F. WYRUCK, Master; A. B. CROWELL, Sec'y.
LAKE GRANGE, Kingston: M. S. BABCOCK, Master; [E. J. BENEDICT, Sec'y].
TULE RIVER GRANGE, Porterville, Tulare Co.: G. A. WILLIAMSON, Master; N. T. BLAIR, Sec'y.
VISALIA GRANGE, Visalia, Tulare Co.: WILEY WATSON, Master; H. G. HIGBIE, Sec'y.

VENTURA COUNTY.

BATOCY GRANGE, P. O., San Buenaventura, Ventura Co.: MILTON WASHON, Master; E. A. DUVAL, Sec'y.

YOLO COUNTY.

ANTELOPE GRANGE, W. J. OLARK, Master; O. L. N. VAUGHN, Sec'y. P. O. Antelope, Yolo Co.
BUCKEYE GRANGE, Yolo Co.: P. O., Buckeye, Yolo Co. WM. SIMS, Master; J. G. ALLEN, Sec'y.
CACHO CREEK GRANGE, Cacho Creek, Yolo Co.: D. B. HURLBERT, Master; L. D. STEPHENS, Sec'y.
CAPAY VALLEY GRANGE, Capay, Yolo Co.: R. R. DARBAY, Master; P. M. SAVAGE, Sec'y.
DAVISVILLE GRANGE, Davisville, Yolo Co.: CHAS. E. GREEN, Master; JOHN KRAIER, Sec'y.
HUNGRY HOLLOW GRANGE, P. O., Yolo, Yolo Co.: G. L. PARKER, Master; C. O. PERKINS, Sec'y.
WEST GRAFTON GRANGE, Yolo, Yolo Co.: A. W. MORRIS, Master; GEO. W. PARKS, Sec'y.
YOLO GRANGE, Woodland, Yolo Co.: W. M. JACKSON, Master; D. SCHINDLER, Sec'y. Agent, W. M. JACKSON.

YUBA COUNTY.

MARYSVILLE GRANGE, Marysville, Yuba Co.: O. G. BOCKIUS, Master; JAR. M. CUTTS, Sec'y.

Deputies who organize new Granges are requested to send the list of officers, and the names of all charter members, with other facts of interest, for free publication in the RURAL PRESS, as early as possible.

GRANGE CORRESPONDENCE. — We are still almost overwhelmed with correspondence from the different Granges, and from Patrons who communicate for the good of the Order and the agricultural interest generally. Notwithstanding, we are condensing to a large extent, as several of our correspondents, to-day, will observe; we have, nevertheless, quite a pile of letters on hand which must lie over. We acknowledge reports from following Granges: Castoria, Santa Clara, Windsor and Bloomfield; also, a communication from Inyo county, saying that several Granges might be organized there; "C. A. L., Paradise Valley; "D. C. A., of Denverton Grange; "J. W. C., of Humboldt county, and a letter from Bro. Wright in relation to the joint action of the State Grange Executive Committee and the Mechanics' Assembly of this City in the matter of the Agricultural Department of the State University.

PATRONS OF CALIFORNIA.—I have communicated the "annual words" for the year 1874 to Brother W. H. Baxter General Deputy and Worthy Secretary of California State Grange. He will communicate the same, orally, to so many Deputies as will afford him the opportunity, and they will in time communicate to the Masters in their several districts.

J. M. HAMILTON,
Master of California State Grange.
Guenoc, January 26th, 1874.

THE BETTER KNOWN, THE MORE GENERALLY APPROVED.—It rarely happens that the farmer who hears the objects of the Patrons of Husbandry fully explained by a competent man, hesitates to place himself and family fully under its protecting wings, by becoming a member of the Order. Fewer still—indeed, we have not yet heard of a single individual, who, having once taken that step, has become discontented with his choice.

DO YOU WANT A GRANGE?—If any farming neighborhood is desirous of having a Grange instituted in its midst, all that is necessary is for some one to write to State Secretary Wm. H. Baxter, of this city, who will furnish you all the desired information to that end, and secure the attendance of a proper deputy to effect such an organization.

GOOD FROM ALL.—The Patrons of husbandry have drawn the very choicest ideas from the mystic rites of the oldest and best of Orders to give form and beauty to this latest and most useful of all fraternal associations ever devised.

Grange Membership.

EDITORS PRESS:—I would like to ask a few questions in reference to the advisability of admitting professional men into the Granges. I wish to be informed whether it is in accordance with the spirit of the National By-Laws to allow any but an agriculturist to enter. The By-Laws say that any person of a certain age, engaged in agricultural pursuits is eligible for membership; but does not say that no others shall be allowed admittance.

Hence we hear of a professor in this Grange, minister in that, and a doctor in still another. If we allow these men to enter, what right have we to prevent a commission merchant from joining? Are the interests of one any more in common with farmers, than the others?

I have noticed different articles in your paper cautioning Granges from admitting mechanics. Why not be as strict in regard to other outsiders? I think we are decidedly injuring ourselves, by not keeping within our own circle. One object of the Grange was to show that the farmers were sufficiently intelligent and capable of managing and controlling their own affairs. But by admitting these men, who by their superior education soon gain the Master's chair, we are proving the contrary; instead of self-sustaining we are weak and dependent.

This is just what the commission men desire; the weak spot that will soon undermine and overthrow our walls. As they come gradually creeping in, and creeping in, we are daily losing power, and in five year's time the reins of government will be in the hands of these scientific gentlemen, and the poor farmer back in the same position as before the organization of Granges.

I think the By-Laws should state positively, whether or not any but an actual farmer could become a member. If so, it would prevent a deal of argument and ill-feeling among the members. I would very much like to hear some remarks from other Patrons who entertain different views on the subject.

A GRANOER.

The National Grange—Its Organization.

[The following letter was written by Brother Wright, one of California's delegates to the National Grange, as he was crossing the Sierras, on his way thither. We expect to receive from Brother W. as early and full reports of the doings of that body, as will be permitted to reach the public press. These reports will no doubt be interesting and important to both the membership of the Order, and to the public at large.]

EDITORS PRESS:—On the eve of the important session of the National Grange which convenes in St. Louis, Wednesday, Feb. 4th, a short review and some remarks concerning it, jotted down while on the way, may not be out of place.

The National Grange is composed, as many of your readers know, of Masters and Past Masters of State Granges and their wives, if fifth degree members, as well as those who were officers of the National Grange, before the organization of State Granges.

This body meets annually, although its officers are elected once in three years.

Last year it met in Washington; but on account of the growth of the Order, a more central position has been selected for the present meeting.

Last year but ten State Granges were represented, viz: Iowa, Minnesota, Illinois, Indiana, Wisconsin, Vermont, South Carolina, Nebraska, Mississippi and Kansas. At this, the seventh annual meeting, at least thirty-one State Granges will be represented, or all except Connecticut, Delaware, Maine, Maryland, Nevada, New Hampshire and Rhode Island, where State Granges have not yet been organized.

Most of the States having but one representative, the regular membership is not likely to exceed forty male members, and perhaps twenty-five or thirty ladies. The delegates from the Pacific Coast are the Master of Oregon and Washington State Grange and the Master and Past Master of California.

While, at present, only four degrees are conferred in Subordinate Granges, the fifth degree is conferred in State Granges, the sixth in the National Grange, and the seventh, or highest degree, in the National Council. The latter is composed of all members of the National Grange who have served one year and then apply and are elected to membership in the Council.

This body has charge of the secret work of the Order, and forms a court of impeachment for all officers of the National Grange.

The present meeting will naturally be watched with deep interest by all members of the Order and their friends. It is considered the most important meeting of agriculturists that has ever assembled in this country. May true wisdom guide its counsels, and may nothing but good result from all the measures it may adopt—not for our membership alone, but for all our people, and all the solid interests of the country at large—While I have been writing this, the cars have borne us from the mild spring air of our plains to the snow drifts of the Sierras. Even here, near Blue cañon, 27 miles from the summit, the snow is spread to a general depth of at least four feet throughout the mountain forests. In places it is piled eight or ten feet deep. Around the Summit Hotel it is full fifteen feet.

Though it is now nearly nine o'clock at night, we can see distinctly for some distance down the deep cañons, and along the mountain ridges, by aid of the bright moonlight transmitted through the clouds and reflected by the unbroken sheet of snow.

J. W. A. W.

C. P. R. R., Jan. 30, 1874.

Tule River Grange.

At a meeting of Tule River Grange, P. of H., held on the 24th of January, 1874, the following resolutions, presented by the Chairman of the Board of Trustees, were unanimously adopted:

Resolved, That Tule River Grange P. of H., on and after the first Saturday in February, 1874, initiate applicants for membership into our Order in the first degree only at the first meeting of each successive month; in the second degree at the second meeting of each successive month, and so on to the end of each month, or until the four degrees have been conferred in numerical rotation.

Resolved, That we warmly commend, and to the extent of our limited pecuniary means will cordially sustain Bros. Dewey & Ewer, of the PACIFIC RURAL PRESS, for the frank and able manner in which they sustain the interests of the Patrons of Husbandry; and that we will, for our own agricultural benefit, as well as the enlarged circulation of that paper, subscribe for the same at our earliest possible convenience.

Resolved, That we hereby fraternally recommend to all good Patrons of Husbandry, everywhere, the careful perusal and weekly reading of said RURAL PRESS, knowing from copies read in our Grange that we are highly justified in making this recommendation.

Resolved, That we will, so soon as charter and seal is secured, avail ourselves, to the greatest possible extent, of the benefit of the Grange Purchasing Agency of the State of California, thereby striving to place in the hands of the farmers—the lords of the soil and the direct supporters of our race and their institutions—that of which they have been so long deprived, and which they, of all classes, so justly deserve—namely, the highest prices paid for produce raised, and the lowest prices for articles purchased.

Resolved, That we, as Patrons of Husbandry, will, to the greatest possible extent, exert our intellectual and pecuniary ability to bring ourselves into direct commercial relations with the manufacturer and laborer—the real producers of our Nation—thereby limiting the middlemen or drones of society to the lowest possible numbers.

Resolved, That a copy of these resolutions be forwarded to the PACIFIC RURAL PRESS for publication.

N. T. BLAIR, Sect.

THANKS TO S. R. Chandler, Yuba City, for information and business attention.

From the Granges.

GRAND ISLAND GRANGE, Colusa Co. James C. Wilkins, Secretary, writes: "Our Grange was organized on the 10th of June, with a full charter list. We number at present about 60, and are receiving propositions at the rate of 25 per month, and promise to be before long one of the Granges of the State. Up to the present time we have been laboring under many disadvantages, among which are a suitable place in which to meet. We hope to be able to build a comfortable hall soon. As one of the results of our organization here, we have a farmers' co-operative store, which, while the Grange has nothing to do with it as a Grange, none can become stockholders but Patrons. It is working like a charm in reducing the tariff heretofore put on as profits by our merchants. The same company propose building workshops for blacksmithing and wagon-making and warehouses for storing our wine. Crops in the vicinity are looking well. Farmers, owing to the late rains, are somewhat backward with their work; yet all are cheerful and are content to have it rain, even if they are compelled to feed more hay and barley, confidently expecting a large yield from grain sown as late as March. We shall confer the fourth degree on Saturday, January 31st, at which time we expect a full attendance. I shall take that opportunity to present the merits of the RURAL PRESS to our members, and I shall do so cheerfully, as I believe your paper is more exclusively than any other on this coast devoted to the interests of the agriculturists. Our officers elected for the present year are as follows: Wm. Ogden, M.; Thos. Eddy, O.; Isaac Howell, C.; James Herm, L.; Jas. C. Wilkins, Jr., Sec.; John Welch, G. K.; T. Thomas, S.; J. J. Hikok, A. S.; Mrs. M. V. Welch, Ceres; Miss Mary Brown, Flora; Miss Sobia Davis, Pomona."

SEBASTAPOL GRANGE, Sonoma county. Bro. M. C. Hicks, Master, writes under date of Jan. 24: "We had a good time at our meeting today; graduated a class of nineteen and enjoyed a harvest feast, which both members and invited guests seemed to enjoy. The latter appeared to leave well satisfied that the Grange was a good thing, particularly its harvest feasts. Well, there does seem to be something about it that is very enticing, for we have already 25 more applications on hand for next month, and expect an addition to that number next Saturday. More than this, we are getting the very best material within the reach of our Grange. We are not taking the rag-tag and bob-tails of creation into our Order. We shall continue the work of initiation and instruction until the 1st of April, when work on the farm will compel us to change our weekly to regular meetings, only once in two weeks, and those chiefly for business purposes only. Our business for next Saturday will be chiefly for investigating the matter of starting a Grange store. This brings me to a point on which we are not thoroughly satisfied—how to proceed to make a legal contract, as a Grange with an outside or inside party, to carry on a store for the benefit of the Grange. Is it necessary that a Grange should become an organized body to make a legal and binding contract? [In answer to the last question we would say yes. There is much that might be said in regard to the matter of Grange stores and Co-operation generally, both among Granges exclusively, and in connection with outsiders. We will endeavor to refer to this matter somewhat at length next week.—Eds.]

CAPAY VALLEY GRANGE, Yolo county. P. M. Savage, Secretary, writes as follows: "In announcing to you the prosperity of our Grange I will say that our progress has been slow, but, I think sure. We organized with 13 Charter Members, and we now number about 35. Owing to the inclemency of the weather and the bad condition of our hall, we have not as yet enjoyed the pleasures of the harvest feasts, but as the beautiful spring days approach, and the roads begin to dry up, so that our hall can be put in a suitable condition, we mean not to be surpassed by any of our sister Granges in this, one of the most pleasant features connected with the working of our Order. Our installations took place the 10th of this month and was largely attended, and highly appreciated by all present. All were invited to attend. Our worthy brother, William Sims, Master of Buckeye Grange, assisted by S. A. Howard, Overseer of Cache Creek Grange, officiated as the installing officers. There is a good prospect of our numbers increasing rapidly during the spring months, which progress I shall be pleased to announce at some future time."

WOODBIDGE GRANGE, San Joaquin Co. Secretary A. S. Thomas writes: I shall endeavor to get you a good list of new subscribers from our members. No farmer should be without the RURAL PRESS, and every Granger should contribute toward its support, if it is only for the information he may get through it in regard to the history, workings and progress of the Order, and its warm support of and co-operation with the Granges. In addition to this, however, they also have a first class agricultural journal, containing valuable information for every farmer.—[We are under much obligation to our brother for his earnest efforts in behalf of the RURAL, and most sincerely hope he may not be disappointed in the good that will flow from it to the Order and to the farming interest everywhere.—Eds.]

YUBA GRANGE, Yuba City, is growing rapidly in numbers, and according to the Sutter Banner was to have initiated 15 new members on Saturday last.

BUCKEYE GRANGE, Yolo Co. R. R. Darby, Master of Capay Valley Grange, writes: I had the pleasure of meeting with Buckeye Grange on the 17th inst., for the purpose of installing their officers. Although the morning was unfavorable, the rain of the night before having filled the sloughs of that vicinity to their most capacity, and the rain still falling at intervals, the brothers and sisters were not in the least discouraged, but turned out in full force. Grange met at 11 o'clock, and went through with the ordinary business, after which I conferred the fourth degree upon eight brothers and two sisters. We then proceeded to install the officers. This being done, we adjourned to a hall on the ground floor to partake of the Harvest Feast,—and a feast it was, truly, such a one as the ladies of Buckeye know so well how to get up. Not less than 150 persons partook of the repast and there was plenty for as many more. This Grange is truly in fine working order. It has an efficient set of officers and a membership that will compare favorably in point of intelligence with any Grange with which it has been my privilege to meet. I can say to any brother or sister who wishes to meet with a real live Grange, that if they visit Buckeye they will not be disappointed.

ANTIOCH GRANGE, Contra Costa Co.—James D. Darby, Sec'y, writes—"A spray from the great wave of reformation, which for the last few years, has been beating so heavily against the foundation of monopolies in the Eastern States, and for the last few months in our own fair homes, has at last reached the farmers of Antioch and vicinity, and impressed most forcibly upon their minds the great fact that self-preservation is the first law of Nature, and that a general effort for disenthralment is the only alternative for the farming community. The consequence has been that a determined effort in that direction is now being made. We were organized into a Grange, December 27th, by Bro. W. H. Baxter, with a full charter membership. Up to January 27th, we had met twice, and though still new and awkward in the work, are willing and anxious to learn. Our officers installed, are as follows:—J. P. Walton, M.; William Davison, O.; Josiah Wills, L.; W. J. Smith, S.; W. G. Sellers, A. S.; W. W. Smith, C.; G. W. Kimball, T.; J. D. Darby, Sec'y; D. K. Benedict, G. K.; Mrs. D. K. Benedict, Ceres; Mrs. W. G. Sellers, Pomona; Mrs. W. W. Smith, Flora; Miss Alice Wills, L. A. S."

BONITA GRANGE.—A. B. Crook, Secretary, writes as follows: "Our Grange is still young and small, but in a flourishing condition. Gradually increasing in members, with everything working harmoniously and smoothly. Could not expect to do more than we are doing, in regard to increasing our numbers. In the first place, our country here is generally held in pretty large farms; consequently, not very thickly settled. In the next place, it has rained so much that the roads are almost impassable, making it very difficult to get out. Nevertheless, we have met every week, with one exception, and our meetings have been well represented. Bonita Grange holds its meetings at Bonita school-house, six miles west of Crow's Landing."

[Bro. C. will notice that the balance of his communication was anticipated, in substance, by a previous correspondence which appeared last week, under the head of "Location of Granges."]

TABLE BLUFF GRANGE, Humboldt county. B. W. C. Pollard, Secretary, writes:—"We are getting along very nicely with our Grange; have 30 members and a class of 12 on the way. We held our annual election December 17th, with the following result: Jackson Sawyer, M.; E. P. Vance, O.; H. P. Dolen, L.; T. I. Knight, S.; E. B. Long, A. S.; W. R. Worthington, C.; I. C. Foss, T.; B. W. C. Pollard, Sec'y; J. P. Walsh, G. K.; Mrs. T. Y. Clyde, Ceres; Mrs. Hannah Sawyer, Pomona; Mrs. Elizabeth Long, Flora; Mrs. Hannah Pollard, L. A. S.; and on the 9th of January, 1874, we met at our hall at ten o'clock, and conferred the fourth degree on several members, after which, we enjoyed ourselves in a grand festive ball, and many of our friends partook with us of a bountiful harvest feast. After the conclusion of the feast, Brother Boyington, W. M. of Fern Dale Grange, with the assistance of Bro. Buyett, installed our officers as before named."

YOUNTVILLE GRANGE—Napa Co.—The Master of this Grange, Bro. J. M. Mayfield, in apologizing for sending us only two new subscribers, writes as follows: "There are only some three or four of the male members of our Grange who are not now taking the RURAL PRESS, and I hope to see them all taking it before the winter closes." [We accept Bro. Mayfield's apology, and heartily thank him for the interest which he manifests in the circulation of the Press.—EDITORS.]

FLORIN GRANGE, Sacramento county.—Warren H. Smith, Secretary of this Grange, sends us some interesting strictures upon Bro. Wright's illustrated article on the Filere, which will appear next week, and adds: "I am trying to get up a club for the RURAL PRESS among the members of this Grange, of which you will hear in the course of a week or two."

CENTRAL GRANGE, Calistoga, W. G. Saunders, Sec'y, writes:—"Our members are diligent workers, and our numbers will increase rapidly as soon as the weather becomes settled. The Central Grangers are all in favor of the No-Fence law. I shall soon send you a Club of Subscribers for your valuable paper."

The Grange Co-operative Company of Los Angeles.

We give below the substance of the circular of the Grange Co-operative Company of Los Angeles, setting forth the plans, objects and inaugurating steps which have been taken to put the same into operation:

The Grange Co-operative Company was organized in Los Angeles on the 23d instant, under direction of the District Council Patrons of Husbandry, for the Counties of Los Angeles and San Bernardino. Directors appointed for the first three months are as follows:

T. A. Garey of Los Angeles Grange, A. M. Southworth of Enterprise Grange, E. B. Grandin of Los Nietos Grange, H. L. Montgomery of Silver Grange, J. H. Gray of El Monte Grange, M. B. Craig of Westminster Grange, Edward Evey of Fairview Grange, G. D. Compton of Compton Grange, Cyrus Burdick of Eureka Grange, E. G. Brown of Riverside Grange and N. O. Stafford of Fruitland Grange.

Edward Evey, of Anaheim, was elected temporary Chairman, and L. M. Holt of Los Angeles, temporary Secretary.

The company was incorporated on the following basis:

1. The objects of the company to be the establishment of one or more stores, warehouses, etc., the buying and selling of goods, machinery and agricultural products; the borrowing and loaning of money; the buying, holding and selling of such real estate as may be necessary for its own use; and the conduct of a general mercantile business.

2. Principal place of business Los Angeles.

3. Capital stock \$100,000 divided into 2,000 shares of \$50 each, \$5 per share to be paid on or before April 1st, 1874, and the balance in installments as may be called for by the Board of Directors, not to exceed \$10 per share per annum.

4. None but Grange members can hold stock, and no person can hold more than ten shares.

5. Each family containing one Grange member can obtain all the privileges of the company by holding one share of stock.

6. Goods are to be sold to stockholders and their families at as near cost as possible, and the usual prices are to be charged all outsiders.

7. All farm produce is to be bought or handled on commission by the company.

8. Money to be loaned stockholders for legitimate farming operations at the lowest rates of interest.

It is also the intention of the company to assist stockholders in every way it can consistent with its own safety. It will, as soon as practicable, borrow funds with which to assist those who are now in the clutches of merchants, or others, if such persons endeavor to oppress our members because they seek to better their condition by this method of co-operation. The company is organized for the benefit of its stockholders and any safety carried out will be inaugurated for the common good. It is proposed at first to establish a store of general merchandise in Los Angeles. This store will furnish goods to stockholders at as near cost as possible, and will also handle their produce as cheaply as they can, and sell the same at as high a price as possible. As the company becomes a fixture, and the capital is sufficiently large to enable it to do so, branch stores will be established in such places as the Board of Directors shall determine, and the main store in Los Angeles will enlarge its operations.

In order to get this stock fairly distributed, it has been informally apportioned among 17 Granges of the District.

No Grange is restricted to the number of shares apportioned, but none should cease work until the limit is reached. The movement meets with universal approbation. Compton Grange, at its meeting last Saturday, subscribed ninety-six shares, and pledged the balance by the time it was needed. Los Angeles has started a list with about one hundred shares subscribed, and will do its part. Other Granges are expected to do theirs. Every subscriber will save during the year the amount of money he advances, if all pull together for the common good. It is desirable that the work be completed and a full report made by the assembling of the District Council at Gallatin, on Tuesday, February 1st, at which place all subscription lists must be turned over to the Secretary. A full attendance is desirable at that meeting.

EDWARD EVEY, Temporary Chairman.

L. M. HOLT, Temporary Secretary.

A County Council for Solano.

At a meeting of delegations from different Granges of Patrons of Husbandry, to take steps to form a County Council for Solano county, Bro. J. B. Carrington was called to the chair and L. C. Hawley appointed Secretary, pro tem.

On motion a committee consisting of one from each delegation was appointed on permanent organization and to report an order of business. Bros. H. T. Pringle of Suisun, Little of Dixon, W. B. Davis of Vacaville, and Jones of Denverton were appointed that committee.

After a short recess the committee reported as follows: "Your committee would respectfully report for permanent chairman, Bro. H. T. Pringle of Suisun, and for Secretary, Bro. L. C. Hawley of Vacaville. That they recommend Friday, February 27th, 1874, at 11 o'clock A. M., as a proper time and Suisun the place to meet to organize a County Council for Solano county, and would suggest that the representation of Granges in council be fixed as follows: One member at large and one for each thirty or fraction thereof, equal to fifteen members in the Grange represented. And your committee further suggest that nine members would be a proper number to constitute a quorum for the transaction of business in Council."

Report of committee was adopted and the secretary was directed to furnish a copy of these minutes to each Grange in the county and to notify their respective Secretaries that the Granges are requested to elect delegations as hereinbefore provided, based upon their whole number of members, including those who have received the first degree. Said delegations to assemble in Suisun on Friday, Feb. 27th, 1874, at 11 o'clock A. M., for the purpose of organizing a County Council.

The Secretary was also instructed to furnish a copy to the PACIFIC RURAL PRESS for publication.

By request, Bros. Carrington of Denverton and —of San José addressed the meeting in a few well chosen remarks, when, on motion, the meeting adjourned.

H. T. PRINGLE, Chairman.
L. C. HAWLEY, Sec'y.

Suisun, Jan'y 23d.

Farmers' Debts—Grange Stores—Irrigating Ditches, etc.

EDITORS PRESS:—Our Grange met at 9 A. M. to-day; initiated six lady members, transacted some other business, adjourned long enough to have a pleasant time disposing of an abundant lunch, then went into session again, so re-invigorated by the feast, as to be able to show some new brothers over the farm, by conferring the first degree upon four initiates. It was our first effort, but all went off smoothly. We feel now in good running order, and propose, before the race is over, to run all monopoly off the track. They have had 25, 50 and 100 per cent. from the farmers here too long already, and we must stop that tax as soon as possible.

A neighbor farmer informed me the other day that it was not safe to join the Grange, as the merchants would not trust a Granger—they had us all spotted. I think if that was a fact it would be a blessing, for nothing is much more of a curse to the farmer than this credit system—being trusted with a supply of goods at two prices, many of which he could do without, but takes because they are so easily to be had, and because he expects a good crop to pay with. Few expect anything but a profitable crop at planting time, but when the harvest comes, the crop must be turned over to merchant or speculator at half price, to pay debts with; and then in three or six months prices go up and all the profit is in the pockets of the non-producers.

I have nothing to say against the merchants, there are good men among them, but we must adopt a new system—we must start Grange stores all over the State, by each farmer taking one or more shares, and employ merchants at a fair pay and under suitable bonds, to attend to the business, dividing the profits among us all. To aid that work, let the Government furnish plenty of currency—legal tenders at three per cent. per annum on mortgage or other security, in the place of this speculative currency now employed. If the farmer has no property to give as security, he had better work awhile for some one who has, rather than speculate upon borrowed capital; though it may be advisable to assist those who are prepared to plant, by furnishing seed, etc., the crop being security; but this will probably be work for the Granges to consider, in body, or through their Executive Committee.

I hear a company has been formed in San José to construct a ditch on the north side of Kern river—a good work which will make valuable a fine country. I hope they will be able to make it pay. There is work of the same kind needed between Tulare river and Deer creek, which will take less capital, be a safer, and probably, a better paying investment, as the soil is rich and less trouble with frost than in most places.

Was glad to see your article on "Impure Water," on page 23; have thought much on that subject since visiting Bakersfield last summer. I think much of the chills and fever is caused by the use of surface well water, and we want a cheap plan of filter published in the Press, that farmers can prepare to purify their drinking water with. Cannot you give one or more of the best? Yours for humanity,

ISAAC B. RUMFORD.

Plano, Jan. 17, 1874.

Installation and Harvest Feast at Livermore.

The installation and harvest feast of Livermore Grange, was held at Exchange Hall on Saturday, last, and was largely attended. Visitors were present from Centerville, Haywards and Temescal Granges, and with the attendance from Livermore, the hall was crowded with those who came to witness and assist in the ceremony. In the forenoon, the fourth degree was conferred upon a large class. At 1 o'clock all present adjourned to the feast spread in the hall below, which was bountifully prepared and duly appreciated. W. H. Baxter, Sec'y of the State Grange, installed the following officers, publicly: Dan. Inman, M.; J. A. Neal, O.; E. V. Carr, L.; W. W. Wynn, C.; J. S. Taylor, S.; J. W. Clark, A. S.; E. S. Allen, T.; F. R. Fassett, Sec'y; J. H. Brackett, G. K.; Mrs. J. H. Brackett, Ceres; Mrs. A. Weymouth, Pomona; Mrs. J. H. Taylor, Flora; Hattie L. Clark, L. A. S.

After lunch, all again repaired to the upper hall, where an able lecture was delivered by Prof. Carr, of the State University. By unanimous vote a copy of his very able and comprehensive effort was solicited for publication.—Oakland Transcript.

New Granges.

MONTEZUMA GRANGE.—On Friday, January 23d, Bro. R. C. Haile, of Suisun Valley Grange, organized at Collinsville, on the Sacramento river, Montezuma Grange, with 24 charter members, and the following list of officers: Thomas T. Hooper, M.; Charles H. Rice, O.; James Galbraith, L.; Emery J. Upham, S.; William J. Jubb, A. S.; C. M. Ish, C.; William Quick, T.; C. Knox Marshall, Sec'y; William Donell, G. K.; Mrs. S. Augusta Daniels, Ceres; Mrs. Sarah C. Shedd, Pomona; Miss Addie F. Daniels, Flora; Mrs. Della Rice, L. A. S. Bro. Haile writes us that this Grange, with that at Denverton, will probably unite and build a hall somewhere near midway between the two, and that they will eventually become two of the most effective Granges in the State.



Farm House Chat.

[FOR THE PRESS—BY MARY MOUNTAIN.]

Having been so emphatic in praise of brown bread, graham, etc., I must now put in a good word for white bread, doughnuts and a few other favorite staples, or some gentle reader will declare me a rank hobbyist whose exhortations may be allowed to go in at one ear and out at the other.

Perhaps we have all known a few hobbyists with views too narrow to attract attention or be in anybody's way; but if persistently held up for public admiration, one could not help noticing how terribly scanty and insufficient they were.

I was quite young when first introduced to grahamite topics and disciples, yet old enough to notice that those who made the most fuss, swallowed the most bran, and allowed the least relish of salt, were invariably the scrawniest and most melancholy of fellow creatures.

One childless couple took the reform and had it very bad indeed. They were fond of visiting around, but 'twould never do to expose their stomachs to the savory temptations of a Yankee table "set out for company."

So they carried along with them a handful of cracked wheat, a graham loaf, or a cold slab of graham mush.

Can I ever forget how gaunt and severely solemn they looked as they sat aloof from the carnival of fat things that kept the family rosy and jolly through the cold snaps of a Vermont winter?

After dinner was cleared away and everything tidily placed, the ghostly wife uprose and said she would like to prepare the food she had brought, as they ate but twice a day and the last meal was now due.

The awful and somewhat pompous majesty of this apostle of reform as she proceeded to unwrap her meager bundles was too much for the boys, who, nearly bursting with fun, were obliged to rush out doors and keel over in the snow several times to smother their wild delight.

The kind hostess offered cooked fruit which was accepted, and tea, which was reproachfully declined by the wife just in time to prevent the more carnal-minded husband from accepting a cup.

They were pious people and asked God's blessing upon "the health-giving food with which they were about to refresh their vile, perishing bodies," and sure enough I believed they would have perished from cold if they had not traveled in company with hot freestones, which were also used for heating their bed at night.

Doubtless they had some grains of sound doctrine in their belief and practice; but the hobby was not well calculated to outbide the severities of a sharp climate; and the progress of reform in their direction could hardly be seen with the naked eye. It was pitiful indeed, that with all their rigid self-denial and crucifixion of the "appetites," the poor old souls were horribly dyspeptic, and so suffered double martyrdom.

You see they had not studied far enough to understand all the conditions; and while punishing themselves so severely in the matter of diet, and hoping to work out their salvation on that line alone, they were utterly neglectful of the sunshine, pure air, cheerful exercise and other important items that help to make up that glorious crown of earthly blessings—"good health."

Even in these modern times we sometimes meet persons with but one hobby, and what a poor affair life is for them!

A full, rich life has plenty of hobbies, keeps them well in hand and makes no great fuss about them except in case of some prime favorite that leads all the others, and possibly dominates life itself.

The Hobby of Diet

Belongs to this class and can hardly have too much or too intelligent care and attention; but this must not be given with melancholy precision and foreboding.

Next in rank to the religious and spiritual aspirations of the soul, comes the generous, cheerful, unceasing care of the

body; and there is such close relationship between these two that no one can afford to cultivate the one and neglect the other.

The frequent assembling together and relating of personal experience has always been accounted a good thing for the spiritual health, and has ever been cherished as an edifying christian exercise.

Similar conference meetings in behalf of physical health might have been equally interesting and profitable, but for a long time it was rather the fashion to believe that sublime elevation of the soul was most easily obtained by degrading the body—not only by real punishment of neglect and contempt, but by the rather imaginary abuse of calling it all sorts of hard names and berating it soundly in prayer and praise and pious exhortation. But this fashion also passes away and more wholesome views are steadily gaining ground. Writers for the press, lecturers, teachers and even preachers are giving more and more attention to the subject of physical culture and kindred topics. And what do you think will be the outcome of all this?

Gross Materialism?

Nay, the clear flame of religious faith should glow more brightly in the well-kept, vigorous body, "fit temple for the in-dwelling of an immortal spirit."

When women for themselves and families become as zealous in the building up and preservation of sound beautiful bodies as they now are in the fashioning of stylish garments, there will be certainly somewhat less of sham in the world and we may reasonably hope there will be a broader, richer, and more genuine humanity.

But how far is all this from white bread and doughnuts? Not so very far, and it requires no hurtful amount of hard thinking to perceive what close alliance there may be between genuine good food and the genuine humanities.

Not good food for the favored few alone, but plenty of it for every living soul upon the rich and fruitful earth. I would like to have a rousing religious "revival" upon this basis, as affording the best ground work for the spiritual growth that should follow. If we comfortable Christians were as much in earnest to feed and educate poor little children as we are to rival each other in building costly and elegant churches, what a different Christian world we should make of it!

White Bread.

Those who live far from neighbors must be self-reliant in the matter of yeast; and I find it a good plan to keep stock-yeast made in this way. Take a handful of hops, pour on them 3 pints of hot water and boil half an hour. Take 3 tablespoonsful of flour, 2 of brown sugar, 2 of salt, 1 of ginger and mix them all smoothly with a cup of warm water. Strain the hops and pour the hot liquid over the mixture, stirring briskly to prevent lumping.

Set it over the fire until it boils, stirring it often enough to prevent scorching. When nearly cool, add a cupful of lively old yeast and set in a warm place. In a day or two it will have fermented and be ready to pour off in bottles; or a wide-mouthed, glass fruit-can is better, and should not be quite filled, as there is pretty sure to be a second rising. If closely corked and put in a cool place it will keep sweet 3 or 4 months. But the bread is not made directly from this yeast. Take a pint or more of nicely mashed potato, add a spoonful of brown sugar, a teaspoonful of salt and hot water enough to make a thin batter. When nearly cool, add 4 or 5 spoonfuls of the stock-yeast, and if kept warm it will soon be light and ready for use. After fermentation set it in a cool place and it will keep several days, and may be renewed and increased by adding more of the warm potato batter. For the loaf take a quart of flour, a pint of the potato yeast and nearly a pint of warm water. Mix thoroughly, set in a warm place and it will rise in about 2 hours. Now stir in flour until it is quite stiff, but not too stiff. Transfer the dough to the wide flour pan or the moulding board, and for 10 or 15 minutes knead it with the hands and slash it briskly with a case knife. This slashing makes the loaf more tender and even-grained, also prevents those large air holes that are apt to insinuate themselves in a hastily made loaf. At the last my loaf is not stiff enough to stand alone and I put it in a deep, round tin basin, keep it warm until it rises to the brim, spread over its surface a spoonful of melted lard or butter and with the oven "just right" the heat will penetrate the loaf evenly, there will be no thick, hard crust and in little less than an hour it will come out of the oven all of a pinkish tint and "every bit good enough to eat."

A wise Massachusetts lecturer declares that all bread should be kneaded vigorously from 1½ to 2 hours. Some of us may have arms that could hold out for that length of time, if the "length of time" could be spared; but hours are too precious and there is really a "shorter cut" to good results.

Some years ago I was reading about Boston crackers and that they are made so crisp and tender by the tremendous cutting up they get from machines that have the dough in charge.

The moral I drew from this "slashing story" became of practical value in my bread making at once and ever since.

All our hygienic teachers say that yeast bread must have time to "aerate or ripen" before it is fit to eat, but they don't tell how many hours are needed for that subtle process. It certainly tastes good as soon as 'tis cool enough to cut nicely; and even the smell of delicious, freshly baked loaves is quite a treat for hungry nostrils.

Since writing the above a Vermont journal has come to hand, and in it I find that "Health and economy demand that the bread shall not be eaten till 24 hours after baking."

Farmer Speedwell's Pudding.

Old John Speedwell was a well-to-do farmer, living in the western part of Vermont.

His family consisted of his wife Phoebe, two sons, Amos and Jim, and two daughters, Reliance and Prudence, (which names were very appropriate, as the elder daughter was a model of reliance, and the other was prudence personified.)

The elder daughter, Reliance, was engaged to be married to a neighboring farmer, a young man whose mother had just died.

In those days there was no butcher to bring fresh meat every day, as at the present time; but people had to rely on their own resources for dinner; and, on the morning which opens our story, old Farmer Speedwell had proposed to have some hasty pudding and milk for dinner; and as his word was law, it was agreed upon.

After breakfast, Farmer Speedwell and his sons went to their haying, Dame Speedwell to her work, and the girls busied themselves about their domestic duties.

At the proper time Dame Speedwell made the pudding, taking care to salt it well, as she knew her husband liked a good deal of salt, hung it over a slow fire, and went up stairs to put the winter clothing in camphor.

It was only a few moments before Reliance came into the kitchen, when, seeing the pudding cooking, and knowing that her mother was apt to forget to salt it, she put in a handful of salt and stirred it well, so that her father would not have occasion to find fault.

Soon after, Prudence passed through the kitchen, and, reasoning the same as Reliance had, she also added a handful of salt, and went about her work again.

Before long, Amos entered to get a jug of molasses and water, and soon after Jim, each of whom put in a handful more of salt, as they had no more faith in their mother's remembering it than Reliance or Prudence had.

Just before dinner, Farmer Speedwell returned from work, and when he saw the pudding cooking, said: "That pudding smells all-fired good, but I'll bet a sixpence wife's forgot to salt it, as she always does; I used to depend on Reliance, till she got her head chock full of that young man o' hers, but I can't reckon on her thinkin' on't now; and, as to Prudence, she is so cautious she would not dare to salt it anyhow; so I guess I'll salt it myself," and suiting the action to the word, he put in a handful and a half of salt, stirring it well in.

Twelve o'clock came, and they were all seated at the table, when Farmer Speedwell helped himself to a good share of the pudding, and took a mouthful; but no sooner had he tasted it than he leaped up, exclaiming: "Who salted this ere pudding?" then recollecting that he had salted it himself, he left the room, saying: "I should think that thundering colt was trying to kick through the barn floor!"

The next who tried it was Amos, who leaped up, also, and left "to see what that colt was doing!"

Then followed Reliance and Prudence and Jim, who, each and all, escaped on some pretence, leaving Dame Speedwell in amazement, to realize the truth of the old adage: "The proof of the pudding is in the eating."—*Ec.*

Facial Features—What they Denote in Men and Women.

The upright forehead, with its various modifications of squareness and partial curving, generally denotes the sound and noble understanding, as opposed to the retreating form, which indicates the precise reverse, till, from the negro to the ape, and from the ape to the animal, it merges almost into a line with the nose. A merely high forehead does not, however, always imply a good forehead; for the form, proportion, sloping light, or arching and position of the bone of the forehead are tests of the mental power and character. Even the color and smoothness of the skin, together with the lines of the wrinkles, must be taken into account, for they express the passion and state of the mind. A perfect forehead should be one-third of the whole face, or equal to the nose in height, the covering skin clearer than the rest of the face, and smooth and free from wrinkles, yet have the power of wrinkling in deep thought, anger or pain. A forehead, to be perfect, should be, when seen in profile, neither too arched nor too square, neither too upright nor too retreating. The higher the forehead the more comprehension and less activity. The more compressed, firm and short (if not too short), the more concentrated and firm the character. The more curved the top, the more gentle and flexible the character, while the less curved—that is, the more square the top, the more determination, perseverance and sternness. If the forehead is perfectly upright from the eyebrows to the roots of the hair, there will be a deficient understanding, while a projecting forehead will denote imbecility, weakness or stupidity, accordingly.

As Modified by the Other Features.

On the other hand, the upright forehead, which is gently arched to the top, denotes a calm, cold, deep thinker. The poetic imagination is denoted by a forehead lofty, broad and arched at the top—the forehead of Shakespeare. A slightly retreating forehead implies imagination, wit and acute understanding. Square foreheads, with large temples and firm eyebones, denote circumspectness and firmness, while the round forehead, prominent above, straight-lined below and moderately upright, denotes great understanding, energy, sensibility, fire and cool judgment. A perfectly perpendicular forehead, upon horizontal eyebrows, and much rounded on either side toward the temples, implies great solidity of understanding. One upright forehead we should guard against, and that is the one which is narrow, short, wrinkly, shiny and projecting. The owner of such will undoubtedly possess weakness and shallow understanding, with little imagination and sensibility. When many knotty, angular protuberances appear, they will denote perseverance, combined with much vigorous, firm, harsh, oppressive, warm activity; short, regular, knotty foreheads, pressed in one side, and jagged foreheads with cross wrinkles, are incapable of lasting friendship. Perpendicular wrinkles, if natural to the forehead, denote power and application; horizontal ones, on the other hand, and those broken in the middle or at the ends, generally imply the want of those qualities. Perpendicular, deep indentings in the bones of the forehead, between the eyebrows, denote sound understanding and a free and noble mind. We often mark veins on the forehead; these, too, have their significance, for a blue vein in the form of the letter Y, in an open, smooth, well arched forehead denotes extraordinary talents and warm generous character. It will thus be seen, in regard to the forehead, how small a deviation from certain forms goes to make or mar a certain quality. And now we reach the eyes, which have been poetically termed

"The Windows of the Soul."

How much we hear of them! What expression they have! what tenderness! what fire, what love, what coldness. And if large, lustrous and beautiful, what a charm they add to the face! We cannot escape their gaze; we must needs watch them, whether or no, for there is a fascination, especially if they belong to the opposite sex, we cannot resist; a magnetic influence which draws us to follow their movements. And then comes night in company with sleep, the "brother of death," the eyelids fall, and the windows of the soul become closed! And when closed, what a change! What is it that is gone, or hid—what is it that we miss? What but the wonderful expression of life they convey? The color of the eyes is often a great puzzle; in some it is impossible to determine a prevailing hue. Buffon says the colors

most common to the eye are orange, yellow, blue, green, gray, and gray mixed with white. Blue and orange are the most common, and are often in the same eye. Eyes which we call black are only brown, yellow or a deep orange; for seen from a distance, or turned toward the light, they appear to be black, because the darker color so contrasts with the white of the eye that it appears black. Wherever blue is, however slight the tincture, it becomes the predominant color, and appears in streaks over the whole iris, or circle around the pupil. The orange is in flakes around the pupil, and at some little distance from it, but is generally overpowered by the blue, the orange only being detected when closely examined. Two colors form

The Finest Eyes,

Black and blue; the black implying the greatest strength of expression, the most fire and vivacity; blue have more mildness, and perhaps more archness. We often see unmeaning eyes which appear fixed; this is caused by the black of the pupil being too strong for the surrounding colors, and thus we only see the pupil in the center of the eye. Both eyes are not always of the same color. We will not note how certain qualities appertain to certain colored eyes. Quick, bright eyes denote an active and acute mind. Clear blue eyes are never found in a person of melancholy temperament, and rarely in the choleric; the latter have eyes of every color; but more generally brown and inclined to green. This tendency to green almost always denotes fire and courage. Black brown eyes denote more strength of intellect, thought and firmness than blue. Many men of great power have had blue eyes, but that color generally denotes more flexibility of character than black or brown. Wide, open eyes, with the white seen under the pupil, will be found in the timid and cold, as well as in the courageous and rash; but when fully compared, they will be easily distinguished by the fiery and determined being more firm and more strongly marked and having thicker and better eyelids. Very large, prominent eyes of a light blue or gray, often denote greediness. Very small, sharp eyes denote cunning—the eye of a serpent, for instance. If the eyelids form a straight line over the pupil, it indicates acuteness, ability and subtlety. When the under arch, formed by the upper eyelid, is perfectly circular, it always denotes goodness and tenderness, timidity, fear and weakness.

Of The Eye-Bone

Those which are sharp and projecting indicate acute understanding and wisdom. Eye-bones with well-defined, plain, firm arches, denote nobility of mind. Such arched eyebones are generally found in the antique, ideal sculptures. Of the eye-brows, those which are dark denote firmness, the white, weakness; the nearer they are to the eyes, the more firm, deep and earnest the character; the further from the eyes, the more changeable, flexible and lukewarm. Regular and well-arched eyebrows belong to women, and horizontal to men. The two somewhat combined—that is, slightly arched—signify the union of manly mind and energy with womanly gentleness. Meeting eyebrows, though formerly said to denote craftiness, are said by Lavater to be found in the most honest and open faces. Close, firm eyebrows, with the hairs growing straight, as if cut, are most certain signs of firm, manly, mature mind, profound wisdom, and accurate perception. Weak eyebrows are found to denote coldness and weakness, but for this weakness of the eyebrows, the fire and power would be still greater. Some lose their eyebrows through too much rubbing in washing the face, or by illness. Angular, strong, broken eyebrows always denote fire and energy.—*Ladies' Own Journal.*

MATRIMONY IN AMERICA.—In ideal matrimony the husband and wife are not absorbed into each other by any means. They remain totally separate individuals, with their own aims, desires and loves, but blending as it were into one whenever union is necessary. The wife in this marriage is no slave or toy of her husband, but his equal, companion, friend and adviser, inspirer, stimulator and even agitator. Him she meets with open, frank eyes, not in the barbarous fashion of western Europe, abashed and submissive; and him she leads on to a higher and nobler life, not administering to his base material comforts and ease, but urging him ever onward and upward. The ideal husband, knowing her to be his equal in every respect, mental and moral, naturally regards her with the deeper veneration that she is physically his inferior.

Young Folks' Column.

Letters to Boys.—No 3.

Did you think I had forgotten the California boys? I wrote you a letter some time ago, but by some unaccountable means it has been lost. I believe I promised some time ago, to tell you of a little man only eleven years old. If you think you must wait until you are quite tall to be gentlemen, you are mistaken. I have seen little men not four feet high who had far better right to the title of gentlemen than many a six-footer. A very little man may be better than he that taketh a city, if he ruleth his own spirit. My little friend, of whom I promised to tell you, is the son of a farmer. We will call him Willie Spencer, so that he will not recognise his photograph, should he chance to see this letter. Though he has not as many playmates as some boys have, and perhaps not as good advantages, he is cheerful and contented. He is his Mother's helper. In the morning, if you were near enough, you might hear a great rattling of plates and pans, and an occasional creak, creak, of the pump, while above all rings a merry whistle or song. Would you like to take a peep into the pleasant kitchen? There stands the knight of the dish-pan, jacket off, sleeves rolled up, dish-cloth or wiper in hand, working away with a right good will. Do I hear some bright-eyed boy say "Must I wash my mother's dishes if I would be a gentleman?" Well, perhaps so, if your mother wishes you to, but she may have some one else to do that work. Mrs. Spencer has no servant, and no little girl, only Alice, four years old; and when she is very busy, it is a great help to her to have such a good boy to do her dishes.

Willie is very kind to his little sister, and keeps her amused and happy, while his mother is at work. I think Mrs. Spencer could hardly keep house without him.

Do you ask if it pays? Yes, doing good and helping others is a very paying kind of work. Beside the reward which Willie's happy heart gives him, he has many others, which I will tell you about in my next.

J. C. JAMESON.

Boys, Read This.

A gentleman advertised for a boy to assist him in his office, and nearly fifty applicants presented themselves before him. Out of the whole number he selected one and dismissed the rest. "I should like to know," said a friend, "on what ground you selected that boy, who had not a single recommendation." "You are mistaken," said the gentleman, "he has a great many. He wiped his feet when he came in and closed the door after him, showing that he was careful; gave up his seat to the lame old man, showing that he was kind and thoughtful; he took off his cap when he came in, answered my questions promptly and respectfully, showing that he was polite and gentlemanly; he picked up a book which I had purposely laid upon the floor and replaced it on the table, while all the rest stepped over it or shoved it one side; and he waited quietly for his turn, instead of pushing and crowding, showing that he was honest and orderly. When I talked with him I noticed that his clothes were carefully brushed, his hair in nice order and his teeth as white as milk; and when he wrote his name, I noticed that his finger nails were clean, instead of being tipped with jet like that handsome little fellow in the blue jacket. Don't you call these things letters of recommendation? I do, and I would give more for what I can tell about a boy by using my eyes ten minutes than all the letters of recommendation that he can bring me."—*Ec.*

WHO I LIKE.—DECLAMATION FOR LITTLE BOYS.—I am a little boy, and don't know much, but I can tell P from Q, and I know who I like. I like my Uncle Jabez, because he always has peanuts in his pockets, and he gives me some. But my Uncle Jeremiah always looks cross out of his eyes, and says, "Out o' my way there, boys!" And I like like my grandma, because her cheeks smell like pineapple, and she always gives me ginger snaps, when I go to see her. When I speak next time, I will tell you who I like best—it's my mother.—*Ec.*

"How old is your mamma?" asked a love-smitten old bachelor of the daughter, of the widow who had enchanted him. "I don't know, sir; ma's age varies from forty-three to twenty-five," was the artless reply, and the bachelor was disenchanted.

Good Health.

Hints for Nurses.

The following sensible suggestions are from the pen of Florence Nightingale: "Conciseness and decision are, above all things, necessary with the sick. Let your thought expressed to them be concisely and decidedly expressed. What doubt and hesitation there may be in your own mind must never be communicated to theirs, not even (I would rather say especially not) in little things. Let your doubt be to yourself, your decision to them. People who think outside their heads, the whole process of whose thought appears, like Homer's, in the act of secretion, who tell everything that ed them towards this conclusion and away from that, ought never to be with the sick.

Irresolution is what all patients most dread. Rather than meet this in others, they will collect all their data and make up their minds for themselves. A change of mind in others, whether it is regarding an operation, or re-writing a letter, always injures the patient more than the being called upon to make up his mind to the most dreaded or difficult decision. Further than this, in very many cases, the imagination in disease is far more active and vivid than it is in health. If you propose to the patient change of air to one place one year, and to another the next, he has, in each case, immediately constituted himself in imagination, the tenant of the place, gone over the whole premises in idea, and you have tired him as much by displacing his imagination, as if you had actually carried him over both places.

Above all, leave the sick room quickly, and come into it quickly, not suddenly—not with a rush—but don't let the patient be wearily waiting for when you will be out of the room, or when you will be in it. Conciseness and decision in your movements, as well as your words, are necessary in the sick room, as necessary of absence of hurry and bustle. To possess yourself entirely will insure you from either failing, either loitering or hurrying.

If a patient has to see, not only to his own, but also to his nurse's punctuality, or perseverance, or readiness, or calmness, to any or all of these things, he is far better without that nurse than with her, however valuable and handy her services may otherwise be to him, and however incapable he may be of rendering them to himself.

THE PULSE.—The pulse of a healthful grown person beats seventy times in a minute; there may be good health down to sixty; but if the pulse always exceeds seventy, there is a disease—the machine is working too fast; it is wearing itself out; there is a fever or inflammation somewhere, and the body is feeding on itself, as in consumption, when the pulse is quick, that is, over seventy, gradually increasing with decreased chances of cure, until it reaches one hundred and ten or one hundred and twenty, when death comes before many days. When the pulse is over seventy for months, and if there is a slight cough, the lungs are affected. Every intelligent person owes it to himself to learn from his family physician how to ascertain the pulse in health; then by comparing it with what it is when ailing, he may have some idea of the urgency of his case, and it will be an important guide to the physician. Parents should know the healthy pulse of each child, as now and then a person is born with a peculiarly slow or fast pulse, and the very case in hand may be that peculiarity. An infant's pulse is one hundred and forty; a child of seven, about eighty; and from twenty to sixty years it is seventy beats a minute, declining to sixty at four score. There are pulses all over the body, but where there are only skin and bone, as at the temples, it is most easily felt.—*Home and Health.*

DOCTORS AND MEDICINES.—A Chicago man says: "We are told that doctors never take medicine of their own or of any one else's recommending. I was reminded of this a few months ago. I went into the office of one of Chicago's most celebrated physicians to obtain a prescription for a cold and hoarseness. While he was writing it out he casually mentioned that, having been out in the terrible storm of the previous day, a severe cold had resulted, and that in the morning he could scarcely speak aloud. As I folded the prescription—which was Egyptian to me, but seems to be the mother tongue of druggists—I ventured to inquire what he had taken for his hoarseness. 'Loaf sugar and lemons,' was the placid reply. Well, that prescription for drugs was never used, and I found 'loaf sugar and lemons' excellent."

TO REMOVE ADHESIVE PLASTER.—Every surgeon, doubtless, is familiar with the appearance of a part which has been enveloped in adhesive plaster, after the straps have been removed. The appearance is not one in very good keeping with a cleanly and neat surgical dressing. The portion of the plaster which is left adhering to the skin may be quickly and completely removed by the use of oil of turpentine and sweet oil. Use a little more than half turpentine. This compound, carefully rubbed over the parts with a bit of cloth or sponge, and then washed off with warm soapsuds, will leave the surface as clean as nature ever intended.—*Exchange.*

COFFEE WATER AS A REMEDY FOR GOUT.—Dr. Monchaux, in the *Revue de Therapeutique*, gives the following: Put a tablespoonful of green—that is, unroasted—coffee in a half a tumbler of pure water, at the temperature of the surrounding air, and after allowing it to stand for twenty-four hours, drink off the liquid immediately upon getting up in the morning. Fill the glass with water again as before, and again drink the liquid as before, so that the same coffee serves twice. The liquid obtained is of a green color, more or less tinged with blue, according to the kind of coffee used. I do not know the chemical composition of the water, but the grains well considerably, and sometimes sprout, throwing off little bubbles of gas, which I suppose to be carbonic acid. I have not observed very long relative to this remedy upon the uric acid diathesis. If I am to give an opinion upon it, I am at present inclined to think that it attacks rather the effects of the malady than the disease itself, suppressing the former from day to day, if I may so express myself, while the latter remains. It will be, therefore, necessary to continue the daily use of the remedy as above.

POTATOES PROSCRIBED.—Several German writers upon races predict that nations, far from improving, will deteriorate both in physical and mental characteristics, if potatoes become a principal article of diet. The celebrated Carl Voigt says that "the nourishing potato does not restore the wasted tissues, but makes our proletariats physically and mentally weak." The Holland physiologist, Mulder, gives the same judgment when he declares that the excessive use of potatoes among the poorer classes and coffee and tea by the higher ranks, is the cause of the indolence of nations. Leidenfrost maintains that the revolutions of the last three centuries have been caused by the changed nourishment; the lowest workman, in former times, ate more flesh than now, when the cheap potato forms his principal subsistence, but gives him no muscular or nervous strength.

FOOD MEDICINE.—Dr. Hall relates the case of a man who was cured of his biliousness by going without his supper and drinking freely of lemonade. Every morning, says the Doctor, this patient arose with a wonderful sense of rest and refreshment, and feeling as though the blood had been literally washed, cleansed and cooled by the lemonade and fast. His theory is that food can be used as a remedy for many diseases successfully. As an example, he cures spitting of the blood by the use of salt; epilepsy by watermelons; kidney affections by celery; poison, olive or sweet oil; erysipelas, pounded cranberries applied to the part affected; hydrophobia, onions, etc. So the way to keep in good health is really to know what to eat—not to know what medicines to take.

DANGER FROM WET CLOTHES.—Few persons understand fully the reason why wet clothes exert such a chilling influence. It is simply this: Water, when it evaporates, carries off an enormous amount of heat in what is called the latent form. One pound of water in vapor contains as much heat as nine or ten pounds of liquid water, and all this heat must, of course, be taken from the body. If our clothes are moistened with three pounds of water—that is, if by wetting they are rendered three pounds heavier, these three pounds will in drying, carry off as much heat as would raise three gallons of ice-cold water to the boiling point. No wonder damp clothes chill us.

FEVER AND AGUE PROPHYLACTIC.—We hear that several of the officers upon Sir Garnet Wolseley's staff provided themselves before starting with the prescription for bilious remittent fever so strongly recommended by Dr. Livingstone. It will perhaps be remembered that in his interesting volume on the Zambesi expedition, the Doctor published the ingredients of a pill which was found to be of the greatest service to every one accompanying him. The formula includes resin of jalap, powdered rhubarb, quinine and calomel, and was always administered previous to the employment of quinine.

CHAPPED HANDS.—The easiest and simplest remedy is found in every storeroom. Take common starch and grind it with a knife until it is reduced to the smoothest powder. Take a clean box and fill it with starch thus prepared, so as to have it continually at hand for use. Every time hands are taken from the suds or dishwater, wipe them, and, while they are yet damp, rub a portion of starch thoroughly over them, covering the whole surface. The effect is magical. The rough, smarting skin is cooled and healed bringing and insuring the greatest degree of comfort and freedom, from this by no means insignificant trial.—*Artisan.*

TO STOP BLEEDING AT THE NOSE.—It is worth while to know how to stop the bleeding from the nose when it becomes excessive. If the finger is pressed firmly upon the little artery that supplies the blood to the side of the face affected, the result is accomplished. The two small arteries branching up from the main arteries on each side of the neck, and passing over the outside of the jawbone, supply the face with blood. If the nose bleeds from the right nostril, for example, pass the finger along the edge of the right jaw till the beating of the artery is felt. Press hard upon it, and the bleeding will cease. Continue the pressure five minutes, until the ruptured vessels in the nose have time to contract.



PUBLISHED BY

DEWEY & CO.

T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 14 years. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, Feb. 7, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—A California Lily; Transplanting Trees; Methods of Preserving Fruits, 81. Fields of Beans; Tobacco Curing; Farming Among the Foothills of the Sierras; Sowing Grass Seeds; Plum Growing for Profit, 88. Thielens's Grain Cleaner; Flax and its Culture, 89. Patents and Inventions, 92.

ILLUSTRATIONS.—California Lily, 81. Grain and Malt Cleaner and Crusher, 89.

CORRESPONDENCE.—An Appreciative Reader of the "Press"; Alfalfa—Osage Orange; A Many-Sided Question: Peanut Raising, 92. Sphere of the Farm Laborer; California Grown Seeds, 93.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 84-5.

HOME CIRCLE.—Farm House Chat; Farmer Speedwell's Pudding; Facial Features—What they Denote in Men and Women; Matrimony in America, 86-7.

YOUNG FOLKS' COLUMN.—Letters to Boys—No. 3; Boys, Read This! Who I Like—Declaration for Little Boys, 87.

GOOD HEALTH.—Hints for Nurses; The Pulse; Doctors and Medicines; To Remove Adhesive Plaster; Coffee Water as a Remedy for Gout; Potatoes Proscribed; Food Medicine; Danger from Wet Clothes; Fever and Ague Prophylactic; Chapped Hands; To Stop Bleeding at the Nose, 87.

THE DAIRY.—Cheese Factories; Gem Recipe, 88.

POPULAR LECTURES.—Prof. Neri's Lecture—Magnetism and Electricity—No. 2, 89.

USEFUL INFORMATION.—New Dyeing Recipes; Casting Nickel; A Useful Device; Detection of Adulteration in Coffee; Gluing the Ends of Leather Belts; Utilization of Gas Lime; Determination of Water in Essential Oils; Dentist's Solder; Increasing the Felting Property of Hairs by the Use of Chemicals; Improved Drawing Ink, 90.

THE VEGETABLE GARDEN.—History of the Potato; Pruning Tomatoes; Onion Maggot; Analysis of the Potato, 91.

THE HORSE.—About Ponies; Gentle Words to Horses; Light Harness, 91.

AGRICULTURAL NOTES from various countries in California, 92.

MISCELLANEOUS.—Scenes in the High Sierras; New Agricultural Implements; Enameling Paint; Improved Method of Propelling Boats; Counties of California, 93. A New Type-Setting Machine; A Novel Burglar Detector; Application of the Sand-Blast; How Mirrors are Silvered; Mint Crazy; Passed Through; American Flag Mill; Aluminum; Improved Butter Print Press, 90.

APPRECIATIVE.—MESSRS. EDITORS:—The weekly visits of the RURAL PRESS are looked for with undiminished interest. I cannot think of allowing it to be discontinued. Enclosed please find money order, for renewal. Will send the duplicate number to a friend in Ohio. I feel a deep interest in the Farmers' Movement, and hope it may prosper more and more until it reaches a full and permanent triumph. Would like to see a Grange in operation here. A. C. D.

Anaheim, Placer County, Jan. 20.

We should suppose that a sufficient number of farmers might be found for such an organization. Will not our correspondent look around for them and report? Nine males and four females is the full number needed for an organization. Let every one be a true farmer, a farmer's wife or daughter. Any additional number to the extent of 30 would be admitted as charter members.—[EDITORS PRESS.]

ENGLISH SEED CATALOGUE.—We have received a beautifully illustrated catalogue from Sutton & Sons, Royal Berks Seed Establishment, Reading, England. Besides numerous finely executed colored engravings of flowers, fruits and vegetables, with catalogues and lists of fruit, grain, flower and tree seeds, it also contains splendidly executed engravings of their vast establishment, giving both interior and exterior views of the same. It is a well gotten up catalogue in every respect, and its contents as a guide to the amateur and general gardener, are excellent.

FRUIT TREES IN S. F.—T. Corley has an assortment of choicely selected fruit trees at his nursery depot, No. 315 Washington street, embracing a large variety common to this coast. He has also shade trees, ornamental plants and shrubbery.

Tobacco Curing.

In response to an Oregon correspondent relative to the Culp process of curing tobacco as practised by the California Tobacco Company operating at Gilroy, we are enabled to present it as given in the Culp patent specification; it is as follows:

When the tobacco has been cut and gathered into a close house, I pack it in piles, say about six feet long and two feet high. It is allowed to remain in this position until it heats and reaches about 100° Fahrenheit. This may require from one to three days, according to the particular time of day the tobacco has been cut. When the pile has reached about the required state of heat, above mentioned, the leaves of the tobacco will be found to be covered with moisture. The tobacco is then hung up in a horizontal position, so as to allow the leaves to hang apart.

To hang the tobacco in a horizontal position I erect in a close room a scaffolding of scantling, and horizontally on each side of the vertical scantling I nail strips of plank, the lower edge of each alternate strip being about an inch higher than the upper edge of the strip on the opposite side of the scantling.

The butt of the tobacco stalks are then placed over the lower strip and the end brought under the edge of the higher one on the opposite side of the scantling, and the stalk is left suspended in a horizontal position, and the leaves hang vertically and separated.

The arrangement I have described for hanging tobacco in a horizontal position I have found very convenient, but it may be varied to suit tastes or circumstances.

The tobacco having been hung up in the position described, all the surface moisture is allowed to evaporate, but the leaf should not become dry when the tobacco is taken down and subjected again to the heating process.

As the purpose is to secure to the tobacco a rich brown color when cured, the piling and heating may have to be repeated three or even four times.

An inspection of the tobacco being cured will readily indicate to the skilled manipulator when the leaf has been sufficiently heated. When the requisite color to the leaf has been obtained, the tobacco is allowed to hang in the rack until sufficiently dry for packing.

By this process I am enabled to secure a fine color and a flavor equal to the best Havana, this being accomplished by keeping the leaf in the moist and heated condition until it ripens under the treatment to the proper color and flavor to be dried.

The foregoing extract of specification, we obtain from the Patent Agency of Dewey & Co., 338 Montgomery St., S. F.—EDITOR.

Farming among the Foothills of the Sierras.

We would say a word to the grand army of farming immigrants now pouring into California from the eastern side of the continent, and it is this: That there is a vast tract of country lying along the western base of the Sierras, at least four hundred miles in length and from fifty to seventy miles in width, between the higher mountains and the great plains and valleys below, which is known as the "Foothills," and which is worthy your careful attention.

Our reasons for saying this, are these: There is a diversity of hill and valley, well wooded, and in many places splendidly timbered. The country is well adapted to grazing and dairying, while all the cereals, at least wheat, oats and barley, are a sure crop in seasons at all favorable. There are no better lands for vineyards than the lower foothills, in the whole State; while the middle and upper, with a climate partaking more of the character of an eastern winter without the intensity of its cold, is unsurpassed for the production of the staple orchard fruits, apples, pears and peaches.

Even above the highest limit to which we would expect to carry the cultivation of these fruits, we find in the greatest abundance all manner of wild fruits and berries, indigenous to the country; the wild plum or apricot, the choke cherry, huckleberry and bearberry in abundance, showing the perfect adaptability of soil and climate to their growth.

As an inducement to those who are not afraid of an occasional snow fall, and who would glory in a healthy mountain home, and a mild winter's cheerful fireside, we can say that there are millions of acres of such lands yet unclaimed, nor have the government surveys as yet been extended over them. Here are limpid streams of water, ever cold from the everlasting banks of snow above. No finer places for the artificial culture of trout, than among these foothills, where large springs and cold waters abound.

Only a few objections can be brought against a foothill home and life—the summer season is not quite as long as in the low valleys of the State. Vegetation does not start as early, nor can the more tropical fruits be grown as they are where snow never falls; but for all else than these, give us a foothill or even a mountain home, for health, happiness and a thousand comforts unknown to the torrid valleys.

To Prepare Rennet.

The following recipe for preparing rennet we find floating around without credit, for the reason perhaps that it is as old as it is good and easy to prepare. It is unnecessary to say that unflavored proof spirits will be just as good as rose brandy:

Take the stomach of a newly-killed calf and do not wash it, as it weakens the gastric juice. Hang it in a cool and dry place five days or so, then turn the inside out and slip off the curds with the hand. Then fill it with salt, with a little saltpeter mixed in, and lay it in a stone pot, pouring on a teaspoonful of vinegar and sprinkling on a handful of salt. Cover it closely and keep for use. After six weeks take a piece four inches square and put it in a bottle with five gills of cold water and two gills of rose brandy; stop it close and shake it when you use it. A tablespoonful is enough for a quart of milk.

The following from the New York Tribune can be relied upon: The fourth stomach of an unweaned calf should be chosen, and if previous to the slaughter of the animal a moderate feed of milk be given, so much the better for the rennet. As soon as the calf is killed, the stomach with its contents is removed.

A quantity of fine salt is immediately introduced into the stomach, sufficient to preserve it; a large handful for instance, which is as evenly spread about the inside as possible. The outside is also rubbed with salt. A moderately stiff, elastic twig is then bent like a loop and inserted into the stomach, in which it is allowed to expand and stretch the skin into a sort of purse-shaped bag, the sides of which are brought into contact. It then appears something like the annexed figure. In this condition it is hung up to dry, and if kept dry and safe from vermin, by being inclosed in a tight paper bag, it will remain good indefinitely.

When used, a piece is cut off and soaked in warm water for a few hours, and the water is poured into the milk, which is well stirred to mingle the liquid with it. For twelve gallons of milk two square inches of the rennet in a quart of a pint of water will be found sufficient. A young lamb's or pig's stomach will answer the purpose equally well, although there may be a prejudice against using the stomach of a pig. The lamb's stomach is used in the manufacture of at least one kind of fancy cheese in England.

The State University.

We have from time to time noticed complaints made through the public press and otherwise, that the authorities of the State University were not paying to its Agricultural Department the attention which its importance seems to demand. The necessity for a School of Mines and a College of Agriculture in this State, being placed before the Legislature really gave birth to the University. The organic act contemplated the establishment of these branches of education first and others (industrial and classical) afterwards. The College of California being transferred to the University, the order of establishing several departments has been reversed, and the real College of Agriculture is yet to come.

The farmers of this State, we believe, as a body, demand that no unnecessary delay be made in putting the Agricultural Department on its proper basis. A portion of the grounds ought to be set off for nurseries and gardening, for grain and seed growing and for experimental practice generally. Observations carefully noted and reported through the press of the State would do much immediate good to farmers everywhere, and afford a better reward than is usually returned for the expenditure of public money. The comparatively young farming community of this State needs some such assistance, owing partly to the peculiarity of our soils and climate, more than the husbandmen of any other section of our Union.

Our miners and metallurgists also stand in similar need of careful researches and experiments for their benefit. The prosperity and greatness of our State depends chiefly upon the progress or these two great industries, and the people say, let these branches of education be put permanently forward in our State University.

If it should be found that any of the members of the Board of Regents are too deeply engrossed in business or speculative schemes to pay due attention to the University and the wants of the people, let their places be filled by men whose lives show that they are with and for the legitimate, educational and industrial interests of the State.

If it be necessary, let the present legislature make a special appropriation for the agricultural and mining departments of the University, to be used solely and exclusively for improvements, instruction and experiment in that direction.

We throw out these hints, and thus invite discussion, by all interested, through our columns. We may write more fully on this subject hereafter.

Sowing Grass Seeds.

One of the most important points in the growing of the so-called cultivated grasses and clovers, is to procure in the first instance what we call a "good stand," which means that the plants shall be in sufficient numbers to completely cover the ground, as thickly as is desired. There are several reasons why we do not always succeed as well as we could wish. In some instances the soil is in fault, and particularly in California, the excess of alkali in many places is such, that sowing as carefully and as plentifully of seed as we will, the result is sure to be a spotted field, as but few grasses can be made to grow upon the alkaline places.

Another cause of failure in getting a good stand, is in the unequal depths to which we cover the seed. The seeds of most of our grasses are extremely small, and as the roughness of the soil at the time of seeding permits of the seed falling into the porous earth to irregular depths, and the implement for covering, be it what it may, necessarily covers the seed unequally, and much of it to such a depth that it can not vegetate.

It is important, therefore, in this regard, that the surface of all fields, intended for grass seeds, should be as finely pulverized, and made as smooth as the finest harrow can make it, before sowing the seed; and, then, equally important, that a fine, light, short-toothed harrow be used in the covering of the seed; and, if the surface be particularly fine and soft, may prefer a bush to the harrow. Another cause, and one which more frequently prevails than we are aware of, is the use of poor seed, that which has lost its vitality by being long kept. Grass seeds should be as fresh and new as possible; and, in buying, have a care that you are not getting two-thirds very old seed; mixed, perhaps, with one-third new; and, then, of whatever seed you get, don't scrimp the quantity; but sow abundantly, as the only guaranty of certain success.

Plum Growing for Profit.

We called on our groceryman the other day, and asked the price of dried plums. The answer was, twenty-five cents a pound. And how much for good raisins? The same, twenty-five cents a pound. Now these happened to be imported raisins of very fair quality. It occurred to us that whilst very many of our California grape growers might not be experts in converting grapes into raisins, almost anybody can take the stones out of plums, and in our wonderfully fine, summer climate, without ruin or dew of any account, might easily dry them.

Plums and apricots are never pared before drying, as peaches and most other large fruits are; hence a saving of material, but what is of more importance, a saving of time and trouble. Plums are sometimes dried with the stones left in, but their value in the markets is proportionately lessened, though they are always in demand, many cooks believing that the stone cooked with the fruit improves the latter, by giving it a peculiar, piquant flavor. Either with or without the stone, the plum is very easily and quickly dried; it is not necessary that the packages be made up with that care, usually given to raisins; they can be packed in bulk, in very large casks, it being the way in which immense quantities of foreign plums and prunes are imported.

The plum as a fruit bearing tree, is enormously productive in California, a constant bearer and very hardy; if it has a single fault, it is its tendency to overbear. To obtain large specimens, thin out the fruit to one-half, when one-third grown. Plums are a largely paying fruit.

BEE SUGAR COMPANY.—At the annual meeting of the stockholders of the Sacramento Valley Beet Sugar Company, held last evening at the office of Julius Wetzelar, the following were elected Trustees for the coming year: Julius Wetzelar, W. E. Brown, H. G. Smith, Samuel Lavenson and Philip Scheld. The prospects of the company, as reported at the meeting, are gratifyingly promising. Eighteen hundred acres of land will be sown in beets this season, to supply the factory.—Sac. Daily Union.

DUTY ON SUGAR.—In Congress, Sypher offered a resolution reciting that by the abolition of the duty on sugar the revenues have been reduced \$12,000,000 while no reduction has been made in the cost to consumers, and directing the Committee of Ways and Means to inquire into the expediency of restoring the duty. Referred.

ON FILE.—Car for Shipping Sheep; Essay on Fruit Culture; Rural Homes among the Foothills; S. N. Walla Walla; Letter from F. G., Nevada; Is the Filere Indigenous? Jute Manufacturing, Anderson Valley, etc.; Small Hens and Thoroughbreds; Hybrid Grapes; Horse Power to Cross-cut Saws; Orange Culture at Riverside; Equine Neuralgia.

"A SCRIBBLE." Hill's Ferry, is informed that Cushing's Manual can be had for 65 cts., coin, at Bancroft's, S. F., or for 65 cts., currency, of O. H. Kelley, Secretary, Washington, D. C. It will not give you the information asked for. See our answer to a similar question, in RURAL of Jan. 31st.

POPULAR LECTURES.

Prof. Neri's Lecture—Magnetism and Electricity—No. 2.

[Especially Reported for the RURAL PRESS.]

The first lecture of the course was devoted to the consideration of frictional and statical electricity. The present lecture will be devoted more especially to magnetism, and its relation to electricity. A certain class of electrical phenomena is attributed to magnetic force. About six hundred years before the Christian era, it was discovered that a certain kind of rock was known to possess the property of strongly attracting iron. This rock was called magnet, from Magnesia, the country in which it was discovered. In the modern study and classification of minerals, this rock, which is a natural magnet, is found to consist largely of a peculiar oxide of iron—a mineral from which the best quality of iron is made—and which occurs in many places, particularly in Sweden. A specimen of this rock, highly polished, was exhibited, and its attracting properties demonstrated. Very little was known about magnetism by the ancients, and it is only within about two hundred years that it has been much studied.

The Natural Magnet

Possesses the property of transmitting its power to steel, which thereupon is found to possess a greater power than the original magnet. Various forms of artificial magnets were shown—the single bar, compound bar, and the horn-shoe form of both. It has been found that the power of a magnet is greatly increased by hanging a weight upon it, and gradually increasing that weight at intervals.

Polarity of the Magnet.

Magnetism, like electricity, possesses two qualities, positive and negative. Each magnet has its positive and negative pole, designated in the magnetic needle as the north and south poles; also, a neutral point midway between the two, where no influence is discernible. That a marked difference exists between these two is shown by various demonstrations. Opposite polarities attract; equal polarities repel. What this mysterious influence is, or how it is caused, has thus far eluded the closest and most scientific scrutiny. If we divide a magnet at any point, each portion of the original becomes itself a magnet. This division may be carried on indefinitely. If we could divide so minutely, we should no doubt find that each molecule of the original was a magnet, possessing positive and negative poles, and its neutral center. Hence, magnetism is not inherent, or does not reside at any particular point of the magnet.

Magnetic Lines of Force or, Curves.

The lines of magnetic force pass in graceful curves from one pole to the other of the magnet, and vice versa. This fact was demonstrated by showing the influence of the magnet upon filings. This experiment, which, from its nature, is usually confined to the observation of a few who may gather around a table, was distinctly shown to every individual of the large audience of nearly 1,000 persons, by being projected upon a screen by means of a newly devised instrument made up of reflectors and prisms.

Magnetic Induction.

In addition to the property which the magnet possesses of transferring its influence to steel by being rubbed upon it, it also possesses the remarkable peculiarity of transmitting its power by induction. A piece of common iron when placed in contact with a magnet, and even when not in actual contact, but near to such a piece of iron, also becomes magnetic, and continues so as long as it is kept under the influence of the original. This is called induction, and is similar to the same principle developed in electricity.

The earth itself is a huge magnet, and its north pole attracts the south pole of the needle; hence what we call the north pole of the needle is really its south pole. We reverse the nomenclature simply for convenience, because the south pole is always upon the north point of the needle when it is freely suspended.

Magnetic Vibration and Dip.

It was for a long time supposed that the needle always pointed due north and south; but it has of late years been demonstrated that there is always a variation either east or west and greater or less at different points on the earth's surface. This irregularity of the needle is called "magnetic variation." Its cause is not yet fully understood, and its existence is not constant, or alike at all times in any one place.

The needle has also another variation called its "dip." On the equator there is no dip; the needle stands there perfectly horizontal. As we go north or south, the variation from the horizontal is gradually changed, until, if we could reach either of the earth's poles, we should find the needle there, if freely hung, occupying a perpendicular position. This peculiarity was first discovered in 1576.

It is claimed that the magnetic needle was known in China 3,000 years ago; but the claim is considered doubtful. But the first idea of it undoubtedly came from the east, and was probably introduced into Europe by Marco Polo.

The Effect of the Magnet on Gold, Silver, Copper, etc.

The magnet, besides its influence on steel and iron, has also a greater or less effect upon most

other substances, such as gold, silver, copper, nickel, cobalt, zinc, glass, paper, cloth, liquids and gases. This influence on a limited number of substances has long been known; but Faraday made the matter a special study, and demonstrated the fact that it had a very wide and almost unlimited influence, though in relation to most substances its influence was extremely weak. He devised an apparatus which was capable of detecting its influence when exerted only one-millionth part as strongly as upon iron. This instrument was exhibited and its action explained. The power of this instrument to develop the more minute influences of magnetism depended upon a peculiar and intimate

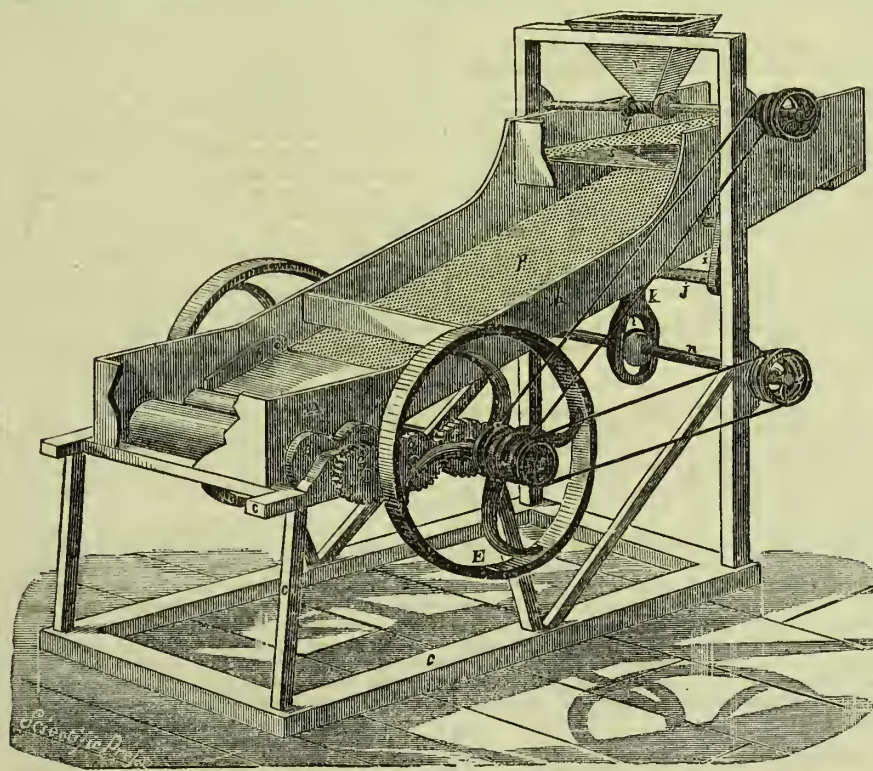
Relation between Magnetism and Electricity.

When electricity is caused to pass through two magnets whose poles are placed in close proximity to each other, the magnetic power is most wonderfully intensified at the interval between the two poles, and the instrument then becomes what is known as an electro-magnet. Pieces of gold, silver, copper, etc., placed in the interval between the poles, which is called the magnetic field, and which were not at all visibly affected by the ordinary magnetic current, were most palpably influenced when the electric current was added to intensify the former. The increased power of the electro-magnet over the simple magnet was also otherwise demonstrated in a most remarkable and amusing manner, as in the greedy way with which it would seize upon and hold a large mass of carpet tacks or small nails. The in-

Thielen's Grain Cleaner.

We illustrate this week an improved grain and malt cleaner, and crusher; invented by Mr. Nicholas Thielen, of Sacramento; and patented through the SCIENTIFIC PRESS Patent Agency. The machine is a durable one, and well adapted to its work. The grain or malt is cleaned before crushing. By employing the spreader and extra screen, hereinafter described, the grain is evenly distributed along the entire length of the rollers, so as to cause them to wear uniformly, and not in one place more than another.

The cut represents a side view of the machine. A A is a three-sided box, inside of which the crushing rollers, B B, revolve; and which is mounted upon one end of a frame, C C C, in the usual manner. Instead of driving the rollers by belts, applied directly to pulleys on the extremity of each shaft, the inventor employs an additional or supplementary shaft, d; outside of the box, A, and parallel with the rollers, B B, a large fly-wheel, E, is secured to each end of this shaft, and inside of one of the fly-wheels, a spur-wheel, f, is secured, which engages with the spur-wheels, g g, on the extremities of the roller shafts, so that by driving the supplementary shaft, d, the rollers are also revolved. The shaking-screen frame, h, has its upper end supported at the upper end of the frame, C C, opposite the rollers, between two upright arms, i, of the rock shaft, j; an arm, K, depends from the middle of the rock shaft, and



GRAIN AND MALT CLEANER AND CRUSHER.

fluence of a rotating disk or plate on the magnetic needle was also shown.

The Magnetic Force Universal.

The magnetic force has a most important purpose in the grand economy of nature, and extends its influence throughout the entire universe. This is inferred from the known influence known to extend from the sun to the earth. What are called

Magnetic Storms

Or an unusually excited condition of the magneto-electric forces upon the earth, are known to have their origin (at least sometimes) in the sun. Unusual disturbances in the sun, such as the extraordinary eruptions, which modern observers have been able to detect and so fully describe, are always accompanied by magnetic storms on the earth. It has also been ascertained that sun spots have an important influence in this direction.

A Remarkable Instance

Was referred to, where an observer in Europe having noticed a certain disturbance in the sun's atmosphere, immediately telegraphed to all the magnetic observatories on the earth, with which he could be put in communication, when it was discovered that a general magnetic disturbance or storm commenced in the vicinity of all those observatories, simultaneously with the same phenomena in the sun. The learned lecturer concluded by announcing that these higher and most important phenomena connected with magnetism and electricity would form the subject of his future lectures, the next one of which would be given on Thursday evening, February 12th.

MAKING RAISINS.—We have a short letter from H., asking us if there has yet been invented on the Pacific coast, a suitable dryer for making good raisins speedily and as perfectly merchantable as the imported article. We have heard it asserted that good raisins have been made from grapes in from 6 to 8 hours by the Alden fruit drying process; but we have never seen any of the product; nor do we know of any apparatus that will do it; and yet it would seem to be a matter of certain accomplishment to one who might give the subject proper attention.

Flax and its Culture.

The importance of flax culture is, we think, hardly sufficiently appreciated by farmers of the Pacific coast. A few, here and there, have given it a trial, and when the season has proved propitious, and the soil adapted to its growth, it has paid a fair and in a few instances a large profit. The present season would seem to be one in which everything favors the flax crop. The soil and subsoil are completely soaked with rains. Flax is a tap-rooted plant and runs down for its nutriment and moisture, and is not as dependent upon spring rains as wheat and other surface feeders; and as the wheat acreage must necessarily be largely diminished this spring, in consequence of the redundant rains, it presents a good opportunity of giving the flax crop a fair trial.

Without falling back upon any Eastern experience in flax culture, as a rule or guide for the farmers here, we are enabled to give a few practical hints from one who has grown the crop in Monterey county successfully. W. T. Armstrong, Esq., of Salinas, says:

"As the culture of flax is becoming one of the leading and profitable industries of the Pacific Coast, and as the culture and harvesting are imperfectly understood by the majority of farmers, I conclude a few hints relative to culture and harvesting may be of service and interest to those about to commence the cultivation of flax. My experience extends over a number of years, cultivating from one hundred to six hundred acres yearly. I am willing that others may profit by my experience, and for that reason I submit the following

Hints.

There are a few old-fogy ideas connected with flax that should be exploded: One is, that it impoverishes the soil to a greater extent than any other crop—which is not the case. It leaves the ground loose, and in better condition than wheat or barley; while wheat and barley derive most of their strength from surface soil, flax draws largely from the subsoil. The elements of a good wheat crop remaining after flax, in some of the Western States it is sown as a preparatory crop for wheat—a failure after flax being seldom known. Another false idea is, that it will not do to sow early, on account of frost. For the last two years I have had volunteer flax germinating in December, standing the frost of winter without any apparent injury, looking healthy and growing finely the whole winter.

The Ground

Should be well plowed, the harrow following the plow, pulverizing and smoothing the ground in the best possible manner. The seed should then be sown, harrowed well, and thoroughly rolled. The amount of seed sown to the acre, depends altogether on the soil and season. Strong adobe land, with plenty of rain, will require about fifty pounds of seed to the acre; while land less strong, requires from ten to twenty pounds less to the acre. One point always to be remembered is, in a dry season sow light.

Harvesting.

I have used a header and reaper, but am inclined to recommend the reaper. If headed and stacked, it should be threshed as soon as possible; if it is allowed to get into the sweat, it is very difficult to thresh.

I can harvest and thresh at a cost of two dollars per acre. To hire the work all done, it would cost about four. The details relative to threshing cannot be given in this article.

Threshing is the most difficult part of the whole business. Where it is not understood, twenty-five dollars' worth of seed can be thrown away each day and the operator not know it. My advice is, to have none thresh but those who understand it fully. I believe the Vibrator is the best flax machine made, though good work can be done by other machines if properly arranged.

Yield.

The yield is, on upland, from 600 to 1,000 pounds per acre. On adobe, from 1,200 to 2,000 pounds per acre.

There is one advantage that flax has over wheat and barley: it has no enemies to cut it short, such as rust, blight, or insect, which cut a wheat crop short just before harvest. It is safe to have a part flax, even if it should not pay quite as well, to fall back on, in case of wheat and barley failure.

Its advantages over grain are, in harvesting and threshing it requires less help, less sacks, less freight to market, and brings a much greater price."

CULTIVATION OF THE ORANGE.—We have frequently alluded to the marked success which has hitherto attended the cultivation of the orange in this State, not only in the southern, but in the central and northern portions as well. We last week received ocular demonstration of the fact that Calaveras county is not a whit behind any other portion of the State in its capacity to produce to perfection this delicious tropical fruit—even within the lower lines of the snow belt of the Sierras.

The demonstration alluded to was in the shape of a small box of oranges and lemons from Knight's Ferry—the former raised by Mr. George Winter, who has six trees, from which he has this year gathered 900 oranges. The lemons were from trees grown by Mr. Isaac Dakin, a brother-in-law of our correspondent, "Mary Mountain." They came from a tree raised from seed brought from Acapulco, about six years ago, and were not only mammoth but delicious specimens of their kind.

Too MANY.—In a recent reference to orange trees in Orange, Los Angeles county, we gave the number one million, when it should have read one hundred thousand.

USEFUL INFORMATION.

New Dyeing Recipes.

Reimann's *Farber Zeitung* contains a recipe for a safflower rose on glazed calico. The dressing consists of 50 lbs. of wheat starch, 20 lbs. of wheat flower, 4 lbs. of white wax, and 6 lbs. of cocoa nut oil, a little sulphuric acid being added to the water in which the starch is mixed.

There are also recipes for light and deep Prussian blues on glazed calico; for a green (extracts of indigo and of quercitron) on jaconnet; a peach wood crimson on glazed calico and jaconnet; a brown on calico with Bismark brown and magenta; a gray drab on wool, and a scarlet on woolen cloth and flannel; also a blue (soluble aniline blue) and a coffee brown on plush; a violet on woolen yarn. The mordant in this case consists of $1\frac{1}{2}$ ozs. of tannic acid, dissolved in hot water in which $\frac{1}{2}$ oz. of Marseilles soap is next dissolved; $\frac{1}{4}$ oz. rape oil is next added, and stirred up till it forms an emulsion. The liquid is used at 167° Fah. The bleached yarn is worked in this mordant for fifteen minutes, and then withdrawn. The color bath, at the same temperature, is prepared with 5 ozs. of alum and the clear solution of 1 oz. of methyl violet.

There is also a prescription for a light green on cotton yarn, the color being methyl green fixed with tannic acid.

The editor gives a recipe for a brown on shoddy containing a mixture of cotton, called on the continent *velour*. To 100 lbs. of this material, make up a bath of 30 lbs. of fustic, 3 lbs. of alum, 2 lbs. of prepared tartar, and 1 lb. of blue vitriol, in which the shoddy is boiled for half an hour. To the same lot are then added 1 lb. of chromate of potash and $\frac{1}{2}$ lb. of aniline red, ruby, or aniline crimson, known on the continent as *rosain*. The dyeing is carried on at a gentle boil, and turmeric added to modify the shade. Logwood may be used, if needful, to darken. Aniline is refuse magenta; it is dissolved in hydrochloric acid and boiled in water previous to use.—*Chemical News*.

VENEERS are readily dyed upon the surface, but in this condition are much more liable to disfigurement than when the color is made to permeate the mass. Those colored throughout are therefore the most sought after, and before the late war were chiefly furnished from Paris. During the war, the supply being cut off, some German cabinet-makers took up the subject, and, after numerous experiments, perfected a process which secures the desired result. The veneers are first soaked for 24 hours in a solution of caustic soda, and then boiled therein for half an hour. They are then washed with water until all the alkali is removed, when they are ready to receive the dye. This treatment with soda effects a general disintegration of the wood, whereby it becomes, in the moist state, elastic and leather-like, and prepared to absorb the color. Veneers thus treated, if left for 24 hours in a hot decoction of logwood, and, after superficial dyeing, immersed for 24 hours more in a hot solution of copperas, become of a beautiful and permanent black throughout. A solution of picric acid in water, with the addition of ammonia, gives a yellow color, not in the least affected by subsequent varnishing. Coralline dissolved in hot water, to which a little caustic soda and one-fifth its volume of soluble glass have been added, produces rose color of different shades, dependent on the amount of coralline taken. After dyeing, they are dried between sheets of paper and subjected to pressure to retain their shape.—*Manufacturer and Builder*.

CASTING NICKEL.—Nickel can be cast; it is now done in Berlin, Prussia, where nickel plates of 16 inches square and $\frac{1}{4}$ inch thick are made from the ordinary small cubes under which it comes in the trade. The way to do it is to place the nickel in crucibles in the ordinary furnaces used in brass foundries, but the melting requires a constant and careful watchfulness, while a proper liquid condition is only attained after a heat of at least six hours. As soon as it flows it must at once be cast in sand molds, because if allowed to cool in the least it will at once form a compact lump, which it is impossible to melt again in any ordinary smelting furnace. Such a very large cast of nickel plates were to be seen at the late Vienna exhibition. They are of course very useful for nickel-platers.—*Manufacturer & Builder*.

A USEFUL DEVICE.—A tin tube made like a siphon, driven into the vent of a barrel of wine or cider, and the other end inserted into a vial of water, will prevent the air from entering the barrel, while the gas escapes through the water. Make the barrel otherwise tight. When the cider or wine is done working, the water in the bottle will cease bubbling. It requires no filling up, as there is no loss.—*Boston Journal of Chemistry*.

DETECTION OF ADULTERATION IN COFFEE.—In order to ascertain whether ground coffee has been mixed with either roasted corn or amylaceous substances generally, it is only necessary to treat the powder, first with dilute caustic potassa, and after filtration and addition of a large quantity of pure water, a solution of iodine is added, whereby the starch is detected.—*Dingler*.

Gluing the Ends of Leather Belts.

The first requisite in uniting leather belts with glue is to dress off each piece at a true taper, for a distance equal to the width of the belt. The two pieces should be made to fit as nearly as two pieces of planed boards when dressed with a jointer. Now, procure some glue of the very best quality, and prepare it the same as for gluing pieces of wood together. Then, let the leather be warmed, lay on the glue quickly while it is hot, and apply pressure with a vise or hand screw. In lieu of either of these appliances, place the leather between two pieces of plank, put two carriage bolts through them, screw them up tightly, and let it remain in the clamp until the glue is thoroughly hardened.

We have united leather belts with glue of a common quality, which were in use for several years; and the glued joints did not separate until the leather was allowed to get wet.

An exchange contains the following directions for making a cement for uniting leather belts: Mix ten parts of sulphide with one oil of turpentine, and then add enough gutta percha to make a tough, thickly-flowing liquid. One essential requisite to a thorough union of the parts consists in freedom of the surface to be joined from grease. This may be accomplished by laying a cloth upon them and applying a hot iron for a time. The cement is then applied to both pieces, the surfaces brought in contact, and pressure applied until the joint is dry.—*Ex.*

UTILIZATION OF GAS LIME.—An English engineer claims to have discovered that the waste lime from gas purifiers, hitherto considered as almost useless refuse, may be used to great advantage in the manufacture of mortar, beton, and concrete. He states that it is simply requisite to grind it up in the usual mortar mill or to mix it as ordinary lime with sand, ashes, and similar material. When used in making concrete or beton, the lime may or may not, as required, be moulded into bricks or flags in the ordinary manner. The addition of Portland cement to the mixture is said to render the product much harder. This use of gas lime has been patented in England by the inventor, Mr. Humphrey Chamberlain Round, Green Barnsley, York.

PERHAPS the item in which method brings the largest returns is that of keeping machinery in constant use. Not only by this means is its usual profit obtained, and the interest on its first cost saved, but the mechanism, if kept in good repair, will last much longer; for it is well known that when in daily operation, a machine, like an engine-lathe, will deteriorate but one-half as fast as when entirely idle. This should be kept in mind when selecting for manufacture a line of staple articles; that which will keep the machinery running regularly throughout the year, other things being equal, pays a better interest on time, money, and labor than that which for any cause must be allowed to stand idle at intervals.—*American Car Builder*.

DETERMINATION OF WATER IN ESSENTIAL OILS.—All the volatile oils distilled from vegetable matter may contain water even when perfectly free from turbidity. If to samples of such oils several times their volume be added of petroleum ether (light petroleum spirit), a turbidity arises from drops of water which are separated out, and which appears the denser the larger is the proportion of water present. The following oils were thus found to contain water:—Lavender, clove, spike, cinnamon, rosemary, sassafras, juniper, and bergamot. Traces of water were found in neroli and oil of *Gaultheria procumbens*. Turpentine, cedar, citron, rue, and amber were free from water.

DENTIST'S SOLDERS.—For gold solder, use 8 grains American silver coin and 4 grains best copper wire (or copper from an old style cent) to each pennyweight of gold plate of the same fineness as that to be soldered. For silver, use 8 grains best brass wire to each pennyweight of silver coin. Melt with borax, cool, and roll into plate.—*Scientific American*.

INCREASING THE FELTING PROPERTY OF HAIRS BY THE USE OF CHEMICALS.—According to Reimann's *Farber Zeitung*, a mixture of nitric acid and treacle is now proposed as a substitute for the use of mercury dissolved in nitric acid, formerly employed for enhancing the felting properties of rabbit's hair in the manufacture of felt hats.

IMPROVED DRAWING INK.—The addition of one part of carbolic acid to 80 parts of the fluid India ink, while it does not impair its fluidity, causes it to dry rapidly even in heavy lines, so that they can be varnished over. The proper amount of carbolic acid to be added in any case may be ascertained by adding drop by drop, the ordinary apothecary's solution of it in alcohol until varnishing does not effect the definition of a test line by causing it to run. The addition of too much carbolic acid is indicated by the transparency of the line and the inability to draw fine lines, a condition which may be easily remedied by the addition of more of the fluid ink.

DANRUFF can be removed by washing the head with buttermilk and thoroughly cleansing with pure soft water afterwards.

MISCELLANEOUS.

A New Type-Setting Machine.

The art of printing by machinery has advanced with very rapid strides during the last twenty years; so quickly, indeed, that the variety of machines at present in use is scarcely known even to printers' engineers. But this only applies to the printing-press department, or that division of the trade which impresses the types on the paper after they have been put together into pages and locked in an iron frame termed a "chase."

Strange to say, notwithstanding all these improvements in the printing-off of the "formes" of type, the art of the compositor—the man who puts the type together—has been left where it was above two centuries ago. But this has not arisen either from oversight or from a belief that the art had arrived at perfection, but from the innumerable difficulties which attend the application of machinery to composing. For fifty years failure has followed the footsteps of inventors, notwithstanding their partial success, mainly of late years, because the advantage gained by machinery over men was too small to pay for repairs and return a decent interest on the original cost of the machine.

The earliest of these machines was that produced by Dr. Church just fifty years ago, the latest before the general public was that shown at work in the Exhibition of 1872, and which it was remarked by strangers to the art of printing was constantly getting out of order. In next year's Exhibition, however, we hope to see a new one which will find more favor with master printers than its predecessors, as it is constructed on an entirely original plan, and cannot easily be deranged, or if deranged by a vice, can be put in order in a few seconds. The machine has not yet been patented, but we have been favored with a sight of it at work, when it gave very satisfactory results.

This machine is the invention of Mr. J. Hooker, a compositor and self-taught mechanic, who has had considerable experience in the working of type setting and distributing machines, and consequently has had a capital opportunity of testing their value and observing their defects. Besides the above, the inventor is now constructing its sister machine—a distributor—without which the art of composing is not considered complete; but at the time of our visit, this machine was so little advanced that we could not test its value or detect its defects.

The composing machine can be worked singly—that is, by one man—but the inventor tells us that it is most economically worked by three men and a boy, who can produce work equal to that of twelve compositors, and with many less errors, which we believe is in the limit of its power, as we tested the speed and worked it ourselves. The inventor has been over ten years working out his ideas, and has during that time twice abandoned a partly completed machine for improved ones on new principles. He has studied every English patent, and has done wisely in constructing a perfect machine instead of patenting a model, which can never show whether an invention can be pecuniarily successful or not. For his sake, and as a boon to the newspaper and reading public, we wish him every success.—*Iron*.

A NOVEL BURGLAR DETECTOR.—The *Montreal Gazette* recently informed us that "the profession of burglary, at all times a hazardous pursuit, is likely to become still more dangerous to its followers in the future—thanks to an ingenious invention which was privately exhibited at the Mechanics' Hall. We allude to Simpson's 'Excelsior Burglar Detector,' which is an apparatus of great simplicity, and one which will no doubt answer all the purposes for which it is designed. It consists of a small cast-iron block, having four chambers drilled in the surface, communication between which is managed by a fuse hole running from the bottom of the fourth to the first hole. These holes are charged with powder, ordinary gun wadding being used, and exploded by means of a strong hammer spring, which, being connected with wires to any part requiring protection, is brought down on the nipple by the slightest touch of the wire. The first chamber is thus exploded, and after an elapse of a few seconds the other chambers explode in succession, owing to the fuse at the bottom, giving an alarm loud enough to awaken Rip Van Winkle or put a regiment of burglars to flight. As many connecting wires can be used as suit the owner's fancy, and if he is inclined to inflict punishment upon the intruders, all that is necessary is to have the chambers loaded with ball, with the muzzles pointed in the direction from whence he anticipates a visit. The apparatus is certainly a very useful and effective one, and must be extensively used by those householders who desire to protect their property from burglars."

APPLICATION OF THE SAND-BLAST.—The most recent application of the sand-blast is for cleaning the fronts of buildings by removing the soot, dust, and other substances therefrom. The impact of the sand on the surface removes the soot or dust from all the crevices and indentations, without perceptibly interfering with the sharpness of the architectural ornamentation.—*Jour. Soc. Arts*.

HOW MIRRORS ARE SILVERED.—The following description of "silvering" plate glass for mirrors is mainly founded upon the method pursued at St. Gobin and Ravenhead. After polishing, each glass tablet intended to make a looking-glass is silvered, or, more correctly, coated on one side with an amalgam of tin. In the preparation of this amalgam tinfoil is used, but it must be beaten from the finest tin, and possess a surface similar to that of polished silver. The art of silvering is simple, and merely requires dexterity. The glass plate having been thoroughly cleansed from all grease and dirt with putty-powder and wood ash, the workman proceeds to lay a sheet of tinfoil smoothly upon the table, carefully pressing out with a cloth dabber all wrinkles and places likely to form air bubbles. He spreads over it a quantity of mercury, taking care that all parts are equally covered, and then the glass plate is pushed gently on to the surface, commencing at one edge. The glass is allowed to remain for twenty-four hours; it is then removed to a wooden incline similar to a reading-desk, to allow of the excess of mercury draining off. As the amalgam gradually sets, the incline is increased till finally the plate reaches the perpendicular, when the process is finished, and the mirror removed to the store-room.

MINT CRAZY.—The American people are seemingly getting crazy in regard to the mints—not mint-juleps, nor "mint-drops," but the establishments that turn out the "drops." Every mining locality, almost, wants a mint. We have one at Carson to accommodate the miners of Nevada and Utah. Montana has for some time past been asking for a mint establishment, and now comes Salt Lake City with a demand for a like institution. As soon as Alpine leaves off her swaddling cloths we had better ask for a mint for Silver Mountain. And, we had forgotten, Chicago wants one, and if her wants are supplied her rival, St. Louis, will want one. Our people are continually growling about high taxes and foolish expenditures of the public moneys, and at the same time they ask Congress to spend some five or six millions of dollars to establish mints when the mints we now have fully meet the wants of the country.—*Alpine Chronicle*.

PASSED THROUGH.—We met Mr. Kimball, a gentleman from San Francisco, to assume charge of the fine 20-stamp mill at Egan Cañon. He precedes J. R. Murphy but a few days and will at once get matters in shape to commence work with vigor. We are informed by the gentleman mentioned that Mr. Murphy, accompanied by Mr. Taylor, of the London firm of Taylor & Sons, large operators in mines and mining, and connected with the property at Mineral Hill, will arrive this morning from below. It is in view to look at the prospects of Cherry Creek and report upon them. We trust the parties mentioned may be satisfied of the advisability of investing in the new camp, as men of their stamp do much toward bringing out a country. The present inclement season of the year, we fear, may operate to the disadvantage of the district, but we hope for better weather soon, which will place a different aspect on matters generally.—*White Pine News*.

AMERICAN FLAG MILL.—The American Flag mill has just finished making thorough repairs, and is prepared to do the best of work. A new dry kiln, twenty-one feet square, has been built, provided with two furnaces, which dries the ore quickly and thoroughly. The capacity of the mill is thus much increased. The mill has always done satisfactory work; and, with increased facilities, must still retain the confidence of the public. The mill is now working ore from the Washington & Creole mine, and extracting eighty per cent. of the silver contained therein. A. G. Moore, the foreman of the mill, has had much experience in the treatment of ores in this camp, and understands the processes best adapted to obtain good results from the different classes and grades of ore the camp produces.—*Pioche Record*.

ALUMINUM.—J. S. Howard, of Springfield, Massachusetts, has, it is said, after three years of patient experiment, succeeded in extracting from clay, at a price which will compete with the foreign production, the aluminum for plating which has been used extensively in Europe, but which has never been manufactured to any extent in this country, owing to the cost of extracting it under the old method. Mr. Howard affirms that by this method the aluminum can be furnished nearly a third cheaper than the retail price for the foreign production.

IMPROVED BUTTER PRINT PRESS.—A patent has been granted for an invention, the object of which is to furnish to farmers and dairymen an improved butter print or press, by which the butter may be quickly and evenly formed into cakes of required weight, with suitable print marks thereon, without previous weighing. It consists in a sliding box, into which the butter is introduced and pressed on a printing block, by a follower block and lever, into suitable shape and weight.

ABOUT the year 1300 coal was first discovered on the banks of the Tyne, and was introduced as fuel into London about the year 1350, in the reign of Edward I. Its use, however, was in 1373 forbidden by proclamation, in consequence of the gas being considered to be deleterious to health through corrupting the atmosphere, and for many years after it remained unused. At the close of the century, however, the value of coal became recognized, and its application and consumption extended.

THE VEGETABLE GARDEN.

History of the Potato.

It seems scarcely credible that only one hundred years have elapsed since the general introduction of this now well-known and universally cultivated esculent into Europe. But such is the fact, and it has been proposed to hold a jubilee in Germany in this year, 1874, in honor of the centennial of the potato.

When the Spaniards conquered Peru, in the sixteenth century, they carried some potatoes to Europe and sent them to the Pope. The raw plant was cultivated a little in Spain, Italy, Burgundy and the Netherlands, and from a certain resemblance to the truffle, an esculent fungus growing in the earth, the Italians gave them the name of *Tartufi*, or *Taratufoli*, whence the Germans derive their word *Kartoffel*. The French called them "Apples of the earth," *Pommes de terre*, while in Austria and portions of Germany the equivalent expression *Erd-apfel* is used.

John Hawkins first introduced them into England in 1565. Walter Raleigh brought them there 1584, and finally, Admiral Drake in 1586. The latter sent some to a friend to a friend to plant, with the remark that the fruit was excellent and nutritious, so that it would be very useful in Europe. His friend actually planted the tubers, and they grew nicely. But when the seeds balls were ripe, he took these instead of the tubers and fried them in butter, and sprinkling sugar and cinnamon over them, placed them before some company as a great rarity. Of course these balls tasted disgustingly, and the assembly concluded that the fruit would not ripen in Europe. The gardener pulled up the plants and burned them. The gentleman, who chanced to be present, stepped on one of the baked potatoes as it lay in the ashes, when it broke open, and he noticed that it was white as snow, and mealy, and had such an agreeable smell that he tasted it and found it very palatable. The new vegetable was thus rescued, but for a century after it was only cultivated in his garden, and in 1600 the Queen of England made the remark in her house-book that a pound of potatoes cost two shillings (about 50 cents).—*Jour. of App. Chem.*

PRUNING TOMATOES.—That tomatoes are benefited by pruning we have not the slightest doubt, and we yearly practice it in our own garden. Some recommend and others practice cutting off all the tops of the plants, to which we most strongly object, as we are satisfied that such a course is very injurious to the plants, as well as to the perfect ripening of the fruit. As the tomato begins to grow, select say three or four of the strongest shoots, pinch all the others out, should there be any, by the finger and thumb, close to the stem. When these four bunches begin to show fruit, a small lateral will show itself immediately at the next joint. These should all be pinched out as fast as they appear, letting no shoots grow at any time, but the four main branches referred to; by so doing, whether the plants are tied to stakes or laid on the ground, we have always found that we secured a larger, finer, and at the same time a heavier crop than we could by any other process.—*Briggs & Bro's Catalogue.*

ONION MAGGOT.—An onion-grower, of considerable experience, says that he destroys the onion maggot in the following manner:—As soon as the maggots are discovered at work, remove the soil from the sides of the bulbs, by making a shallow trench with the corner of a hoe; then pour into this trench soap-suds made by dissolving two or three gallons of soft soap in a barrel of water, previously adding one pound of copperas in the soap.—*Rural New Yorker.*

ANALYSIS OF THE POTATO.—It has been found by analysis that in 100 parts of potato there are water, 70.00; starch, 24.00; azotic matter, 1.60; fatty matter, .10; sugar, 1.09; skin, 1.65; mineral matter, (salts), 1.56; total, 100.00. The potato produces at least 30 per 100 of dry matter, 1.65 of which must be subtracted for the skin, which reduces the food part to 28 per 100, 24 parts of which are starch.

THE HORSE.

About Ponies.

Next to or before the brougham-horse, in general utility, comes the pony, which is a sort of equine servant-of-all work, the *Souffre-douleur*—the whipping-block on which the boys and girls learn to ride, and the ready resources in any emergency, when the boy-page or groom has to hurry off with a letter or telegram, or to fetch some forgotten article for the cook. The late Sir Robt. Peel did not ask a more difficult question when he invited the House of Commons to tell him "what is a pound?" than the man who, in a company of horse men collected from the four points of the compass, inquires, "What is a pony?" In Yorkshire, Leicestershire, Northamptonshire, anything under 15 hands 2 inches is called a pony. The famous Steeplechaser, the Lamb, which twice won the Liverpool Steeplechase, and stood 15 hands 2 inches high, was called "The Pony" by the professional reporters of his struggles and his triumphs. In Suffolk, which for some unexplained reason is great as a horse-breeding county, the height of a pony is settled at 13 hands 3 inches. In Nottinghamshire, the height is considered to be anything under 14 hands 2 inches; whilst in Devonshire and Somersetshire "the oldest inhabitants" consider any pony more than 12 hands high as the degenerate result of some foreign cross of the ancient Exmoor breed. Strictly speaking, a pony is one of a tribe reared for generations untold on mountains and moorlands, without shelter and without other food than the natural herbage. The true pony is bred because nothing of a greater size can be reared under the circumstances of soil and climate. The smallest size for any useful purpose is about 9 hands (i. e., 36 inches); well-shaped ponies under that height are only fit for pets or for the establishment of a showman.—*Cassell's Book of the Horse.*

GENTLE WORDS TO HORSES.—The ridiculously loud tone of voice in which orders are generally given to horses when the driver desires them to start or stop, has often been a subject of surprise to me. If horses were next thing to deaf, there would be an excuse for the shoutings and yellings so generally indulged in, but they are not, and therefore need not be spoken to so loudly and harshly. The ear of a horse is very sensitive, and, save in exceptional cases, it is as possible to control his motions by a command given in a moderate tone of voice, just as readily, and indeed, I think, more readily than where this rough, rude manner is used. A horse is a teachable animal, and is always affected by kind treatment. The fact of the matter is, that if kind words and gentle treatment throughout were given these noble animals, instead of oaths, curses and blows, we should find their docility greatly increased. Just imagine if you will, a gee! or whoa! uttered in a tone sufficiently loud to be heard at a half mile's distance, and this command given to an animal within five or ten feet of the party giving it. Wherein consists the necessity for it? Why not speak in a moderate tone? This is all that is required. The horse, if not deaf, can hear it, and will as readily obey as if given in thundering tones. One of the best managed teams I have ever seen, was controlled by the driver without indulgence of any of this unmusical yelling. The driver rarely ever spoke above his ordinary tone of voice, and yet his horses laid into their work with as much willingness, and apparently greater earnestness than if they had been driven to it by fearful shoutings and blows. Let me appeal to the common sense of our readers in this particular direction. The horse is an intelligent animal. None of the brute creation more readily appreciate kind words and kind treatment. Such facts should be considered always by those who have the care of these animals.—*Cor. Farm Journal.*

LIGHT HARNESS.—Farm work, during the hot summer months, requires only the lightest harness. In the cities the harness worn by street railroad horses is as scant as is consistent with the work they have to perform. No breeching is used; the hipstraps are dispensed with. Teams may often be seen in the hot days of July and August, plowing in the same harness they wore during the winter. This is unnecessary; nay, sometimes it amounts to positive cruelty. Remove every superfluous strap, take away the back-strap and crupper band, and let the air circulate

freely around the body. At night when the work is over, wash the sweat and dust from the legs and thighs of the horse; a dash of water on his flanks would be grateful to him. Let his stable be airy and clean, with a bed of clean straw. Kindness to these serviceable animals is the truest economy. Besides we feel far better when our horses are made comfortable. The sensation is akin to that derived from doing a benevolent action. A sensitive man cannot see a horse sweating under and galled by a heavy harness during the intense heat of a summer's day, without sympathy and pity, nor can he retire to rest with an easy conscience, knowing that his faithful servants in the stable are not properly cared for.—*Ec.*

AMMONIAC SULPHATE.—L. L. Hote proposes to utilize refuse wool, horn, feathers, and other nitrogenous bodies by digesting them with a dilute solution of caustic soda, 1 part soda to 10 of water, until they have assumed a pasty consistency. The mass is then mixed with quicklime and distilled, at first at a low heat and afterwards at a full red. The vapors are condensed in chamber acid. The residuum in the retort is carbonate of soda and quicklime. By boiling this with water the soda is recovered as caustic soda, and is ready for the next operation.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street, (Russ House Block.) San Francisco. Wholesale and retail dealer in Mens', Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods; also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J Street, Sacramento.

San Francisco Wire Works, 665 Mission St., S. F. O. H. Gruenewald & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Ohermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; J. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

The New Wilson SEWING MACHINE



Has points of superiority over all others. A reliable warranty is given with each machine for **FIVE YEARS.** It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market. **G. A. NORTON, Gen. Ag't** for the Pacific Coast, 337 Kearny St., S. F. 2v7eow-hp-ly

PRICE, \$50.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO., Manufacturers of and Dealers in **Monuments, Headstones, Tombs, MANTEL PIECES, ETC.,** 421 Pine street, between Montgomery and Kearny, San Francisco. 21v2-ly

AVERILL'S CHEMICAL PAINT

Of any desired Shade or Color, Mixed ready for application, and sold by the gallon. It is Cheaper, Handsomer, more Durable and Elastic than the best of any other Paint. Office, corner Fourth and Townsend streets, San Francisco. Send for sample card and price list. 15v23-3meowbp **HEALY & JEWELL, Agents.**

McLAREN, JANES & CO., DEALERS, MANUFACTURERS AND INTRODUCERS OF **NEW INVENTIONS** FOR THE PACIFIC COAST. Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.

Real Estate and General Business Agency. NO. 605 CLAY STREET, SAN FRANCISCO, CAL. ja10-bp-3m

GEO. A. COBURN, Pub'r New York, San Francisco, Boston, London, P.O. Box 1116.

OUR SPECIALTY: "BEYOND THE MISSISSIPPI!" GO WEST, YOUNG MAN! GO WEST! Gold by the Bushel! Silver by the Ton! Capital required: Nerve and Honest Industry. **THE FAR WEST,** The Great Treasure Chamber of America. All about its Resources, Mines, Railroads, Lands, Indians, Climate, and its Developments Illustrated and Described in **CROFUTT'S WESTERN WORLD,** for \$1.50 a year. With \$10 Premium Chromo, **"AMERICAN PROGRESS,"** free to each subscriber. Two sample Worlds sent for 10 cents. Agents wanted.

LANDS & HOMES FOR SALE

RANCHOS FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to.

ALFRED ROBINSON, Trustee. 542 MARKET STREET, N. E. corner of Montgomery.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER, 311 Montgomery street, San Francisco, Or Pacific Rural Press Office.

FOR SALE OR TRADE,

680 acres fine farming or grazing land, with frontage of three-quarters of a mile, on a fine stream of water. Located in Shasta valley, Siskiyou county, within three miles of a large town. Commanding a back range of from 50,000 to 60,000 acres, well adapted to sheep or cattle. Will sell for cash, or trade for city property, or a small improved farm in any of the bay counties. Apply to **McLAREN, JONES & CO.,** 605 Clay Street, Room 10, S. F. jan31-1m

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP.

On Gift Map 4.

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

Valuable Dairy and Grain Ranch FOR SALE.

In San Mateo County, comprising 900 acres, 400 acres under cultivation, and all well watered and substantially improved. Inquire of

JOS. W. JORDAN, N. E. cor. Clay and Front sts., San Francisco.

A RANCH OF 160 ACRES.

With Barn and House, thirty or forty tons of hay, and with all the necessary farming implements, to be let for a term of years, either by the acre or on shares; situated between Medway Station and Moore's Landing, 2½ miles from either place. For particulars, enquire of **CHAS. ALPERS,** 238 Bush street, at 1 P. M. 1v1-2m

Horse Clipping—Price, \$6 per Horse.

Our friends and patrons are hereby notified that we are prepared with the **BEST HORSE CLIPPING MACHINE** in the country to do and guarantee first-class work. 20v6-3m **PRINCE & CHANTRY,** Norfolk Stables, Cor. Ellis and Mason, S. F.

SAN JOSE INSTITUTE

—AND—

Business College.

A Day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department

Is under the supervision of James Vinsonboller, who for many years was at the head of Business Colleges of San Francisco.

The Twenty-fourth Session commences January 19th, 1874.

For circulars address

3v7-2m **JAMES VINSONHALLER.**

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils, OIL CAKES AND MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.

Office, 3 and 5 Front street.

Works, King street, bet. Second and Third. fe15-eow

AGENTS WANTED FOR MONOPOLIES AND THE PEOPLE.

Being a full and authentic account of the struggles of the American Farmers against the extortions of the Railroad Companies, with a history of the rise and progress of the Order of Patrons of Husbandry; its objects and prospects. It sells at sight. Send for specimen pages and terms to Agents, and see why it sells faster than any other book. Address,

A. L. BANCROFT & CO., 721 Market St., S. F. jan31-1m

SANTA BARBARA COLLEGE, SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874. Write for Catalogue to **ELWOOD OOPER,** President Board of Directors. 22v6-1y

AGRICULTURAL NOTES.

ALAMEDA.

COAL.—A valuable coal ledge has been discovered by Thomas Harris, near Corral Hollow, about fifteen miles from town.

JOSEPH H. TAYLOR, a farmer residing about five miles east of Livermore, will plant about a thousand pounds of cotton seed this season, on his low land lying on the Corral Hollow creek. The situation is well adapted to cotton culture, as the waters of the creek can be made available at slight expense. Should the crop turn out well this season, a much larger seedling will be cultivated next year.

CALAVERAS.

THE WEATHER.—*Citizen*, January 31st: For the past week rain and sunshine have alternated, and the transposition from one to the other was effected so quickly and with so little warning as to disgust all the weather prophets. Enough rain has fallen to satisfy the most exacting and a month of dry weather would be welcome.

COLUSA.

COTTON.—*Sun*, Jan. 31: The weather having been unfavorable for plowing during the first part of this season, we would advise those who have land yet unshown to inquire into the matter of planting cotton. Several of the best business men in the county are going to take Col. Strong's proposition of planting cotton on the shares. Almost any of the land in the county thoroughly wet, as it is this winter, will produce cotton. Col. Strong, himself, does not figure on a fortune in a year from a few acres of cotton, but he has demonstrated that it is a crop equally as good as wheat taking the seasons as they come. Like wheat, it is a staple and always has a market; with this advantage: that it is not so much under the control of sheep owners. Bringing a higher price by the pound it can better stand a cent or so rise in freights. Then the farmer who has both cotton and wheat, can sell which ever bears the best price, and store the other for a better price. It does not, in the least, interfere with the wheat crop, but it is planted after the wheat is in, is thinned out before harvest and gathered after harvest; and then if the season is too wet to get the land all in wheat, it comes in for late planting. It is a much safer crop than wheat sown after the middle of February. Every farmer in the county, who can possibly do so, should plant some cotton the present season.

PLANT TREES.—This is a splendid season for planting trees, and no farmer should fail to put out some—especially should all those on the plains make a point of planting shade trees. Planted this season they will grow without further trouble. And we believe it is in the power of the farmers on the plains to materially alter the climate—making it more moist—by planting shade and fruit trees. The fig makes a splendid shade—is of rapid growth, and the fruit is very valuable, as there is always a demand for dried figs. The slip, which costs nothing, planted during a wet season like this, will require but little after attention. A half dozen trees will furnish both green and dried figs for a large family, which would make a large annual saving. Now is the time to plant them. There are many other kinds of trees and shrubs that are invaluable to a farm, and which should be planted during the coming month of February.

CONTRA COSTA.

THE COMPULSORY SQUIRREL LAW.—*Gazette*, Jan. 31: The Santa Clara Farmers' Club, at a meeting held on Saturday last, after having had the matter under consideration at several previous meetings, unanimously adopted a resolution approving the Squirrel Extermination bill, introduced in the Assembly by our member, Mr. Hammitt, with the exception, that they favor limiting the tax levy, for the purposes of the law, to ten cents on the hundred dollars, and they recommend that the Inspectors should be elected annually by the voters of the respective school districts, and that the fees of the officers for collecting the fines and recording the liens should be less than the bill provides. With these modifications they want the law applied to Santa Clara county; and it was the expression of the Club that the proposed squirrel law would be approved by nine-tenths of the farmers of the county.

This expression of the Club is quite gratifying to us, who have spent a great deal of time and effort in consideration of the subject, and in perfecting, as nearly as possible in view of the many difficulties, a measure calculated, as we believe, if it becomes a law, to relieve our agricultural interests of one of the most intolerable and discouraging evils that now burdens them. At the previous meetings when the squirrel bill was discussed in San José, there was much objection raised to it which a further consideration appears to have removed; and this has been the result in every other instance, where any consideration has been given the measure. The objections it has almost invariably evoked have yielded upon better understanding of the provisions, their relation to each other and the object sought to be accomplished. The members from Alameda, and their constituents we believe, desire the law made applicable to their county; and we have no doubt if it goes into operation in Alameda, Santa Clara, and this county, it will be certain to be extended to every other squirrel infested county in the State by the next Legislature.

KERN.

Courier, Jan. 31: Unlike the many of other products that have, from time to time, attracted the attention of California farmers, alfalfa not only fulfills all the expectations that were entertained of it when first introduced to their notice, but even exceeds them. It is quite well demonstrated that it is equally as good a corrective of malaria as either sunflowers or the Australian gum tree. Its productiveness astonishes everybody, and the avidity with which domestic animals feed and the way they thrive upon it surpasses anything ever before heard of. Hogs feed on all young and tender grasses and shoots, and it is well-known they prefer alfalfa, even in its advanced stages of growth, to any other vegetation. But we presume no one ever suspected they would feed upon it in its dry state. Who, in short, ever heard of a hog eating hay? But several of our farmers inform us they have maintained herds of stock hogs, this winter on alfalfa hay. This opens up a new and most profitable product, and makes it certain that no quantity can be produced so great that it cannot be readily converted into money.

The county is very prosperous. Abundant rains have tempted the new settlers to plant all the ground their teams can prepare. The demand for alfalfa land increases, as experience proves that it is cheaper to buy land at \$20 per acre and plant it in alfalfa than to use the wild lands, which always leaves the stock poor one half of the year. The land and fences bought with money worth two per cent. per month is cheaper than to hire the necessary labor to provide for herding sheep or cattle. To fence a section of land would cost about \$2,500. A band of 1,000 sheep costs for herder, with board, fifty dollars a month, which is two per cent. per month on the cost of fence. Two hundred acres of alfalfa would carry 4,000 sheep with the balance of the section to range over. As the flocks increase, division fences would be made, and the farm would then carry twenty sheep to the acre the year round, which would be twelve thousand eight hundred to the section. The figures look large, but it is no longer speculation; and the facts, too common here to admit of dispute, can be shown to any one curious or interested enough to come and see.

LAKE.

PIGEONS.—*Bee*, Jan. 29: These birds of "rapid wing" are now paying our locality a visit, in large numbers. Lakeport hunters enjoy the sport of bagging them; and our town folks, the luxury of a pie "good enough to set before a king." Our farmers declare them to be, however, like squirrels, pests and deplore their appearance.

THE FARMERS.—All around are taking advantages of the weather to get in their crops. Although we are not situated in any extensive farming country, still we have adjoining our town a few small farms which for fertility are unexcelled by any in the State. Going directly north from the town, you come suddenly upon a valley lying upon the river, in which are about six hundred acres of some of the best land in the State. This tract is divided up into several farms owned by J. G. Heald, who has the largest, C. H. Cooley, W. D. Sink, D. Sink and others. The land is nearly all covered with sediment brought down by the river, increasing greatly its fertility. Continuing on down from here you will find several farms of this kind of land remarkable for its productiveness in the cereals; but going back from the river you come upon the low hills upon either side possessing a soil peculiarly adapted to the cultivation of the vine.

There are several vineyards near, on the same kind of land, which produce a very superior quality of grapes, I am told, and the wine made from them is of the very best. All of this combined with the climate, which is unexcelled in equability, render this place eminently adapted to this branch of industry, and to this we look when persons begin to recognize the fact; but, like all other places, we must be content to grow gradually.

MONTEREY.

WEATHER.—*Advance*, Jan. 31: The past week has been the most delightful growing weather. A great deal of rain has been added to the general fall of the season, and the prospect for a bountiful harvest still brightens. It commenced raining about 3 o'clock p. m. yesterday, and it is still coming down as we go to press.

LARGE CROPS.—*Democrat*, Jan. 31: The Gonzales Brothers, of Monterey, have sown this year ten thousand acres of wheat, and it is nearly all up and looking finely, the country seemingly for miles presenting one vast area of beautiful green.

SANTA CLARA.

JUTE.—*Mercury*, Jan. 31: The movement for the establishment of a jute factory in Santa Clara promises to become a success. At the meeting at Widney's Hall, on Wednesday evening, the Soliciting Committee reported progress, and books were immediately opened for subscriptions, and capital stock to the amount of \$20,000 was subscribed at once. The total subscriptions from the citizens of Santa Clara will amount to \$125,000. A committee was appointed to select a suitable location for the necessary buildings and also to solicit additional subscriptions to the capital stock. The business is in the hands of live and enterprising men, and the success of the project seems assured. Mr. Phillips, Secretary of the Oakland jute factory, was present at the meeting, and gave the gentlemen much valuable information which will aid them in their work.

FARMERS' CLUB.—The Farmers' Club met yesterday as usual, and was called to order by

President Casey. The regular subject for discussion was laid over until next week, and on motion the subject of "Internal Improvement" was taken up and discussed. The arguments were devoted principally to the matter of cheap transportation and the management of railroads, and embodied the same views that have appeared in the *Mercury*. In the matter of the proposed squirrel law, the amendments made to the petition sent by the Club to the legislators from this county, were acquiesced in.

SANTA CRUZ.

Enterprise, Jan. 30: The almond trees about town are putting forth their delicately tinted blossoms. This is a fine indication of an early spring as well as a mild climate in general, in winter.

WILLIAM WOODS, son of John Woods, has invented a machine that is designed to roll, harrow, and if required sow all at the same time. Mechanics pronounce the machine perfect in every detail and an undoubted success. If the invention will work as well as expected, it will save thousands of dollars to the large valley ranches where thousands of acres are annually put into grain. It will more completely pulverize the soil than any machine yet invented. Young Wood is developing quite an inventive talent.

THE DAIRY.

Conducted by J. H. Hegler, Manager of the Dairy Department of California Granges.

Reports of Experiments, Communications, Hints, Suggestions and All Facts that will be of interest to Dairymen (or women,) are particularly solicited for this department.

Cheese Factories.

EDITORS PRESS:—The subject of cheese making is attracting considerable attention just now. Several of the Granges in the dairy country are at work in the matter.

Two young men just from the East, who had some capital, a good deal of energy and business capacity, who seemed to be fully conversant with the business, applied at our office for information, wishing to establish a cheese factory. I gave them all the information I could and started them to Petaluma, on their way to the dairy districts. I am informed that they have succeeded in establishing themselves at Newtown, near Petaluma, where they are converting one of the large warehouses situated on Petaluma creek into a cheese factory.

In a conversation with W. H. White, Master of Bloomfield Grange, on this matter, he informed me that after a careful examination he finds that in the vicinity of Bloomfield there are, within three miles, 950 cows, the milk of 750 of which could be had for a cheese factory.

Here is a chance for some one with a small capital and a knowledge of cheese making to start a business, that must with proper care and management result in much good to all concerned.

In conversation with dairymen I find a very general disposition among them to convert at least the milk of several months of the year into cheese, and in view of the very low price of butter I would suggest to our Granges that this matter be taken in hand.

It may be done on the joint stock plan by a number of dairymen combining and hiring one good practical cheese maker to take charge of the factory. One man who has a thorough knowledge of the business will be enough for one factory. The general work may be done by almost any workman. No factory should commence operations with less than 300, and from that to 1,000 cows.

The outlay or expense need not be very heavy. The building may be of rough lumber, but must be clean, airy and of as even temperature as possible. The tanks and other necessities may cost in all \$1,200 to \$4,000.

A better plan, and one that will give more general satisfaction, is for a party operating a factory to buy the milk outright and own the business. At the present price of butter, milk had better be sold at 8 cents per gallon, which at the ruling prices would leave a large margin for cheese, in fact, as much as 9 or 9½, or even 10 cents per gallon might be paid for milk, and in my opinion the cheese man would still be safe.

Good and competent cheese makers can be had from the dairy counties in New York.

Any information relative to the subject will be cheerfully given at the office of

J. H. HEGLER,

Man. Dairy Dep. Cal. Granges, Cor. Sansome and Commercial Sts., S. F.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

By Special Dispatch, Dated Washington, D. C., Feb 3, 1874.

FOR WEEK ENDING JAN. 20, 1874.

MEDICAL COMPOUND.—Eveline Hungerford, S. F., Cal.

IRRIGATION PIPE.—Nehemiah Clark, Sacramento, Cal.

VACUUM RELIEF VALVE FOR STEAM CYLINDERS.—Andrew J. Stevens, Sacramento, Cal.

STEAM BOILER.—Harvey W. Rice, Haywoods, Cal.

CUTTING APPARATUS FOR HARVESTERS.—Philaender Kitts, Monticello, Cal.

FEEDING DEVICE FOR THRESHING MACHINES.—James T. Watkins and Jasper S. Scott, Santa Clara, Cal.

BUNG BUSH INSERTER.—Hinrich A. Engels, S. F., Cal.

MACHINE FOR FACING CORBLE STONES.—Wm. M. Hughes, assignor to L. Dutertre, A. E. Ballard and E. D. Sawyer, S. F., Cal.

GLOVE.—Isaac N. Pearson, Napa, Cal.

REISSUES.

BEARING FOR SHAFTS.—Jerome Haas, Stockton, Cal.

FLOW.—Don Carlos Matteson and Truman P. Williamson, Stockton, Cal.

Don't Have Your Teeth Extracted.



DR. BEERS' PATENT ENAMELED GOLD CROWNS, for covering Teeth broken down by Decay, have been thoroughly tested, and when properly applied will surely restore them again to usefulness and beauty. Call and see them. Office, 230 Kearny street. 6v7-cow-bp-3m

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT TREES for sale, from three to five years old. The five-year-old Orange Trees are the largest ever offered for sale in this county. For Price, address,

MILTON THOMAS, 6v7-2m P. O. Box 304, Los Angeles, Cal.

U. S. CATTLE MARKET,

Cor. 5th & Bryant sts., S. F.

Cattle Sold on Commission or bought on farm for Cash. Wanted, 18 Milch Cows and 170 Beeves.

Address: DAWSON & BANCROFT, 6v7-1f No. 512 Fourth st., S. F.

SUPERIOR FRUIT TREES, TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSERYMAN.

T. CORLEY, 4v7-3m No. 315 Washington st., S. F.

NEW PEACHES, ETC.

Having a large stock on hand of Rivers' and new Southern Peaches, which I think will be great acquisitions to California, I have concluded, in order to introduce them, to reduce the prices as follows: Beatrice, St. Johns, Plowden, 1 yr old, 50c ea; in buds, 25c ea. Freeman, Van Buren, Golden Dwarf, Italian Dwarf, 1 yr. 40c ea; buds, 20c ea; 2 yr old bearing trees, \$1 ea. Utah Hybrid Cherry, Wild Goose and Miner Plums, 1 yr. 50c ea; 2 yr. \$1 ea; buds 25c ea. Louise, Albert, Early Rivers, Lord and Lady Palmerston, and others from Rivers, and Picquet's Late, Blood Leaved, Lady Pharam, Pace, Amelia, Julia, Darby and other choice Southern Peaches, all in dormant bud, 25c ea; also Selway, Smock, Hale's Early and other well-known leading kinds, at low prices: 1 yr old and in bud, Beatrice has been well tested in the East and proved to be the very best and earliest variety. St. Johns, in the South, is their best early kind and beats all others. Freeman, Picquet's Late and Lady Pharam are noted as the best of their season, and all will no doubt prove superior for orchard culture to the more common fruit heretofore grown in California. My trees I warrant always to be true to label. Also, a general assortment of fruit trees including Cherries, Plums, for drying, and Almonds, all for sale at reduced prices, with a liberal discount by the quantity. Terms cash with the order, and all orders promptly filled. 6v7-1f D. E. HOUGH, Vacaville, Cal.

MULBERRY TREES,

(JAPONICA AND GRAFTED ROSE-LEAVED.) For Sale at Felix Gillet's, Nevada City, Cal.

Japonica, 2 and 3 year old trees at \$10, \$8 and \$6 per hundred; outtings at \$2 per hundred; grafted rose-leaved, standard trees, with heads at six feet from the ground, \$150 per tree; \$10 per ton; scions, for budding and grafting, \$2 per dozen. Small packages of Japonica (3d-class trees) and cuttings, and rose-leaved scions, may be sent by mail in four pound packages, or by express; larger invoices with common freight. Send for more particulars. Also Bionia and Bionia Silk-worm Eggs. 6v7-8t

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of
NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,
SHRUBS AND TREES,IN GOOD AND HEALTHY CONDITION. ALSO A
CHOICE COLLECTION OFFLOWERING BULBS AND SEEDS,
(Native and foreign.)

Our catalogue is now ready, and is the most extensive
ever published on this Coast; we will forward it free to
all applicants.

Nurseries on Lombard and Chestnut streets, near
Larkin street, at the terminus of the new Clay street
railroad. Floral and seed depot, No. 27 Post street, San
Francisco.

Letters by Mail or express will reach us.

ja10

MILLER & SIEVERS.

PRYAL'S NURSERIES.

Fruit, Ornamental and Evergreen Trees,
SHRUBS AND PLANTS,

Vegetable and Flower Seeds, Greenhouse and Bedding
Plants, embracing all of the most desirable kinds,
are now ready and for sale.

BLUE GUM & OTHER VARIETIES OF EUCALYPTUS.
Boxwood Plants for Garden Walks.

Roses of all the New and Old Varieties.

Correspond with me, and, if possible, come and see
my trees, etc. All orders will receive prompt attention.

Address: A. D. PRYAL,

Oakland, Alameda Co., Cal.

DEPOT AND SEED STORE—Broadway, opposite the
City Hall; Nursery and Greenhouse, 3 1/2 miles north of
Oakland, and one mile from Oakland Horse Railroad
depot at Temescal.

Botanical collectors in all parts of the world are re-
quested to correspond. 25v6-tf

TREES, TREES, TREES

—AND—

PLANTS,

In any quantity from one tree to 100,000, both whole-
sale and retail, at lowest market rates. Fruits guaran-
teed true to name. I have many new varieties of fruit
in my collection which are far superior to the old stand-
ard varieties. Among them is the celebrated Beatrice
Peach, guaranteed true; this Peach is 20 days earlier
than the Hale's Early, and in every respect a fine peach.

My stock of Shade Trees and Grape Vines is the
largest in the State, and a fine assortment. Have also
small fruits, hedge plants and hop roots.

Send stamp for printed Catalogue, Price List and
directions for planting and training, or come and see
the stock at the CAPITAL NURSERIES. Office and
tree depot U street, between 15th and 16th streets, Sacra-
mento, Cal.

ROBT. WILLIAMSON, Prop'r.

Special rates to Patrons of Husbandry. 24v6-3m

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of
trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for
beauty, and very prolific. The Chestnuts are delicate
in flavor and very large, and an almost endless variety
of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway,
Oakland, Cal.

GREEN HOUSE PLANTS,
EVERGREEN TREES,
SHRUBS, ROSES, ETC.
100,000 MONTEREY
CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM
TREES, including:—EUCALYPTUS GLOBULUS (Blue
Gum)—extra fine street and shade trees. EUCALYPTUS
VIMENALIS—both sorts very popular. ACACIAS in
variety. Monterey Pines, Lawson's Cypress, etc., etc.
Orders attended to. Address:

M. KING, Nurseryman,

23v6-3m OAKLAND, CAL.

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph
Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental
Trees, Shrubs, Roses, GREEN HOUSE
PLANTS, ETC.

We are constantly adding to our varied stock the NEW-
EST AND RAREST PLANTS on this Coast, and invite
all who are laying out grounds and planting to give us
a call.

LANDSCAPE GARDENING attended to. ja24tf

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and
Plants, and permanently located our Greenhouses and
Tree Depot corner Washington and Liberty streets, we
are prepared to furnish Fruit and Shade Trees, Small
Fruits, Evergreen Trees and Shrubs, Flowering Shrubs,
Greenhouse and Bedding Plants, etc. Send for De-
scriptive Catalogue and list of prices.

Address: W. H. & G. B. PEPPER,
Petaluma, Sonoma Co., Cal.

BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESALERS AND RETAIL,
an immense stock of Evergreen Trees, Ornamental
Shrubs and Flowering Plants, suitable for the conserva-
tory, parlor window, flower garden, lawn, vases, rock-
eries, hanging baskets, ferneries, etc. Comprising in
part, Camellias, Magnolias, Daphnes, Araucarias, Yuccas,
Variegated Agavea, Rosea, Fuchsias, Carnations, Eucal-
yptus Acacias, Peppers, Cypress, Pines, Junipers,
Cedar of Lebanon, etc. New and rare plants a special-
ty. Dealers and nurserymen supplied at low rates.
Hyacinths, Tube Rosea, Tulips and other Bulbs. Choice
Flower Seed, Garden and Lawn Seed, fresh and genuine.
2v7-3m



My business is to supply what every farmer of expe-
rience is most anxious to get, perfectly reliable Vegetable
and Flower Seed. With this object in view, besides
importing many varieties from reliable growers in
France, England and Germany, I grow a hundred and
fifty kinds of vegetable seed on my four seed farms,
right under my own eye. Around all of these I throw
the protection of the three warrants of my Catalogue.
Of new vegetables I make a specialty, having been the
first to introduce the Hubbard and Marblehead Squashes,
the Marblehead Cabbages, and a score of others. My
Catalogue containing numerous fine engravings, taken
from photographs, sent FREE to all.

JAMES J. H. GREGORY,

ja17-ss

Marblehead, Mass.

FRUIT AND ORNAMENTAL TREES.

GLEN GARDENS,

ONE MILE EAST FROM SACRAMENTO.

My stock embraces all the most desirable varieties
known, including several new Peaches, among which
are the Beatrice, Louise, Early Rivers, Rivers' Early
York, Stanwix Early York, Victoria, Prince of Wales,
and several others, (all hybridized by S. Rivers of En-
gland) and fruited on my grounds this year for the
first time in California.

The Louise and Beatrice are 15 and 20 days
Earlier than the Hale's Early.

Being the first to import these new fruits, including
many sorts not mentioned, purchasers may rely upon
getting trees true to name. Also, the FREEMASON and
SALWAY, the most valuable late peaches in culti-
vation.

Blackberry, Raspberry and Strawberry Plants; fresh
Locust Seed—CHEAP FOR CASH.

E. F. AIKEN,

de27-1m

Proprietor.

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Finley Peach,
Georgia Freestone Seedling, the first offered in the State.
Its flavor being richer and superior to the finest of the old
varieties; it is the best for canning and shipping, and brings
double the price of any other Peach in market. Orders
promptly filled fresh from the Nursery.

BRYAN & DOMINGOS,

4v7-2m P. O. Box 157, Sacramento, Cal.

Brooklyn Nursery,

13TH AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cy-
press, (\$3 to \$5 per hundred), 10,000 Australian Blue Gums,
and about 3,000 assorted Roses. Also a choice selection of
the various kinds of ornamental shrubbery, etc. Special
attention given to the laying out of landscape gardens.
Orders received at the Nursery, or at the office of J. P.
SWEENEY & CO., Seedsmen, Nos. 409 and 411 Davis St., S. F.
24v6-3m

JOHN CAREY, Proprietor.

THOS. A. GAREY'S

Semi-Tropical Nurseries,

San Pedro street, two miles below the Court House,
LOS ANGELES, CAL.The Largest Stock of Semi-Tropical and Northern Fruit
Trees in Southern California,

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

Ornamental and Evergreen Trees for Sale
at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of or-
namental Evergreen Trees, Fruit Trees of all kinds, also a
large lot of the Blue Gums, from six inches to 12 feet high,
at from \$4 to \$100 per hundred. A large lot of Cypressess,
Vines and Junipers of every kind. Green House Plants
and a large quantity of Roses, Maple and Laburnum
Trees for street planting. I would call the attention of
the trade to a large quantity of Australian and African
Timber Seeds, and especially Cedrus Decadear, or Dea-
vine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubbs' Hotel. ja10

Send for Catalogue.

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy
BLACKBERRY SETS, for sale at LOWEST RATES.
Orders may be addressed through DEWEY & CO., of the
Rural Press, San Francisco; ROBT. WILLIAMSON, Capital
Nurseries, Sacramento; or to me,

CALVERT T. BIRD,
San Jose, Cal.

TREES FOR SALE.

The undersigned offer for sale at their
Nurseries,

Near Niles Station, Central Pacific Railroad, Alameda
county, Cal., a fine stock of STANDARD FRUIT
TREES of the orchard varieties, best adapted for Cali-
fornia. Our Trees are one and two years old, and all
well grown and well rooted, and true to the label.

We invite Planters and Dealers to examine our stock be-
fore purchasing. Send for a Descriptive Catalogue and
Price List. Trees can be sent by regular freight routes or
by Express, as directed. Careful attention given to pack-
ing for shipment. Local Agents wanted, to whom a liberal
commission will be paid. Address the undersigned, either
at Centerville, Alameda Co., Cal., or at 418 California st.
San Francisco, Cal.

18v6-4m

SHINN & CO., Proprietors.

AUSTRALIAN

GUM TREES.

250,000 on hand for this season, at rates to encourage
forest culture. Also, 50,000 Cypress, in shipping order.
Nursery on 12th street, one block north of Tubbs'
Hotel, East Oakland, Cal. Or address, Box 80, Oak-
land.

BAILEY & CO., Proprietors.

Beautiful fresh Cypress Seed, \$3 per pound, sent by
mail, warranted pure and of the finest quality.

25v6-3m

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF
EVERY VARIETY,

And raised by the most experienced and reliable grow-
ers of Europe, Eastern States and California.

My stock is complete; quality unsurpassed; prices as
low as from the best Eastern houses; embracing Vegeta-
ble, Flower and Agricultural, Fruit, Shade, Ornamental
and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick,
(Rochester) and Monnice & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS
EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,
Red Clover, White Clover,
Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,
Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the
Pacific States and the Interior.

All the better grades forwarded by mail (post-paid),
at catalogue rates. Money forwarded in postal orders,
registered letters or express, at my risk.

My Agricultural Almanac and Price Catalogue is
ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who
raiseVegetable, Flower and Tree Seeds of
all kinds.

Long experience, extensive practice, and the abun-
dant production of this year's seed crop, enables us to
offer a selection of Superior Seeds for California and
Foreign Soils, and also places us in a position to main-
tain the lead in the market for Pure Seeds, and much
cheaper than those sold by other seedsmen.

A large assortment of Imported DUTCH BULBS and
GLASSES just arrived.

ALFALFA, CLOVER, TIMOTHY, KENTUCKY BLUE GRASS,
ORCHARD GRASS, and all other varieties.

FRUIT TREES, SHADE TREES, HARDY SHRUBS, and a
general assortment of all kinds of VEGETABLE PLANTS.

Notice.—We will send, free of postage, on receipt of
order, 25 varieties of garden seeds in small packages
price, \$1.25; or the larger size packages—price, \$2.50.

Send for Catalogue and Price List.

SEVIN VINCENT & CO.,

607 Sansome st., San Francisco.

WESTERN GROWN

SEEDS.

Save Time and Money. Buy direct of the GROWER.
Vegetable, Field and Flower, fresh and true to name.

Catalogue for 1874 sent FREE, by

GEORGE S. HASKELL & CO., Seed Growers,
25v6-2m Rockford, Ill.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street, San Francisco.

19v6-tf

SEED WAREHOUSE.

(Established in 1850.)

ALFALFA—Pure California, Cheap, in lots
to suit.

Timothy, Blue Grass, Red Top, Rye Grass, Red and
White Clover, Mangel and Sugar Beet, and all other
varieties for Field and Garden Culture.

S. W. MOORE & CO., Seedsmen,

420 Sansome St., near Clay.

PURCHASERS please say advertised in Pacific Rural Press.

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a
rates that, with proper cultivation on suitable land,
will make them among the most profitable crops grown.
For further particulars address

PACIFIC OIL AND LEAD WORKS,

3 and 5 Front street, San Francisco.
P. O. Box 1443.

WAKELEE'S

SQUIRREL EXTERMINATOR.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be com-
pelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels
should be destroyed, or they will be the destroyers.
This new compound has all the merits claimed for it.
Is convenient and cheap. There is no danger from
fire in using it. It will kill every time. The squirrels
die in their holes from its effects.

Put up in packages of one or five pounds, convenient
for sending by express. Cost, \$1 per pound, ready for
use. Very economical. Is so good that the squirrels
like it. Testimonials from reliable parties who have
tried it, will soon be published. Reasonable discount
for large orders. Directions for use on packages.

Owing to the chemical composition of the Extermi-
nator it can be used without the slightest danger of fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the
establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed.

3v7-3m

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily
operated Sewing Machine in the market.

Always in order and ready for work.

In the past ten years ELEVEN THOUSAND Florence
Machines have been sold by me on this Coast, and no
purchaser has paid me anything for repairs. If there
is a Florence Machine within one thousand miles of
San Francisco not working well I will fix it without
any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m

Grand Hotel Building, S. F.

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

Is intended to sail with dispatch. To be fol-
lowed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,

San Francisco.

H. K. CUMMINGS.

1858.

H. H. RALSTON.

1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission
House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washing-
ton, San Francisco.

Our business being exclusively Commission, we have
no interests that will conflict with those of the producer.
4v23-1y

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic
Servants, Hotel Cooks, Laundrymen, Waiters, Common
Laborers, Farm Hands, Gardeners, Mechanics, Factory
Hands, Wood Choppers, etc. Special attention given to
furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F.

de27-tf

THE PRINCE ORGANS.

PRICE, \$125.



SEND FOR CIRCULARS.

[STYLE NO. 55—THE CHEAPEST ORGAN IN THE WORLD.]

GEO. A. PRINCE & CO.'S CABINET ORGANS AND MELODEONS are to be found in more Families, Churches, Lodge Rooms and Assembly Halls throughout the world than those of any other maker. Nearly 53,000 of these magnificent instruments are now in use, being a much larger number than has been manufactured by any other firm in the world.

No other Reed Organ approaches so near the Pipe Organ in fullness and purity of tone, combined with great volume and power. Their reputation for durability is unequalled. Instruments manufactured by Prince & Co.—twenty years old—are now valued by their owners as highly as the day they were bought.

The Prince Organs are in use in almost every village and hamlet on the Pacific Coast. They have been tested by every variety of climate, both as regards extremes of heat and cold, and of moisture and dryness, and preserve their remarkable purity of tone and even action under all circumstances.

Owing to the immense facilities of the Prince Manufactory, which is the largest and most complete in the United States, their Church and Parlor Organs are afforded at very low prices, compared with those of corresponding capacity by other makers.

For Illustrated Catalogues and Descriptive Price Lists of styles not mentioned above, address or apply to

MUSIC DEPT, A. L. BANCROFT & CO.,

721 MARKET STREET.....SAN FRANCISCO.

General Agents for

The Celebrated **KNABE** Grand, Square and Upright Pianos. Have taken 85 premiums. The leading Piano of America.

LINDEMAN'S Patent Cycloid Pianos with Crescent back. A new favorite. See Circular.

MCCAMMON'S American Piano Fortes (formerly Boardman, Gray & Co.'s). Medium priced, reliable and serviceable.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure Whitefaced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California.

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-tf-16p2

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdans and Black Spanish, at \$5.00 per dozen; White Leghorns, Game Bantams, Crete Cours, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, Silver Spangled Bantams, Golden Bearded Poland, Black Poland, White Crests, Brown Leghorns, White Sul-tans, La Fleche and Colored Dorkins; also,

Game Imported Direct from Belfast, Ireland,

At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yard. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for pleasure, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 44 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C. O. D.
6v1-tf

WHITE LEGHORN CHICKENS

—AND—

EGGS.

CHOICE FOWLS AND FRESH EGGS AT REASONABLE RATES.

ALSO A FEW GOOD

DARK BRAHMAS AND BLACK SPANISH.

F. N. WOODS & CO.,

feb7-3t

67 California Market.

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GEESSE,

58 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGHES, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List. The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

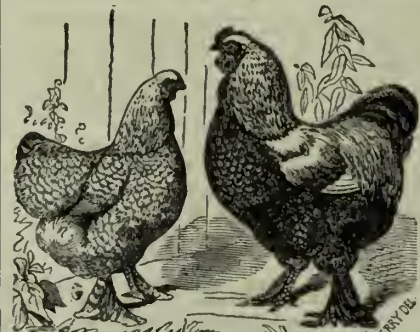
Address: **M. EYRE,**

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.
3v7-3m-16p-sp

Improve Your Poultry.

It Costs No More to Keep Good Fowls than Poor Ones!



Just received a fine invoice of DARK BRAHMAS of the celebrated "Black Prince" strain. Eggs, \$8 per dozen.

SEND STAMP FOR ILLUSTRATED CIRCULAR

Containing a full description of all the best known and most profitable Fowls in the country to

GEORGE B. BAYLEY,

Importer and Breeder of Blooded Fowls, and agent for the Poultry World, a monthly magazine devoted entirely to Poultry—tells how to keep Fowls for pleasure and PROFIT. Subscription only \$1.25 per year.

Address **GEORGE B. BAYLEY,**

ja24-tf

Box 659, San Francisco.

CALIFORNIA LAND AGENCY.

Will attend to the Location, Purchase and Sale of Lands and Farms, the Examination of Titles, and the Payment of Taxes. Lands and farms for sale and exchange for City or Oakland property; also, City property to exchange for lands and farms; also, Eastern property to exchange for California property.

BRANDON & ROGERS,

20v6-1y-16p

536 California street, San Francisco.

THE "EXCELSIOR" FARMERS' PUMP.

After Six Years use proving itself the Best Pump on this Coast, and consequently the CHEAPEST.



BASE.

We can advise all parties to buy the Pump to be worked by hand, wind-mill or horse power. All sizes for sale.

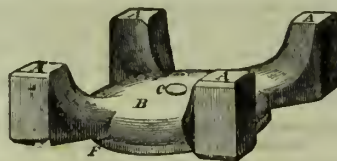
REMEMBER,

Every Pump is tested to 125 lbs. hydraulic pressure per square inch.

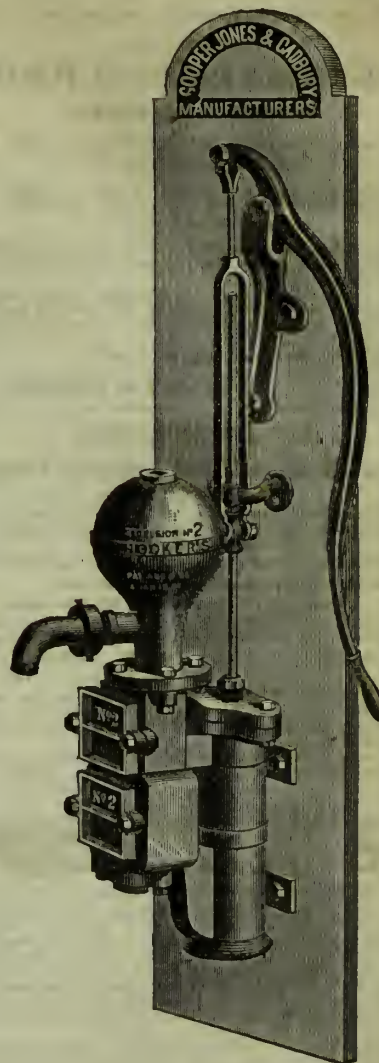
Will pump water 250 feet high.

So simple every Farmer can keep it in order.

EVERY PUMP WARRANTED.



VALVE.



MOUNTED.

BRITTAN, HOLBROOK & CO.,

111 and 113 California street, San Francisco, (and also Sacramento,) General Agents.
6v7-cow-3m

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 21v6-tf

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street,.....San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE and CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE and RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE of CHARGE.

BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th.

R. J. TRUMBULL,
15v6-6m-16p 427 Sansome st., San Francisco.

DR. ABORN, OCUList, AURIST,

Catarrh, Throat and Lung Physician.

The Most Difficult Cases are invited to call.

Offices and Laboratory, 213 Geary street.

Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M.
21v6-3m-16p

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable, Agricultural, and Flower Seeds,
Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS, ENGLISH RYE GRASS, RED TOP, ORCHARD GRASS, TIMOTHY, MESQUIT, RED CLOVER, WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p SAN FRANCISCO.

BEST SHADE IN USE.

—THE—

RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture IS FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE

Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS

Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the Bottom.

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are simple, work to perfection, and never get out of order.

Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.

6v7-16p-3m



Volume VII.]

SAN FRANCISCO, SATURDAY, FEBRUARY, 14, 1874.

[Number 7

Native California Coffee.

We were favored yesterday with a call from Mr. T. H. Folingsby, at present to be found at 315 Clay Street. Mr. F. has resided for many years in South America, where he became familiar with the coffee plant, its cultivation on the mountain, plain and valley, and the peculiarities incident to its growth. He states that at an elevation of from six to eight thousand feet above the sea, coffee is raised to perfection and in great quantity, without the necessity of providing shade for the plants as in the hot, lower valleys. It appears from this, that coffee does not require that extremely tropical climate to perfect its growth that many suppose; but that, give its proper elevation it is even more at home and thrives better wholly unprotected, than when forced to grow in a torrid climate under the shade of other trees, as is the practice in all very hot countries.

Now except as an introductory there is nothing of peculiar interest in the foregoing; but when we annex to it the fact, that in many of the foothill countries of the Sierras, at an elevation of from two to four thousand feet, the same genuine native coffee is found growing in perfection and considerable abundance, may be news to many a reader. That this is the case, there can be no question. Mr. F. has made the most careful investigation of the plant and its fruit, botanically and by the gathering, preparation and use of the seed for coffee making.

In the first place the plant looks precisely like the coffee plant of other countries, with a slight difference in the form of its leaf. The fruit, which is the outer covering of the coffee seed, is the same in color, texture and taste as the cultivated varieties in Central and South America, and in every respect is the genuine coffee of commerce except in name—wild coffee. The shape of the berry when prepared for market is the same, except that the California variety is really larger and more completely perfect than most of the coffee of commerce and would be pronounced a superior article by the side of it.

Mr. F. is ready to produce further evidence of the genuineness of the product being veritable coffee, whenever any interested party shall apply. Now what hinders the extended culture, instead of the present destruction of this indigenous coffee? Why not plant the now almost useless thousands of acres of the foothill and mountain lands of the State with this native coffee, in the very zone, belt and altitude in which it is found growing wild and of course perfectly at home? We shall hope to hear of some one this spring, engaged in collecting a considerable plantation of young coffee trees from the counties of El Dorado, Amador, Tuolumne or Calaveras, in all of which this native coffee is found growing though sparingly, owing to its total destruction wherever the land is improved or used agriculturally.

Grapes for Raisins.

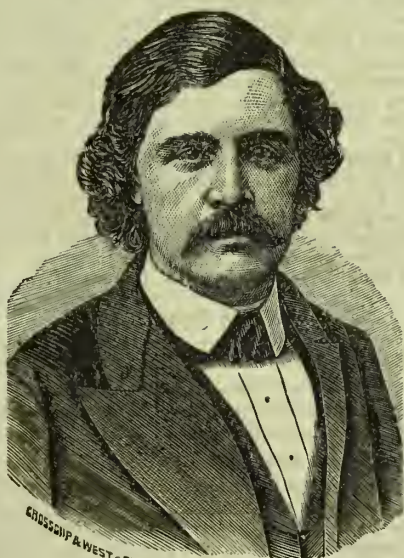
We have received several letters of inquiry in regard to the best known grapes in California for the making of raisins. We wrote to B. N. Bugbey, Esq. of Folsom, Sacramento county, the well known vineyardist and successful grower of some of the best raisins of the Pacific coast, and who has politely furnished us with the following list; he says:

I have what I regard as choice and best grapes for table and raisins: White Muscat of Alexandria, Malaga, Muscatelle, Cannon Hall Muscat, Blue Malvoisia, Pride of Paria, Flame Colored Tokay or Reine De Neice and Fiher Zagors, (the latter, the Fiher Zagors, does not bear transportation on account of its tenderness.) For wine, I use a part of the above, also the Black Zinfandel, Pineaux, Alicante, Tramina, White Neice, Orleans, Johannisberg, Reialing, Italian Bergundy, White Malaga, Chasselas de Fontainebleau, White St. Peters and Royal Muscatelle. I can furnish cuttings of any or all varieties mentioned and many others in small quantities at \$10 per thousand, and in quantities of 10,000 and over at \$8 per thousand.

B. N. BUGBEY.

The Danbury News Man.

James M. Bailey, the "Danbury News Man," whose face is shown on this page is a humorist who has made his appearance in the world of letters within the past few years, and whose witty sayings are read with avidity by all fun-loving Americans. Whenever any one sees a short witty saying with a reference to Danbury or Nelson street, etc., he may be sure it emanated from Bailey's pen. He speaks of every day occurrences of home life in a most ludicrous manner, and the laughable incidents he



J. M. BAILEY.

portrays are so likely to have happened to almost any one, that his stories are more generally appreciated than those of other humorists. Mr. Bailey has lately published a work, containing a compilation of articles previously published in his paper, the *Danbury News*, which has met with a large sale. His quaint style of expression and phraseology is easily recognized after having read one or two of his effusions, and he has already a multitude of imitators, none of whom however, have been able to acquire his peculiarly original style. Mr. Bailey is still a young man, and has become famous within a year or two. Before he began to write, there were not many people who knew that Danbury was in Connecticut or that there was such a paper as the *Danbury News*. He has in a short time made himself and his paper famous. As Mr. Bailey is a new star in the literary firmament, and our readers will not find anything about him in the encyclopedias, we have given his portrait and these few remarks in connection with it, for the benefit of those who were curious to learn something of him.

What Ails My Chickens?

This question is from a correspondent who says: "I have, or had one month ago, five of as fine broods of young chickens as you could wish to see. It was so wet and cold that for the first week, I kept them on a dry stable floor, without the loss of one chick in twenty; since then I have allowed them the range of the cattle yard and though giving them all the food they will eat, besides what they pick up around the straw pile, one half of them have cramps in the feet and legs, so that at times they cannot stand, but kick around on their sides as though about to give up life; those not having cramps have a sleepy, sickly look about them that I don't like. Mr. Editor, can you explain?"

We think we can; the cramps result from allowing your chicks to paddle around in the cold, wet straw and water holes in the barnyard too many hours of the day, when they ought to be on a dry floor. Your sleepy, sickly looking chicks have doubtless been drinking from some high-colored soak-water of the manure or other filthy drain or slop water; such water will sick-en your chicks, if it don't kill them.

"Flea Seeds" Cynips Saltatorius.

We present this week the engraving of an insect and shell from which it emerged, for the purpose of showing our readers an object which has attracted considerable attention for the past year or two in this State. They were first brought to notice by the curious jumping qualities possessed by what was supposed by some persons to be mustard seed, and many theories were advanced as to how the thing was done, some of which were quite amusing.

The "seed," from which the insect was obtained, was gathered with a number of others, under an oak tree on the ranch of Mrs. H. Wilder about eight miles from Marysville, by Mr. F. W. H. Aaron of that city and by him sent to Mr. Hanks, President of the San Francisco Microscopic Society. The matter was referred to Mr. Kinne for examination, who has followed their development through to the perfect insect, and from his report on the subject we collect the following:

The gall or cocoon is found lightly attached to the leaf of the oak and in time falls to the ground, where the noise occasioned by the thousands that are leaping about, without any apparent cause or organs of motion, sounds much like the falling of fine rain on the leaves. An examination shows that the extraordinary activity displayed is caused by the spasmodic contraction and concussion of the abdominal parts of the occupant against the side of the shell, which movement does not cease even after the covering is nearly split in halves, if the tender structure of the chrysalis be not injured. That it is the chrysalis and not the larvæ has been shown by the microscope, and its change to the perfect insect has been noted at weekly stages.

The average length of the insect is five hundredths of an inch, and in each has been found from sixty to eighty pear-shaped ova. The engraving gives its general appearance, with wings raised somewhat unnaturally, for the purpose of showing their size and shape. It was drawn on the wood, from the microscope, by Mr. Kinne, and is enlarged twenty diameters. Its ovipositor is a tiny though perfect piece of nature's mechanism and lies encased in a sheath at the lower part of the



"FLEA SEED."

abdomen. At a recent meeting of the Microscopical Society, Mr. Henry Edwards furnished a report, giving the following technical description of the curiosity.

Genus Cynips—L Cynips Saltatorius, (nov. sp.)

Black, shining. Head broad between the eyes, which are very prominent. Antennæ 14 jointed, the 1st and 2d joints being much swollen, and the 3d joint longer than the other two, the remaining joints are long, simple and nearly equal. Thorax densely but finely punctured, very globose in front, projecting so far as to almost hide the head. Abdomen globose, shining. Ovipositor cases, short, spatulate received into margined groove in the body. Ovipositor itself flesh color, curved inwardly toward its middle. The abdomen is 6 jointed. Terminal joint of palpi, hatchet shaped. Tarsi very hairy throughout, the anterior pair with six and the remainder with seven joints. Coxæ very globose. Tibiæ long, with large and powerful spine at the base.

Do We Use Sufficient Seed?

Of course every farmer is supposed to know how much seed wheat is required to the acre to produce the best yield; but does every farmer really know this? Has he repeatedly made test experiments on the same land fitted and sown at the same time and harvested and measured the product, or is his opinion mere guess work? The wheat fields of England produce as a whole average, more wheat to the acre than any other country.

Wheat has been grown on their lands for centuries with no diminution of product but rather an increase. Of course this has grown out of judicious rotation, the free use of manures and scientific culture. But does not this kind of culture include as well the quantity of seed sown to the acre, as its managements in other respects? In taking up an English exchange, the "Farmer," we find that the first wheat seedlings in the fall, only a bushel of seed was given to the acre; that a month later two bushels were used, while the last sowings as many as four bushels to the acre were not uncommon.

We doubt very much whether our farmers make any such differences in the quantities of seed, as depending upon early or late sowing. Many sow more wheat on late sown ground, but do we ever make so great a difference as do the English in this regard? And if not, are we or they in the wrong in withholding, or needlessly sowing more seed, than will produce the best returns?

Early sown wheat tillers or multiplies its stalks from a single grain from six to ten-fold more than the latest sown, yet we would hardly venture to sow six times the usual quantity because it happened to be late sown. Still we believe it would pay our farmers this year—as they will probably be able to seed as late as as they please—to try an acre or two in different soils, with what would be termed very heavy seeding, amounting to at least double the usual quantity and carefully mark the result. We believe it would inure to their benefit.

Fields of Beans.

There ought to be broad fields of beans planted this year; first, because they are a largely paying crop, and second, because there will be many an acre that was intended for wheat this year that will not be sown, and a bean crop is just about the next thing in value to wheat, as a rich and nourishing food, that we can grow. A coarse food, perhaps, but very nutritious, and yet not so coarse but that many of "our best citizens" are fond of indulging in their once-a-week-dish of baked beans.

As a field crop they will yield from twenty to fifty bushels per acre, depending upon soil, season and culture. A dry, sandy soil is considered the best, but we have raised excellent crops on strong clay loams. For a field crop, bush beans are generally preferred, and the most salable are the white ones. As a market bean the little white is pre-eminent, though not possessing as much richness as a variety known as the Early China, oval in shape, with a bright red eye; they are early, productive, whether green or dry.

Beans should not be planted till all danger of frost is over, as they are very sensitive to its influence. They can be sown broadcast, in drills or in hills. They will bear covering deeper than almost any other seed of its size; in ordinary, dry soil, three inches is not too deep. Beans should never be hoed when wet from rain or dew. Try a few acres this year, and you will hardly miss any lessening that may occur in the yield of your expected wheat crop.

We are obliged again to ask the indulgence of our numerous and valued correspondents for what may seem to them like a neglect on our part to bring out their own particular article. We shall commence next week to put such articles as are appropriate under our department heads; this, with our usual page or more of direct correspondence, will soon enable us to get up more closely to the date of our communications.

CORRESPONDENCE.

A Common Sense View of the Irrigation Question.

EDITORS PRESS:—In the last number of your paper, you made some allusion to Bush's Irrigation Bill. Since then, a bill has been presented by Venable, and both the bills are now before the Legislature, as one or the other of these bills is likely to be passed. It is very important that the merits and demerits of both should be discussed, and made plain to the public understanding, both in the Legislature, and in the newspapers—more particularly in those devoted to the farming interests, such as the RURAL PRESS.

The first bill presented, that by Mr. Bush, was originally intended for a State law, and provided for a State Superintendent, appointed by the Governor, a District Superintendent, (now County Superintendent), and three water Trustees in each local water district—these last had the real charge of the business. The District, and State Superintendents had both an advisory and mandatory power over the Trustees, in case the latter attempted to overstep the limits of their authority; but in almost every case, the people of each district through their Trustees had the entire control and management of their own private affairs; all voting being done by the representatives of property taxable for irrigation purposes. Without any regard to their political qualifications, the intention was to make the people of each district an involuntary joint stock company. The bill fully and completely recognized the right, and also the ability of the people to manage their own affairs. There was so little machinery and red tape about it, that within the space of two months after the passage of the bill, every water district could be fully organized, and have commenced their Survey and construction of their Irrigation works, and the crowning principle of the whole was, that the people voted to tax themselves, and the tax had to be paid in cash. It also contains a provision, which will effectually prevent anything like overcharging favoritism by any private company.

The Bill Introduced by Mr. Venable

Is exactly the opposite of this in every respect, and seems to be based upon the idea that the farming community are a lot of ignorant clodhoppers, who are not able to manage their own business. It provides for the appointment of three Irrigation Commissioners, who are to commence their business in the most approved red tape style, by the appointment of a Board of Engineers; then they divide the slate in the districts, and when application has been duly made to their Lordships, by petition, the engineers proceed to make a survey; then, if approved by the commissioners, after going through a number of useless formalities, an election is ordered (after being advertised for thirty days) by the qualified voters who pay taxes on irrigable property, who are to vote for or against the levying of a tax and the issuing of bonds for the construction of irrigating works. If decided in the affirmative, then the commissioners proceed to construct said works, and after they are finished, they appoint one of their understrappers to manage the property, employ the hands, distribute the water, and have the entire management of everything, subject to the approval of the Commissioners. So long as he pleases them, it does not matter how little he suits the people, who use the water, and pay for the whole.

The whole plan of this bill seems to have been to create the largest number of salaried officials, and to provide for the largest possible useless expenditure of money, and the smallest possible performance of work, and the largest possible delay in doing it. Besides, instead of doing the work for cash, they sell an unlimited amount of bonds, for what they can get for them. There seems to be no check upon these men's extravagance; construction would be both slow and costly, under this bill. The farmers, the parties most interested, would not have the slightest influence in regulating the disposition of their money. Everything would be controlled by the Central Triumvirate. I have read and re-read this bill carefully, and have deliberately come to the conclusion that if Dickens' "Circumlocution Office" had tried to get up a similar bill, on the principle of "how not to do it," it is extremely doubtful if it could have surpassed this one.

It has been objected that the bill of Mr. Bush was a county, and not a State bill. It is a county bill simply because after consulting with the members of the Irrigation Committee he thought it impossible to pass a State law, and as his constituents were very anxious for the passage of the law, he cut it down to its present condition. If desired, it can be easily restored to its previous condition as a State law. The whole aim of its authors was to enable the different irrigating committees to do their own work in their own way. I am one of those who think that the people are fully competent to do their own work. The interests and wants of different districts are so varied that no general rule can be made that will apply to all; and the very best men to manage and subserve those interests, are the trustees whom the people would be likely to select from among themselves.

The plan of having this irrigation business managed, in all its details, by the appointees of a central authority, is contrary to the spirit

of our institutions, and I am astonished that such a bill should ever have been seriously thought of, much less presented to the Legislature.

I earnestly hope that the Venable bill will not pass. It would be better to have no bill than that one; and I also hope that the powerful influence of the PRESS will be used to aid the passage of Mr. Bush's bill or some bill of that character. Respectfully, W. R. OLDEN.
Anaheim, Feb. 1st, 1874.

The Gum Tree Blown Down.

EDITORS RURAL PRESS:—Perhaps it is a usual thing to have shade trees laid low by storms, such as swept our city a few days since, but it is none the less uncomfortable, and now we hear the most beautiful forest tree, the Australian Gum, denounced as worthless, because it does not stand the winds. It is certain that in its native land it reaches hundreds of feet in height, slim and beautiful in form, and stands winds of which we have no knowledge here. There must be some good reason for their failure here. Can anyone of your correspondents give it? A READER.
Petaluma, Feb. 2d, 1874.

The Australian Gum tree or Eucalyptus, in its native land certainly grows hundreds of feet in height, slim and beautiful; but always in close forest form, in which a multiplicity of trees of numerous varieties all help to sustain the upright position of the taller ones, against any wind that blows. In the next place, every tree in its native forests grows as nature dictates it should, with a large tap-root, descending deep into the firm subsoil below. In fact the tap-root is but little else in appearance—if we could see it—but an extension of the body of the tree into the ground.

Nature finds this necessary, not only to insure it against drought but as a power to sustain the tree against any wind that blows. The immense leverage of a three hundred foot tree, with a full top of foliage, can hardly be estimated, and nothing but a strong tap-root can sustain such trees. To secure this in the trees we set by the roadside and in open forest form, we must plant out very small trees, or what would be better where it practicable, plant the seeds where the trees are to grow. Then the tree would be able to form its own tap-root as a power for its preservation against the leverage of its trunk, and if unimpaired by any after removal, would stand up against any wind that blows.

Barren Fig Trees.

EDITORS PRESS:—There are a great many fig trees all over the State, that will bear two and three crops of figs each year, but will drop off when half grown. Nothing will make such trees bear, let them grow where they will, and almost everyone that has such trees, thinks they can not be grafted. But they can, and bud-ded too. Have to graft on the small limbs all over the top of the tree. Will not grow to saw off a large limb to graft. The best time to graft the fig is from the 1st of Feb. to the 25th. Last March I set some fig grafts on one of my trees; part of them grew well; more would have grown if I had set them earlier. Some of the grafts grew over four feet. Last fall I picked ripe figs from these grafts; also where the grafts don't grow, there will be young shoots growing that can be budded in the summer.

I also have an effectual way to destroy chicken lice. I put a handful of wild tansy in each nest; also tie small bunches of the tansy all over the chicken roost. I have used it for years, and never failed in driving the pest off with the tansy. I also kill the cabbage lico on my cabbage with sulphur; first sprinkle the cabbage with water then dust the sulphur over it freely. Two or three applications will kill all the lice.

I have used a grain drill for two seasons. I find the difference in the yield alongside of broadcast sowing, is from five to seven bushels more to the acre in favor of the drill. The birds cannot pull the drilled grain much, and all the grain is put under the ground; with broadcast sowing a good deal is left on top.

F. RITTER.

Elliot, San Joaquin Co., Cal. Feb. 3d, 1874.

Good practical hints, deserving of every farmer's attention. Fig growers should know that there has been disseminated all over the State, the variety known as the "barren fig tree," its characteristics being as named above. Now is the time to graft by the process known as whip or splice grafting. Either graft at once or head back the tree that it may throw out new shoots for grafting next year.

Equine Neuralgia, alias Rattleweed.

EDITORS PRESS:—I promised to give my theory on the peculiar disease of horses in this State, known as rattleweed, commonly thought to be poison on the stomach. Poisons on the stomach produce acute symptoms, unlike the symptoms in question.

True, metaphysically speaking, poisons are at the base of all diseases; but just now we will not argue metaphysically.

Disease, nearly always, either with man or horse, sets in when the conditions are low and the ducts and glands are torpid. Poor, bleached pastures, scanty water and a torrid sunshine,

generally, in my observation, produce this disease; i. e., these symptoms: First, low conditions; second, constipation; third, torpid ducts and glands; fourth, apparent pancreatic letargy; fifth, poor control of the will-power, or, more plainly speaking, an inability to back, or control the muscles other than in the most easy manner, and then awkwardly; sixth, aversion to water, especially external applications; seventh, obtuseness of all the senses, except feeling, and that painfully acute, and particularly acute with the fifth pair of nerves; eighth and last symptom, culminating hydrocephalus.

Treatment: Take the subject out of sunshine; give tone to system by proper food; saturate the head, and especially the inside of the ears, with sweet oil; in short, treat for chronic neuralgia. GEORGE KAY MILLER.
Vacaville, Jan. 29th, 1874.

N. B. I ask our friend "Occasional," or any other "rattleweed" theorist, to disprove the above symptoms, or to make anything out of such symptoms, either in man or horse, but chronic neuralgia. G. K. M.

Is the Filere Indigenous?

EDITORS PRESS:—In the description of Filere in No. 3 of the RURAL PRESS, by Ralph Rambler, he states it as a common error to suppose it is indigenous to California. I differ with him, and I will give my reasons: First, its general distribution on the Pacific slope and in other localities where the known modes of introduction will hardly apply. I have seen it in abundance while crossing the plains in Salt Lake Valley and other places. Filere, *Erodium cicutarium* and *moschatum* are not, I think, the only species of the genera found here. I have noted a third species. *E. cicutarium* is branched and axial in its inflorescence; the other is seldom or never so. It only sends out leaves radiating and densely imbricated, the peduncle or flower stem rising from the center of the plant, bearing a tuft of flowers at its apex similar in size and color to the other species. The order *geraneaceae* is well represented in California. I have noted one or two species of geranium, another genus of the order, and there may be more.

I think R. R. might as safely assert the genus *Pelargonium*, found in such abundance in Southern Africa, was introduced there by settlers of those places from the beautiful pot plants which grace our conservatories and are found in almost every cottage. WARREN H. SMITH.
Florin, Sacramento county, January 27.

Farm Help.

EDITORS PRESS:—The Granger's wife in January 10th of the PRESS, gives her opinion in regard to the treatment of hired men. She also gives her experience with one of them. Now I have been a farmer's wife 20 years, and I propose to give my experience and speak a good word for hired help. Most assuredly the hired man has a right to expect kind and considerate treatment by those who employ them. In all my experience with hired men I have found them (with a few exceptions) decent, clean, and as a general rule, very well behaved. The Granger's wife in Dec. 6th, thinks it well to let them sleep in their dirty blankets until they are educated up to a degree of cleanliness that will make it safe for us to have them in the house.

Now I do not believe a man is going to try much to improve himself or his appearance as long as he is not considered good enough to eat at our table or sit by our fire. I think our duty lies plain before us. Let us not treat those in our employ as though we considered they were disgraced because they work for an honest living. The life of the hired man is a hard one at best; let us encourage him to strive for something higher and better.

GRANGER'S WIFE.

Merced county, January 23, 1874.

A Jute Factory.

EDITORS PRESS:—Your late article cautioning farmers lest they oversupply the wheat market, is a timely one. You recommend the growing of flax, which would be a good article for profit if utilized by machinery here. And it would be of two-fold advantage, as the money used in its manufacture would be kept in the State. The people of this county have experimented with flax and find that it will grow here on a variety of soils. A son of mine raised a little last year on very heavy adobe land, but it does best on soil of a looser nature, not so liable to bake.

But people here are relying more on jute as the coming crop, or rather one of the coming crops. A company is being formed, and much interest felt and manifested in the matter. Nearly \$100,000 of stock has been taken within the last two weeks, and everybody here has jute on the brain. Prominent men, among them those in our Grange, are very active in the movement, which concerns all the farmers of the land; and it is suggested that it should be emphatically a Grange movement.

I. A. W.

Santa Clara, Feb. 6, 1874.

WORK ON THE FARM.—Our correspondent, "G. R.," of Sacramento, writes: "At present, February 5th, work on the farm hereabouts is pretty much at a standstill, and if our rains

keep on late, spring work will increase four-fold, leaving but little time in which to do it. But few have as yet started to prune their grape vines. I expect many will leave it later, as last year's experience proved so unfavorable by the late frost. The surplus wood can be cut now, leaving the bearing branches till later in the spring.

With regard to pruning shears, persons have various tools for trimming. The Germans use the hand scissors and saw. This work is tedious and hard for the hands. Others use the Eastern shears, such as were on exhibition at the last State fair, but find they are unsuitable for the work. What appears to be a very good instrument has been found of California manufacture, made by Geo. E. Duden, on the Upper Stockton road. He has made this matter a specialty for some time; has improved on the old pattern, and is ready and now filling orders from home and abroad. They are made of the best cast-iron steel, strong and durable. They are suitable for trimming trees as well as the vine."

Enterprise.

Nothing pays so well to a farmer or stock-raiser. To a wide-awake, progressive man, who may chance to live among those less progressive, oftentimes a fortune awaits energetic action, in being the first to introduce improved stock, grain or grass. Others will work a weary round, caring for the poorest breed of cattle, miserable sheep, and a grain crop which has exhausted the soil. Among the former class, on a recent trip through Mendocino and Lake counties, we noticed Mr. J. A. Ward, of Dry Creek, who has an improved breed of swine, possessing easy fattening qualities with sufficient bone for traveling, without losing advantage of length and breadth of body.

Mr. W. W. Merrieth, of Lake, has a fine Angora goat, valued at \$500, and his flock of cross-breeds with common goats of various grades, is rapidly increasing.

It is through the influence of such men that communities become infused with life, and the good work of improvement goes on.

C. W. O.

Growing Lateral Roots.

EDITORS PRESS:—Can you or your correspondents inform your readers of the advantage, if any, of planting young fruit or forest trees so as to secure the growth of the tap root? It is the custom of nurserymen to develop the lateral roots and destroy the tap root. If nature is to be thus interfered with, there must be some good reason; this we desire to know.

A SUBSCRIBER.

We never heard any good reason for destroying the tap root of any tree, except that it enables nurserymen to take up their trees when two or three years old, with greater ease and with less injury generally to the majority of the roots.

Farming in Texas.

EDITORS RURAL:—Please send me several copies of your valuable paper, the PACIFIC RURAL PRESS, for which I will try to send you a club of ten or more names from this part of Texas.

I wish to get the people of Texas to farming somewhat differently from their present mode.

ARCHIE O. SPEAKER.

Mt. Calm, Limestone Co., Texas.

All right, and let us hear from you on the subject of farming in Texas; tell us how they do it.

CALIFORNIA PRICE CATALOGUE.—We have received A. D. Pryal's price catalogue of fruit, shade and ornamental trees, greenhouse and bedding plants; flowering bulbs and roots; for 1874. Mr. Pryal gives the prices of his entire stock, so that those wishing to purchase, have only to send for catalogues—which will be sent to any address free—to know just what his wants will cost him. A matter worthy of consideration is, that he grows his own seeds and therefore guaranties their purity and reliability. Mr. Pryal has originated a splendid rose by hybridization, which he has named the "Granger." It is bright crimson, large, full and fine, and he offers a few of them for sale. Address A. D. Pryal, Oakland, Cal.

SILK WORM EGGS.—We have an interesting letter and "clippings" from Felix Gillet, on the growing of the mulberry and silk, which we shall give at the earliest moment. In the meantime Mr. Gillet makes the following offer to persons wishing to experiment on a small scale. He says: "You may offer your readers, on my part, from one to two thousand silk worm eggs of two celebrated races introduced by me in California, which I will send them on the reception of a three cent stamp for the mailing of the eggs. Last year a dozen of your subscribers availed themselves of the same offer."

The Italian army will probably soon be armed with a repeating rifle, as eighty-four of the Vetterli rifles are about to be supplied to each line regiment as an experiment. This weapon is already adopted by the Swiss Government for its troops. It carries the sparo cartridges in a long chamber underneath the barrel, and can fire twelve shots in succession without being removed from the shoulder.

POULTRY YARD.

Winter Chickens.

EDITORS RURAL PRESS:—No doubt you are inundated with contributions to the RURAL about this time. Farmers can do but little out of doors, on account of the ground being so thoroughly soaked by the last rains; and like myself, they must do something to occupy the head or hand. But to the point. I visited a neighbor of mine yesterday. We may say neighbors in this part of the valley, although the distance to their place of residence may be from two to four miles or more. Mrs. Thompson, the neighbor in question, is a Scotch lady, and I think I learned of her something that may benefit a very large number of the subscribers and readers of your excellent journal; it is her method of raising chickens in the dead of winter, and that with the greatest success, that interested me. At this date, Jan. 14th, 1874, she has in a thriving condition four hundred young chickens, some of them tully as large as quails. This same lady raised six hundred last spring, and sold most of them at her own door to peddlers, at the rate of five dollars per dozen, cash.

Now this lady has five young children to care for, the oldest not over eight or nine years of age; besides she milks two cows, makes her own butter, and looks to the welfare of a dozen hogs or more, and this she does herself, besides attending to other household duties, cooking, washing, etc. It is true she has a husband, but he is always working at something else about the farm. She says that she will raise eight hundred, perhaps one thousand, chickens this spring, and I think she will do it. I will describe her method of raising them: as soon as the cold weather sets in, she sets her hens, any that will set, and as soon as the young chicks are hatched, she takes them to a warm, dry room for two or three days, and feeds them on soft food; she then puts them in the coops, two or more broods with one hen, and sends the mothers of them about the business of laying eggs, and hatching out more young, for the hungry cannibals of San Francisco. As to the coops, they are built in the following manner: there is a row of short posts about four feet long; these posts are set in the ground as for a fence, and about four feet apart. Now there is a corresponding number of posts set four or five feet in the rear of the first, but they are much shorter. On the top of the two rows is laid a light rail, and nailed; this makes the posts firm. The whole is partitioned off into separate apartments, and tightly covered with long shingles, or shakes, so-called by some people. In the front of the partition, which is always to the south, is placed a glass window, of six panes; each pane 9x13, giving light and heat to the young chicks in two apartments at the same time. There are also pigeon holes at the bottom for the young to go in and out; but these can be closed at pleasure. Mrs. Thompson allows no rubbish of any kind in the coops. The beaten earth for bedding only; and this she sweeps clean every other day, and covers with hot ashes. I can hardly expect you to find space in the crowded columns of your valuable journal for this long letter.

W. T. EVANS.
Dry Creek, Stanislaus county.

CHEAP POULTRY YARD.—Set posts firmly in the ground, six feet high, eight feet apart. Take No. 9 wire, and stretch from post to post outside, fastening with staples made of wire driven into posts. Place three wires one inch apart, one foot from the ground; another three at three feet ten inches from the ground; another three at top of posts. Take common laths and weave in, leaving three inches spaces between the sides of each. This makes the fence four feet high. Then take other laths, picket one end, and chamfer the other like a chisel blade, and interweave among the top wires; then shove the chamfered edge down beside the top of the bottom lath, lapping under wires two inches. This makes a cheap, durable, pretty fence, that is seven feet ten inches high, and fowl-tight. Wires should be left somewhat slack, as interweaving laths will take it up.

SCALY LEGS.—This affection on fowls' legs, which is mainly caused by damp runs and yards, can be cured by one or more applications of an equal mixture of turpentine and sweet oil.

Small Pens and Thoroughbreds.

EDITORS PRESS:—If my hens don't lay next fall when eggs are high it will not be for the want of advice, for which I thank your correspondent. Although my statement has not been controverted, the fact has been elicited through the RURAL, that a few here and there have a scientific way of bringing their hens in at any season of the year they wish; a new idea to me, sure. I would like to see more in the RURAL from the poultry breeders of this State, not altogether from the dealers and poultry fanciers, but from farmers like myself who have invested in their fine stock and tried to improve our poultry yards; there must be many such among your readers. I am willing to give my experience and way of doing to get some ideas from others, and see what luck other farmers are having with fancy stock.

I never could get enough from the dung-hill variety to inspire a genuine enthusiasm for the business, and about three years ago invested in a trio of White Leghorns and a trio of Light Brahmas—cost \$60. Of the Brahmas I have no recommendation to make as they are no success with me, nor with anyone along this coast country; probably it is too cold—but as they are considered the standard fowl of the times, I will find no fault with them, take the blame to myself and confess that I can't run the Brahmas. But in introducing the White Leghorns I got my money's worth; they are as good a fowl as any farmer wants and easy to run. I can't say that they are any better than many other breeds, for I have not tried them, but they are the farmer's breed and no mistake.

I see that Mr. G. R. Miller and myself are not going to agree in the chicken business, and it would never do for us to go in "pards." He says that many chicken pens and thoroughbreds don't pay at their house. Now, these are my strong suits. I believe in many pens, and in thoroughbreds. I would discard, for laying stock, the big chicken house, with its one or two hundred fowls, and convert the rough-and-tumble chicken yard into a number of small communities or families. I have ten pens, each 16 x 20 feet, covered with laths seven feet high, in each yard a house 5 x 6 feet—3½ feet to the eaves—built flush with, and to open into the general yard; so there is no need to go into the pens to clean the house, get eggs, etc. In each pen I have a cock and eight hens; and a cleaner, more well-to-do lot of chickens I never had; and I have since thought that this must be the secret of the fanciers having their stock do so well. They all have small houses and pens, and keep their poultry in small lots. These eighty hens—thoroughbred Leghorns—will discount any eighty Dughills in the State for laying; or the same number of thoroughbreds running in one flock, with a township to roam in. I have the same number of hens, but mixed breeds, running together; and, with the same feed and care, week in and week out, give not quite half the number of eggs I get from the pens. As soon as I get pens made, I will not have a wandering hen on the place during laying season. And when the time comes to have all hands out for a rest, i. e. hunting for their own living, a la California, these pens and houses are capital to put a brood of about forty chicks with a fat hen, and bring them up to broilers by the time you want the hens back again for business. My experience has been that a hen loses a smaller percentage with forty chicks than with a dozen, in such houses and pens—try it, Mr. M.—and as for thoroughbreds, I have several picked yards, of the best marked standard fowls, that discount their less beautiful sisters in laying right-straight along. So I believe the more thoroughbred the better, so far as Leghorns are concerned.

GEO. W. T. CARTER.

San Gregorio, Feb. 1, 1874.

We believe our correspondent's head is "level" on the subject of small pens and thoroughbreds.

NAPHTHA AS FUEL FOR LOCOMOTIVES.—The Russian Steamship and Railway Company announce that they have found naphtha, for steam generation in locomotives, very advantageous. The material employed by the company is the crude oil from the Caucasian and Volga regions, and compared by weight the amount consumed was about one-half that of coal. The arrangement for burning naphtha is stated to be of such a nature that no difficulty will be experienced in substituting one for coal consumption in place of it, should it be found desirable to do so.

McGARRAHAN AGAIN.—Wm. McGarrahan is considering the proposition of introducing a bill to instruct the Secretary of the Interior to restore to the records pertaining to the grant covering the New Idria quicksilver mine, giving it to the right owners. The patent was signed by President Lincoln, and afterward defaced with the certificate that it had not been legally issued. McGarrahan is here ready to take any action that may be necessary. His case is now pending in the Supreme Court of California.

NEW USE OF MANGANESE.—The very high price of the metal nickel has led some suggestions that metallic manganese might be employed in its place in the manufacture of German silver. Dr. Percy states that more than twenty years since he manufactured an alloy with manganese which so perfectly resembled German silver that it was sold as such to electroplaters without their detecting any difference.

THE VEGETABLE GARDEN.

The Potato in the Sierras.

EDITORS PRESS:—The potato is an American esculent of the most common use and utility. It enters largely into the economy of the household; but its quality and excellence depend much upon the soil, climate and manner of its cultivation.

In the Auburn market the retail price of the potato is from \$1.75 to \$3.50 per cental, throughout the year, according to the variety and quality. The article which is of the least value comes from San Francisco, it having been raised either on reclaimed tule land or on adobe soil, somewhere in the vicinity of the Bay and its estuaries.

The tule potato is especially disagreeable to the taste, it being coarse-grained and flabby in its texture, and surcharged with the odor of the decay of a superabundant vegetation.

The Humboldt potato ranks high in quality, and holds a celebrity which it has long enjoyed. But without disparagement it may be said that the potato that is cultivated high up in the Sierra Nevada mountains is the best that is raised anywhere in the State. It is hard and close-grained. Its flesh is redolent of the woody nature of the sandy loam where it is produced; and, after it has been placed in a hot stove-oven for some time, it becomes perfectly toothsome. It has different names, according to the locality in which it is cultivated. Hence, on the west side of the Summit there is the Auburn, Clipper Gap, Gold Run and Dutch Flat potato; while on the east side of the Sierras there is the Boca, Reno and Lake Tahoe potato.

During the last few years, the mountain potato has been successfully raised, and sent to market from localities of different elevations above tide-water, ranging from 920 to 5,560 feet in altitude. The Boca potato, which is cultivated on the banks of the Truckee river, at the highest point named, calls for the gold medal in excellence; while the Reno, at an elevation of 4,525 ft., claims the silver premium; and the Newcastle potato, at an elevation of 920 feet above tide-water, has honorable mention of quality above all the tule and adobe potatoes which are raised around the bay of San Francisco.

Here in the foothills, at an elevation of only 1,385 feet above tide-water, the following is my method of cultivating the potato: Choose a sandy loam soil, having a slight inclination in some direction; cover it in December with well rotted stable manure; in February or March, plow a foot deep, carefully turning under everything on the surface; harrow then thoroughly. During the last of March commence to plant. Stake off the ground in rows three feet apart. Open drills a foot deep in the line of the rows. Lay down the cuttings one foot apart. Cover them with a compost of manure from the poultry-yard and hard or oak-wood ashes, carefully prepared, to the depth of four or five inches. Then fill the drills with soil. Afterwards, open a small ditch between the rows with the corner of a hoe. Irrigate gently once a week, keeping the ground continuously and constantly damp or moist, but not flooded. When the stalks are up a foot or so high, hoe once, and no more. Afterwards, pull up the weeds by hand. Irrigate with muddy ditch water, as that will drive out the gophers, stop up their holes and fertilize the soil. Continue to plant every two weeks from the 1st of April to the 1st of June; planting the early rose variety first, and afterwards the old peach blow for the main or general crop. Dig the potato only when it is ripe; finishing the harvest in November, before the annual rains commence.

It is to be hoped that everybody will not start in to raise potatoes, as that would spoil the market and reduce the retail price. This article is not intended for the perusal of those farmers who obtain their livelihood by raising oats, barley, or wheat hay, at one-third or one-half of a ton per acre, and then buy their potatoes at from \$2 to \$3 per cental. Hence they will take no offence at the speciality of the description of potato raising, either in the foothills or in the high Sierras.

T. S. MYRICK.

Auburn, Jan. 31, 1874.

Our correspondent need not fear the slightest competition as regards his method of raising potatoes; for excellent as it is without doubt, but very few will plant potatoes for the supply of the large State and interior markets, where they have to use special manures, or any manure at all, in the quantity mentioned by our foothill potato grower. Nor would the covering of the seed a foot deep, be generally considered good advice as applicable to our rich valley lands. However, his method of cultivation is interesting as showing how soil, climate, irrigation, or all combined, may call for peculiarity in mode of cultivation to secure the best results.

COLLODION FILM.—To produce a collodion film of extraordinary tenacity, which may be desired for certain purposes, Bottger recommends that the collodion cotton be dissolved in a mixture of ether and alcohol in equal volumes, and that a small quantity of balsam of copaiba be added.

MISCELLANEOUS.

Accidents in Coal Mines.

They are divided broadly into five groups or categories, viz., explosions of fire-damp, falls of coal from the "face," as it is termed, of the seam, or from the roof; accidents in shafts from ropes or chains breaking, overwinding, etc., miscellaneous accidents underground, such as explosions of gunpowder, suffocation from gas, accidents from trams and tubs, etc.; and accidents on the surface by machinery, boilers bursting, etc. The total number of deaths in England from all these causes amounted last year to 1,060, the majority of which were due to separate accidents. In the first category, explosions of fire-damp, the deaths numbered 154; in the second, falls from the face or roofs of mines, they numbered 456; in the third, accidents in shafts, they numbered 155; in the fourth, miscellaneous underground accidents, they numbered 217; and in the fifth, accidents on the surface, they numbered 78. It will be perceived that of all these classes of accident by far the most frequent is the second, that of falls of coal, either from the face of the seam, upon which the men are at work, or from the roof of the mine. Falls from the roof are stated to have been more than usually numerous last year, owing partly to the large number of inexperienced hands employed in the collieries. It seems that it requires many years' experience to enable a man to gauge the safety of a roof, and to render a dangerous place really secure. But, apart from the question of inexperience, many deaths might have been averted if the timbering of the working-places had been carefully watched by the persons in charge. We are glad to see that the inspectors of mines are pretty generally of opinion, that if the provisions of the new Mining Act, which came into operation on January 1, 1873, be fairly carried out, a material reduction will be effected in the number and nature of accidents under this head; the owner, agent and manager being now held responsible for the security of the roof and sides of every "traveling road and working place."—*American Artisan*.

NEW AGRICULTURAL MACHINE.—The *English Mechanic* says: Messrs. McDonne and Leuchan, of Dublin, have invented a machine which performs the operations of rolling, sowing and harrowing simultaneously. The roller is of wrought iron, riveted on cast iron wheels, forming a cylinder six feet in length by three feet in diameter. Immediately above the roller is a sowing apparatus, by which the seed is rapidly delivered, a star wheel of four points keeping the conductors in constant motion. As the seed is sown, a harrow of four rows of oblique teeth, set in a central axis, turns up the earth over the seed. The harrow is kept in motion by an endless chain or belt which passes round the extreme end of the large cylinder, and fits the groove of a small wheel at the corresponding end of the harrow. Every time the large roller turns over, the circular harrow turns nearly five times, causing the teeth to tear up the soil about twenty times at each of the revolutions. Meantime the seed conductor and distributor rises and falls twelve times during each of these revolutions, and there is a contrivance by which the quantity required to be sown can be regulated. A lever is also connected with the supports of the harrow, and rests upon a fulcrum placed at a suitable part of the frame of the machine. By means of this lever, the harrow portion of the machine can be raised off the ground and the roller only used; and the distributor or sower may be worked simultaneously, by means of the chain-band, which can be closed, and the flow of seed stopped. The machine can be easily made to suit either the purposes of sowing corn or grass for pasturage.

MARINE SCHOOLS.—Sargent, from the Senate Committee on Naval Affairs, has reported a fifth amendment to the bill to encourage the establishment of Marine Schools, as amended by the Committee. It provides that in order to promote nautical education, and to educate officers and seamen for the merchant and naval marine in scientific and practical navigation, and in arts, trades and occupations pertaining to seamanship, the Secretary of the Navy shall be empowered to supply, upon the written application of the Governor of a State, or the authorities of the cities of New York, Boston, Philadelphia, Baltimore and San Francisco, a suitable vessel, with all her apparel, together with charts, books and instruments, if the same can be conveniently spared, from the Public Marine Schools, in each of the above named ports, and the ships and materials so furnished may be loaned to said cities or States in which they are situated, upon condition that said States or cities establish at their own expense nautical schools for the education of youths desirous of entering the merchant or naval marine, or, if already in service, of improving their nautical education. The President of the United States may detail naval officers to act as superintendents or instructors of these schools. In conclusion, the bill provides that no person shall be sentenced to or received at such schools as a punishment, or commutation of punishment, for crime.

CHEMICAL TELEGRAPH.—An improvement has been recently patented in which the paper is wet by the chemical solution by siphon just before reaching electrodes, which are both upon the surface of the paper, the current passing across instead of through it.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 3, No. 320 California street, S. E.—General State Agent: J. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

The Old Folks Join the Grange.

[Written for the RURAL PRESS by Mrs. B. F. FRISBIE.]

I think that we had better go and join the Grangers, wife, And see if there we'll find the means to brighten country life: There's Deacon Jones and Squire Flint and more good neighbors too, Have put their shoulders to the wheel to help the great work through.

'Tis true, I'm old and feeble now, the strength has left my arm That used to swing the axe and scythe on this time-honored farm; 'Tis not that I would think to add much to our worldly store, For while we live we've plenty, wife, and why need wish for more?

I want to help support the cause, and help to swell the throng, And cheer my younger brethren on, and sing the rallying song; I want to see the coming man, if farmer be it be, Have easier times and spandier gains than have been dealt to me.

I'd like to see a farmer Judge, and, ere my days are spent, A farmer for a Governor and one for President; I know you think these silly thoughts my poor old head is dancing, But have a little patience, wife, until we join the Grange.

I know there is enjoyment there, for many times, last fall, I've seen their faces beam with joy, as they came from their hall; They do not wear such merry hearts where sinful work they do, And they are pledged, I'll warrant, wife, to be upright and true.

What say you, then, shall we not go and help our neighbors there, And of the pleasures or the pain our rightful portion share? I tell you I shall happier be, than marchant, upon Change The day I find my name enrolled as PATRON OF THE GRANGE.

Grange Enterprises.

In the present crude state of our organization Patrons must of necessity differ very materially as to what is best in many things, and especially in our multiplied associations for business co-operation. Varied local and pecuniary conditions, and great diversity of production materially add to this difference of opinion; but all these differences will eventually crystallize into a more or less perfect system, applicable to all conditions. To reach this end, however, we must move cautiously, yet firmly, and, above all things, avoid giving aid to the very abuses which it is our mission to war against. We must not pull down one monopoly by building up another. We should not, as producers, enter into any combination which is calculated to work a detriment to other producers, or to any fair and just combination by which society, as a whole, is especially benefitted. We should not seek, for instance, to cut down the charge for fares and freights to such an extent that an honestly constructed and properly managed railroad cannot realize a fair reward for its investment; neither should we use our power or influence to deprive honest labor, in any calling, of its just reward. Still, we are not called upon to pay interest on watered stock in railroads or elsewhere; nor to secure unreasonable profit to middlemen or manufacturers, simply because they hire and pay good wages to mechanics.

In order to avoid this latter dilemma, some of our State and county Granges have gone into the manufacture of agricultural implements, when they have been unable to make reasonable terms with manufacturers already established. In some cases, rights to manufacture have been bought of inventors.

Co-operation Movements in the Western States.

Of late, numerous announcements have found their way into the newspapers of the Northwest, announcing the establishment, by Patrons, of banks, insurance offices, co-operative stores, factories, mills, elevators, warehouses, pork-packing establishments, etc. The establishment of grain warehouses has, perhaps, proved the most successful of any of this class of enterprises. There are said to be over fifty such warehouses, at this time, in Iowa, which have not only proved profitable investments, but which have also become most useful regulators to outsiders engaged in that business.

Sufficient time, however, has not yet elapsed to show whether or not the generality of these enterprises will prove a success. If they should succeed, we shall have reason to be proud of the capacity of our farmers in untried fields—of their readiness to adapt themselves to complex business operations in these trying and peculiar times. In Oscaloosa, Iowa, the Patrons have formed a joint association for the erection of a starch factory to work up their corn into a shape which will pay for transportation; 1,000 bushels a day will thus be consumed. Woolen and other manufactures are also talked of in various localities, and even railroads are contemplated in some quarters as the swiftest and shortest solution to the question of fares and freights. If all these plans are successfully consummated, they will contribute materially to the prosperity of, and win deserved praise for the farming communities which undertake them.

But there are other ways than these, requiring less immediate capital and risk, by which Patrons may derive important pecuniary bene-

fit from the Order, which would probably be better, especially for Californians; to avail themselves of; while, in the meantime we may be watching the progress and success or failure of the more advanced movements of our brethren in the older states. A year or two hence, if they succeed, the Patrons of California may safely follow in the same track. We have herein the first place,

The State Grange Agency.

already established in this city, with a business agent to assist Patrons in all parts of the State, in the purchase of implements and supplies and in the sale of farm produce. This agent has perfected arrangements with agricultural implement dealers, sewing machine agents, grocers, dry goods dealers, and traders engaged in almost every other line of business, by which members of the Order, by concentrating their business, may be supplied with goods at greatly reduced prices, and always of a reliable character. A great saving is thereby made, especially when large orders are sent, such as may be made up by several members of a Grange uniting in thus supplying their wants.

A very large amount of money has also been saved to members of the Order this season, through the same agency, in the shipment of grain. We may safely place this amount at hundreds of thousands of dollars. Arrangements have also just been perfected for the disposition in a similar manner of our dairy produce and wool product. Other departments of farm produce will be connected with this agency, as fast as the necessary arrangements can be made, such as fruits, potatoes, poultry, etc. Of course it takes time to arrange such things; but it is the intention of those who have the matter in charge that no time shall be unnecessarily lost. We believe that, at least, for the present and near future, the State agency will be the most economical device through which supplies of all kinds can be obtained for farmers in the interior. Co-operative stores, even in populous communities, in their ordinary management demand a large amount of caution, experience and capital, and require the aid of the most expert business men to make a success. All these requirements, as well as every risk, is avoided by the Central Agency System as now established.

It is estimated that the Patrons of Iowa saved its members at least \$50,000 last season, by the purchases through the State Agency in the single article of plows; \$30,000 was saved in sewing machines; 25 per cent. on mowing machines—a very large aggregate. About the same percentage was saved on miscellaneous implements, wagons, etc. The total amount saved to the farmers of that State the past year, in their purchases, to say nothing of sales, will greatly exceed a million of dollars—some set it at fully two millions.

Let us move slow. We have a great work to perform—financially, politically and socially. The benefits of the Grange are not to be measured by mere dollars and cents. There are other important factors that must be introduced in making up the grand total, which are of far more value to the farmers of California and the Union, than all the dollars and cents that enter into the calculation, and to which we propose to refer in future issues.

SANTA CLARA GRANGE AND THE RURAL PRESS.—Santa Clara seems to be one of the most flourishing Granges in the State. It had a large membership some months ago, and we hear of new applications almost or quite every week. A business note from Secretary Wilcox informs us, incidentally, that they have a class of 30 now in advancement, to enjoy the next harvest feast. There is no question of the fact, as he writes, "We are sowing seed on good soil." Many thanks for the interest which Bro. W., expresses for the success of the RURAL PRESS, and the earnest efforts he is making to increase its circulation among the farmers of Santa Clara. We trust it will prove a real help to the Patrons wherever it goes. We intend that it shall ever be a power for good in the great and noble cause of agriculture.

"THE SCRIBE AT A GRANGE."—We had intended to have extracted liberally this week, from the letter of our Denver correspondent, who relates, in an amusing manner, his experience at a late meeting of the Denver Grange—but the pressure of other correspondence, and matters of interest to the Order, generally, will not admit. One of the great drawbacks to our correspondent during the first meetings was the fact that the early hour of assembling broke seriously into his regular habits of a mid-day meal; but when he was surprised by the harvest feast he was completely taken a-back, as sailors say. His experience has been like that of many others.

ARIZONA.—A meeting of farmers was held at Phoenix, Arizona on the 17th ultimo, to consider the expediency of establishing a Grange, of P. of H. at that place. The Secretary of the meeting was instructed to write to the proper officers in this State for the necessary information, etc., to that end. When the meeting was adjourned, to be called together again by the Secretary to learn the result of his letter of inquiry.

THE PATRONS IN LAKE COUNTY.—An exchange says that about one-half the voting population of Lake county are Grangers. There are many other counties in the State of which the same may soon be said.

National Grange—Latest Dispatch.

St. Louis, Feb. 11.—At the meeting of the National Grange this morning a declaration of purposes was submitted by the Committee on Resolutions, through Mr. Wadsworth, of Florida, its Chairman, and was unanimously adopted. They read as follows:

Profoundly impressed with the truth that the National Grange in the United States should proclaim to the world its objects, we hereby unanimously make these declarations of the purposes of the Patrons of Husbandry.

First, United by the strong tie of agriculture, we mutually resolve to labor for the good of our order, our country and mankind.

Second, We heartily endorse its motto:

"In essentials unity, in non-essentials liberty; in all things charity."

We shall endeavor to advance our cause by laboring to accomplish the following objects: To develop better, higher manhood and womanhood; to enhance the comforts and attractions of our homes; to strengthen our departments; to emulate each other in labor; to hasten the good time coming; to reduce our expenses, both individually and concretely, by lessening our outlays, and to produce more.

In order to make our farms self-supporting we propose a union in working together, buying and selling together, and in such general way acting together for our mutual protection and advancement, as occasion may require; we shall avoid litigation as much as possible by arbitration in our Granges; we shall constantly strive to secure entire harmony, good will and brotherhood among ourselves, and to make ourselves perpetual; for our business interests we desire to bring the producers and consumers, the farmers and manufacturers together into the most direct and friendly relations possible, and we must dispense with surplus middlemen, not that we are unfriendly, but that we don't need them; all our acts and all our efforts, so far as business is concerned, are not only for the benefit of the producers and consumers, but also for all our interests which tend to bring these two parties into speedy and economical contact; hence, wholesale transportation companies of every kind are necessary to us; their interests are connected with our interests.

Keeping in view that sentence and our declaration "that individual happiness depends on general prosperity," we shall therefore advocate for every State a service of facilities for transporting cheaply to the seaboard, or between home producers and consumers, all the productions of our country. We adopt it as our fixed purpose to open channels for cheap transportation.

There is to be no communism no agrarianism. We are opposed to such a spirit and management of any corporation as tends to oppress the people and deprive them of their just profits. We are not enemies to capital, but we oppose monopoly. We long to see the antagonism between capital and labor removed by common consent and by enlightened statesmanship worthy of the nineteenth century. We are opposed to excessive high rates of interest and exorbitant profits. They greatly increase our burdens and do not bear proper proportions to our labors. We desire only our land by legitimate transactions. We shall advance the cause of education among ourselves and for our children by all just means in our power. We are special advocates that our agricultural sciences and the arts which adorn our homes shall be taught in their courses of study.

Sincerely we assert the oft-repeated truth taught in our organic law, that Granges—National, State or Public—are not political or party organizations. No one true to its obligations can discuss political or religious questions, or can political conventions or names of candidates be mentioned in them. We teach the underlying of all true politics, all true statesmanship and if properly carried out it will tend to purify the social atmosphere of the whole country. If we seek the greatest good we shall always bear in mind that no one by becoming a Patron of Husbandry gives up that right and duty which belongs to every American citizen, to take a proper interest in the politics. On the contrary, it is hoped every one does all in his power to influence for good the actions of any political party. It is his duty to do all he can to put down bribery, corruption and trickery to allow none. We are always characterized by the belief of every Patron of Husbandry, that the offices should seek man and not the man seek the office.

They appeal to all good citizens of all classes for support in their efforts toward reform; declare that one of their cardinal principles is to assist any suffering brother, and finally proclaim that one of their purposes is to inculcate a proper appreciation of the abilities and sphere of woman.

A memorial to the Patrons of Husbandry in the Cotton States, presenting arguments in favor of a system of mixed husbandry in the South, instead of devoting their entire land and labor to the production of one crop, was also submitted and adopted.

Ours being peculiarly a farmers' institution, we cannot admit all to our ranks. Many are excluded by the nature of our organization, not because they are professional men, or artisans, or laborers, but because they have not sufficient direct interest, or may have some interest in conflict with our purposes. But we appeal to all good citizens for their cordial co-operation to assist us in our efforts toward reform. Aid us in our endeavors, that we may remove from our midst the last vestige of corruption.

We hail a general decree for fraternal harmony and earnest co-operation as an omen of our future success. It shall be an abiding principle with us to relieve all of our suffering brotherhood by any means in our command.

Last, but not least, we proclaim among our purposes to inculcate a proper appreciation of the ability and sphere of woman, as is indicated by her admittance to membership in our Order.

Implored the continued assistance of our Divine Maker to guard us in our work, we here pledge ourselves to faithful and harmonious labor for all future time, and to return by our united efforts to the wisdom, justice and political security of our forefathers.

Mr. Wright of California is accredited with the authorship of the Declaration.

How It Pays.—As an evidence of the money saving connected with a proper organization and co-operation of Granges in any given county or section, we would instance the following: Such an association in Centralia, Mo., recently established a purchasing agency embracing a district of thirty miles square. The value of farming implements which passed through the agency in one year was \$93,530, on which the commission as usually charged would have been \$28,058. In this case the agent's charges were just \$4,676.50—thus saving to the farmers of that little district \$23,382.50 in one year. Our farmer friends, who have never united in this movement, and our various friends, as well, may scratch their heads at such things; but a little figuring will show how easy it may be done by concentration of effort.

KERN ISLAND—NOT PANAMA.—The name of the Grange recently organized by Bro. Wright, with full list of charter members, at Bakersfield, Kern county, is "Kern Island," instead of "Panama," as originally reported to us.

The Granges and the Mechanics.

EDITOR PRESS:—Having just read, for the first time, the resolutions of Stockton Grange, since indorsed by Waterford Grange, with regard to our friends, the mechanics, being admitted to the Granges and meeting with us in our good work, I hope a little fraternal comment and advice will be considered pardonable. It is very questionable whether it is well for our subordinate Granges to pass and publish such resolutions. A little reflection will show they are liable to be misunderstood, and to work injury to our cause. Allow me to remind our brotherhood that the question of eligibility to membership is decided by our National and State Granges in their secret sessions, and by instructions from the proper authority.

The present state of the question of admitting mechanics, as a class, is this: Instructions coming through the Worthy Deputy of the National Grange allowed us, after our first organization, to admit mechanics with certain restrictions, in which all our Deputies have been instructed, and which all our members can learn by application to them or to the Masters of the Granges. A few mechanics have been admitted in some localities, for what were considered good and sufficient reasons by the Granges into which they were admitted.

But at present, both the sovereigns of Industry and Patrons of Husbandry are being organized as new orders, it is considered best to wait and see how they will succeed. Should mechanics unite in one or both of those orders, it will accomplish their objects which are similar to ours, and there should be, and no doubt will be, a most hearty cooperation between the two orders. Our interests in the present reforms are identical. Indeed, we are natural allies. It is hoped that neither farmers nor mechanics will forget our close alliance. Let us endorse no unnecessary ill-will and antagonism.

In regard to the correspondence which brought about united action between the State Granges and Mechanics' Deliberative Assembly with reference to the Agricultural and Mechanical interests of our State University, suffice it to say, could every member of our order, know all the facts concerning it they would be likely to fully approve that united action.

When our committee began its inquiries, it soon found the Mechanics' Deliberative Assembly had appointed a similar one. So to prevent any clashing of interests and work in harmony with them, we agreed to prepare a joint memorial, and to ask for the same changes and additions.

We did so most cordially, and our joint memorial, seeking such a development of the Colleges of Agriculture and of Mechanical Arts as was originally intended, was fully endorsed by the Executive Committee, and presented in the Legislature early in January. There it has the earnest support of the Mechanics and their friends, and of the farmers and their friends. This gives it a weight and secures it a hearing which we could not otherwise have expected. Indeed, the result has been most happy; and we believe a cordial cooperation will always exist between our Granges, and not only the Mechanics, but all our natural allies.

Let us not forget, Fellow Patrons, that while we must do everything in our power to secure entire harmony among ourselves, we need all the aid we can get from our many outside friends. Let us remember it is one of our special indications to labor, hand in hand, with all Orders and Associations, to secure the good of our fellow-beings. Important action will no doubt be taken by our National Grange, which convenes at St. Louis, to decide how far the expression "interested in agriculture" is intended to go; and to decide many questions of interest for us. It is hoped its measures will meet with general approval. By all means, let us work together, pull together—but never pull against each other.

Yours fraternally,

J. W. A. WRIGHT.

P. OF H. IN COLORADO.—The Colorado Tribune, of Jan. 7th, speaking of the growth of the Order in that Territory, says:—Our politicians are going over to the "cow boys" in a lively and interesting way, and there is a scramble to see which will be chief puncher. They had all better hurry up or they won't get in. There are now twenty-seven organized granges in Colorado, with over seven hundred members. Granges were formed last night at Littleton, Big Thompson, Longmont and on Boulder creek. The Rocky Mountain Gazette of Jan. 7th says: On the 22d of December, Mr. R. N. Sutherland, Deputy N. G., visited the citizens of Deep Creek Valley, Meagher Co., and organized a Grange of twenty-one members, and on New Year's day went to Bozeman to organize another Grange at that place. In a few days Mr. Sutherland will return to Helena, and while here expects to meet the farmers of Prickly Pear valley. Mr. Sutherland is an energetic young man, and intends devoting the winter months in organizing the Montana farmers into Granges.

NAPA GRANGE.—Bro. James M. Thompson, Master elect, who was absent at the recent installation of officers of this Grange, has since been installed.

CHANGE OF AGENCY.—Bro. Merry having resigned the agency of Healdsburg Grange, P. S. Peck has been appointed in his stead.

From the Granges.

WINDSOR GRANGE, Sonoma County:—Secretary J. H. McClelland writes as follows: "The installation of the officers of the Windsor Grange is now numbered among (what are, no doubt, generally considered) the trivial events of the past; but we, the members of said Grange claim that it is among the important, from the fact that we recognize in the principles of the Grange the instruments to work out the amelioration of the productive classes. We think we see in it the groundwork for a practical remedy for many, if not all, of the impediments and grievances which have oppressed us for so many long and weary years. Our worthy brother, the indefatigable Merry, Past Master of Healdsburg Grange, officiated in his impressive style as installing officer and Bro. Alexander, present Master of Healdsburg Grange as assistant. A magnificent collation was prepared by the matrons and wives of members, many of whom I regret to say are without the gates as yet, yet we regard it as only a question of time in capturing them. The ladies deserve great credit for this, their first effort in catering to the wants of the inner man on a large scale and bringing out his general side and social qualities. This was our first effort at developing the social features of our Order, and we cherish the hope that it may prove a new era with us socially.

There are no people, as a class, who have neglected the cultivation of the social qualities so much as the farmers of California. The reasons why it is so are obvious. In the first place we are a mixed population, from all the States and Territories, and in fact, from all portions of the civilized world, tumbled into one heterogeneous mass—every distinct class possessing its peculiarities in education, manners and customs. These conflicting elements necessarily takes years of friction to grind down and harmonize into even tolerable social order. Then the difficulties incidental to the settlement of all new countries. Further, we all, or a large portion of us, came here to make money and have sacrificed almost every other consideration to accomplish that end. Hence the social status of our people is easily accounted for; but we flatter ourselves that a better day is at hand socially, financially and politically.

Politically we must confess that we had become greatly demoralized. But since our Order sprang into existence we feel more hopeful. We think there is sufficient latent virtue in the American people to correct the grievous wrongs which are practiced in the administration of our government, if it could be mobilized and brought to bear in the right direction, and this, I think, may and will be effected through the medium of the Patrons of Husbandry.

As a Grange we are progressing slowly but surely. Our members, imbued with the proper spirit, are rapidly educating themselves up to the work. We have met with quite an acquisition of members during the last six weeks and the future looks promising.

EDEN GRANGE, Alameda County:—Secretary Wm. Pearce writes as follows: Eden Grange, No. 106, met at 1 o'clock p. m. on the 17th inst. for public installation. After an eloquent address from Brother Ewer, of San Francisco, our officers elect, were installed by Bro. Jackson. [Their names have already appeared in the RURAL PRESS.]

After the installation we went to work in the 4th degree, when it was moved and adopted that a vote of thanks be tendered to Bro. Ewer for his eloquent address, and Bro. Jackson, as installing officer, with instructions to the W. Sec'y. to place it on the minutes of this Grange.

Our Grange up to this time numbers 60 members, and applications are coming in at every meeting, which is every Saturday at 1 p. m. We expect to add greatly to our number as soon as the farmers get in their crops. Everything looks prosperous for good crops this coming season.

UNION GRANGE, Colusa county:—W. W. Dollings, Sec'y, writes that notwithstanding this Grange is young and numerically weak, the prospects are favorable for a large increase, when the weather settles. We have purchased a lot in Butte City and have the lumber on the ground for building a suitable hall, as soon as the weather permits. Our prospect for crops is excellent, and the Grangers are buoyant with hope. The following is a list of our officers for 1874: J. F. Garr, M.; E. McDaniel, O.; J. M. Bussell, L.; J. N. Davis, C.; Wm. Luman, S.; Isaac Bassett, A. S.; J. Annand, T.; W. W. Dollings, Sec'y; A. Beal, G. K.; A. S. McDaniel, Ceres; S. M. McDaniel, Pomona; M. A. Sumner, Cera; Ida Annand, L. A. S.; M. Davis, E. McDaniel and F. M. Delany, Trustees.

SACRAMENTO GRANGE.—Bro. Rich writes as follows: Being the oldest in the county this Grange is making steady accessions to its number and opens the new year fully equipped for the field of labor. Last month State Deputy Bro. H. B. Jolley, of Merced, was in the city and met with us for the purpose of installing our newly elect officers and gave us a fine address previous to the installation, and at our last regular meeting, Jan 24th, also met with us in company with Bro. Clark of Oregon, and instructed us as to our duties, etc. Our meetings are well attended, considering the inclemency of the weather, showing that its members appreciate the social as well as the intellectual features of the order.

CAPAY VALLEY GRANGE, No. 90, has adopted the code of By-Laws recommended by the State Grange, placing the dues of all the members at 25 cts. per month.

ORISTIMBA GRANGE, STANISLAUS COUNTY.—Sister Miller, Ceres of this Grange, writes: "Our Grange was organized Nov. 4th, by Bro. J. W. A. Wright, with a full charter list, and we have since been steadily increasing. On the 24th of January we conferred the third degree on twelve candidates, had a harvest dance, and a very nice lunch. On the 31st we gave the fourth degree to the same candidates, and celebrated our second harvest feast, and to say that we had a splendid time would but feebly express it. We in our Grange, believe in carrying the thing out to the letter—when it says "sing," we sing, and when it says "dance," we dance, and when it says "eat," we eat.

The feasts are not provided exclusively by the sisters, but the bachelor brothers bring in their dish of baked beans, doughnuts and chickens, and all enjoy themselves, and go home feeling in the best of spirits, and do not think the day lost. We had quite a number of visitors to help us enjoy the feast, from the Cottonwood Grange, nine miles to the south of us, and also from the Bonita Grange, eight miles to the northward.

Our Grange now numbers sixty-five. We have a class of twelve more to take the first degree next Saturday. Very seldom any of the members are absent; nothing but sickness or urgent business will keep them from attending. All take a lively interest, each and all doing all in their power to keep up the interest; no discord or hard feelings are allowed to enter our gates. I think we can produce as many wide-awake members as any of our sister Granges. Members are coming in so fast we have not had much time for any other business. I hope they will continue to come. I expect our numbers will reach one hundred or more by the time we celebrate the birthday of our Grange. We all appreciate the RURAL PRESS.

THE P. OF H. IN LOS ANGELES.—A correspondent of the Sacramento Record says: "The Granges are already a power in this part of the State, and are almost daily developing some new feature in their line of operations. Important meetings have been held in this city during the past week. Their most important projects are a Co-operative Association for the transaction of mercantile business, and their proposed Agricultural Exposition. Both these enterprises have taken tangible shape. Disatisfied with the management of the Southern District Agricultural Society, which really seemed to be more of a horse-racing association than anything else, the Grangers have organized under the General Incorporation Law, and propose to hold an Exposition that shall truly represent the agricultural progress of this section of the State. They have also incorporated their co-operative association and expect to establish Grange stores in Los Angeles and surrounding cities. As the order now numbers nearly a thousand members in this county alone, among them many of our wealthiest and influential citizens, it will be readily seen that they are able to effect something if they persevere.

ROHNERVILLE GRANGE, Humboldt county:—Brother John W. Cooper writes as follows: "Reading the PACIFIC RURAL PRESS induced me to believe that the organization of the P. of H. was the essence of all kinds of agricultural societies and associations; and since I have become a Granger I am satisfied that such is the fact. Since the Grange to which I belong was established at this place, we have had many drawbacks. It was some time before our charter, etc. arrived, officers have been sick, and we have had much cold, stormy weather. But we are now beginning to grow, and I have no doubt will flourish as fine weather advances. I have conversed lately with members from several other Granges in the county, and learn they are all prospering well.

I have recommended the RURAL PRESS in our Grange and elsewhere. Our Secretary, Mr. Samuel Strong, is getting up a club for it. If it does not reach you before my subscription runs out, you will please continue my paper; and you will much oblige.

TOMALES GRANGE, Marine County:—It will be seen by the following from Bro. Wm. Vanderbilt, that this Grange is in a flourishing condition: Tomales Grange was organized December 17, 1873, and the officers installed by Deputy J. H. Hegler. Since that time we have had weekly meetings. On Wednesday we initiated in the first degree thirty new members, and have still applications for membership. Our Grange is getting along finely, and the prospects are that in a short time we will have a Grange that we can feel proud of. We intend to have a harvest feast at the time we confer the fourth degree on the class admitted Wednesday. On Friday next we shall go by invitation to Two Rocks Grange, as they install their officers on that day.

BLOOMFIELD, Sonoma county:—The new Secretary A. B. Glover, writes: "Our Grange is in a growing condition. We number over forty members. Had a grand harvest feast on the first of January, notwithstanding the storm. Many of the members of Two Rocks and Tomales Granges were with us, by invitation. Our former Secretary, D. Bruner, is canvassing the county for the RURAL PRESS.

CENTRAL GRANGE, Colusa county:—W. G. Saunders, Secretary, writes: "Our members are diligent workers, and our numbers will increase rapidly as soon as the weather settles. The Central Grange is unanimously in favor of the no-fence law. I shall soon send you a club of subscribers for your valuable paper.

Inyo County—Granges Wanted There.

EDITORS PRESS:—Isolated as we are, we have derived much pleasure and information from the RURAL PRESS. There are, probably, some of your readers ignorant of the fact that fertile spots in California lie east of the Sierra Nevada Mountains. Owens Valley, in Inyo county, is bounded on the east by the Inyo range, and on the west by the Sierras, and has agricultural, as well as mineral resources—Cerro Gordo being the best bullion producing camp in the county—about eighty big teams being required to haul the bullion from said camp to Los Angeles. The highest mountain (Mt. Whitney, 15,000 feet above sea level) in the United States, is in Inyo county; also the lowest valley (Death valley 100 feet below sea level,) and all will admit that Inyo can beat any other part of Uncle Sam's dominion for earthquakes.

Jesting aside, there is considerable agricultural land and many flourishing farming settlements in this county. Grain of all kinds and vegetables do well here. Purling streams of water, winter and summer, are gushing from the mountains, by which means the cultivated lands are irrigated.

The few of us who read the RURAL PRESS are elated in learning of the rapid progress the Patrons are making. It is astonishing that the Order has not yet been planted in this part of California. Half a dozen Granges could be established in this county, also a few in Mono. But there are scores of farmers here who know nothing about the movement—have never heard nor read a word respecting its objects and progress. I suppose that only a few copies of the RURAL find their way to this region. Had there been many subscribers, for the last six months, Granges would have been organized in Owens Valley long ago. However, it is safe to predict that before many months your list will also contain Inyo Granges.

When renewing my subscription I will endeavor to get up a small club. Please send me, for distribution among neighbors, a few pamphlets containing Constitution and By-Laws of P. of H.

Having sent many copies of my RURAL PRESS to friends East, and some even to the "Old Sod" I wish to know if back numbers can be obtained; or still better a complete volume ending 1873? [Yes.]

We are troubled occasionally with smut in this valley. Will you please inform me which is the best method to bluestone seed wheat? My oats last year were rather smutty. Does bluestone have the same effect on oats as on wheat? Please state the required length of time that seed should be soaked in the stone; also the quantity per 100 pounds grain, and oblige many beside, very respectfully,

Owens River.

[Full particulars have been forwarded to our correspondent with regard to the steps necessary to be taken to form a Grange.

The method of using "blue stone"—blue vitriol—for the prevention of smut in wheat, consists in soaking the wheat or other grain—for it is as applicable to oats or barley as to wheat—for a few hours, quite immaterial as regards the number, but usually from 3 to 5 hours, or it may be put in soak at night and remain till morning, only that in such case the soil where sown should be sufficiently moist to insure its immediate germination, for the grain will begin to swell in that time.

After soaking, pour off the solution and spread the wheat six inches deep upon a floor and throw over it finely powdered, dry, slacked lime or wood ashes; then stir with a shovel till every grain is coated. If there should be more lime or ashes than can adhere, the same can be used on the next batch; and the same solution can be used again and again till it is all taken up. Use from 6 to 10 pounds of "blue stone" to a barrel of water. Pulverize, or what is better buy it already pulverized and have the water hot or quite warm, the quicker to dissolve it. Smut is a vegetable fungus, which the vitriol and lime destroy the life of.]—Eds. PREES.

STANISLAUS COUNCIL.—The Stanislaus Council P. of H. met at Modesto on Monday of last week. Five Granges were represented by seventeen delegates, and several visiting brothers. The News says that the session was a busy one, and a large amount of business was dispatched; the purport of the principal part of which was secret. In the evening, the Board of Supervisors met with the Council in an informal session, for an exchange of ideas on county affairs. The conference lasted for nearly two hours, and covered a wide and useful field. We are pleased to state, however, says the News, that there was no jar or conflict of opinion between the Board and Council, but that they agreed with a unanimity, which showed that both had investigated and were desirous of advancing the material welfare of the county; and that, where it was practical, they would work in unison for that purpose. The Council remained in session until Tuesday noon, when it adjourned to meet again at 1 o'clock, on the first Monday in April next.

The act of the county authorities in thus meeting with the Council for deliberative purposes, shows that a most excellent spirit prevails between the Patrons and the people generally of Stanislaus, and that the latter as well as the former, have the general welfare of the county at heart.

National Grange P. of H.

The Seventh Annual session of the National Grange, P. of H., which convened at St. Louis Wednesday last, is still in session. As the deliberations are secret, but little of the proceedings have transpired. As full a report as it will be proper to trust the U. S. mails, will probably be published in pamphlet form and sent to all subordinate Granges. Other and more secret matter will no doubt be furnished to our Granges orally, on the return of our delegates. Worthy Master Hamilton and Past Master Wright.

The only matter of any special interest which has thus far been telegraphed here is noted as follows:—The presentation of a report of the Committee on Commercial Relations, approving the resolutions offered by Mr. Aiken, asking Congress to restrict the time and royalty allowed to patentees, and recommending seven years for a patentee to enjoy the benefits of his patent, and that he be allowed 25 per cent upon the cost of production.

A resolution was passed to memorialize Congress to restrict the maximum life of a patent to five years, instead of seven, as proposed by Mr. Aiken's bill.

A committee has also been appointed to further the proposed Centennial Celebration.

A constitutional amendment has been proposed, providing for the establishment of District Granges, confined to single counties, and to work in the fifth degree. Besides Masters and Past Masters and their wives, it is also proposed that fourth-degree members may be eligible to membership of councils, after being examined as to proficiency in the work of the Order—persons so chosen, being, of course, entitled to the fifth degree.

Grange Rulings.

The following report of rulings of the Master of the California State Grange was placed in our hands, a few weeks since, by Bro. Hamilton, with the understanding that it was not to be published. But as we now find it printed in the Granger, of San José, we see no impropriety in producing it in the RURAL PRESS, for the benefit of the Order throughout the State:

A person after having paid his admission fee and been initiated in the first degree, is entitled to receive upon application the 2d, 3d and 4th degrees without further ballot, and can only be restrained from advancing by the preparing and establishing such charges against them as are sufficient under Article 6, Section 2, By-Laws of State Grange, to expel them from the Order. All members of the 1st, 2d and 3d degree are entitled to receive the same benefits made by our Agent, in S. F., in the way of buying and selling, as 4th degree members.

In organizing New Granges admit none as Charter Members but those who are actually engaged in farming, and whose principal means of living is derived from that source. The wives and children of such, if of proper age, may also be admitted.

The precise formula as laid down in the Ritual must be observed in opening, closing and initiatory ceremonies.

Applications for membership must be in the form required by the National Grange, duly signed and recommended and laid over until next meeting before being voted upon.

But one degree can be conferred on the same day, under any circumstances (except organization). Persistent violation of Constitution or obligation on the part of any Subordinate Grange, makes it my duty to recommend to W. M. of National Grange, a revocation of dispensation or charter of the Subordinate Grange so offending.

No definite time is fixed by Constitution, which must elapse after rejection of candidate, before the application can be renewed; this must be provided for in By-Laws of Subordinate Granges.

Not to admit more than twenty male and ten female members at organization of new Grange.

An appeal from ruling of Master of Subordinate Granges on Constitutional questions to the members of the Grange is improper. Such appeal must be made to W. M. of State Grange. An appeal from ruling on points of order to the members is right.

Constitution makes no difference in regard to sex of members; therefore, ladies are eligible to any office in the Grange to which they are duly elected.

A GRANGE AT MAYFIELD.—On Saturday, the 31st ult., Deputy Henning of San José organized a New Grange at Mayfield, Santa Clara Co., with 17 charter members, and the following list of officers: F. W. Weisshaar, W. M.; A. J. Pitman, O.; John Greer, L.; Jas. A. Boulware, S.; Nathan Dawson, A. S.; Wm. Paul, C.; Jas. M. Pitman, Sec'y; Thomas Williams, T.; John Bradbury, G. K.; Mrs. L. R. Boulware, Ceres; Mrs. Sara H. Gras, Flora Miss. Permelia Boulware, Pomona; Miss. Josephine Bowles, L. A. S. Here is a nucleus about which will gather other farmers, with their families, constituting ere long, a numerous and wealthy Grange. Success and it!

DIXON GRANGE.—Bro. Merryfield informs us that the sisters of this Grange, made a move for a new organ, and raised \$135 at one meeting. Live women and a merry field in that Grange.

HUMBOLDT COUNTY.—A brother Patron writes encouragingly of the advantages of Humboldt county as a good place for farmers to visit, who are seeking for new homes on this coast.

OREGON.—The Patrons of Husbandry are making rapid strides in Oregon, and already include many of the most wealthy and influential men in that State.

AGENCY.—G. W. Roadhouse has been appointed agent of Pajaro Grange, Monterey county. His address is Watsonville, Santa Cruz county.

SUISUN VALLEY GRANGE.—J. M. Lemon has been chosen agent for this Grange—Bonds \$10,000.



VIOLET'S VALENTINE.

[Written for the Press by MARY MOUNTAIN.]

In the sad old war times we worked harder for the Sanitary Fund than we had ever done for the poor little church; and our calico-parties, grab-bags and ring cakes were no longer "stale, flat and unprofitable," for the glow of our enthusiasm penetrated hearts and pockets.

All our good seed fell upon good ground, and we gathered with joyful gratitude our magical harvest of gold, and sent it with lightning speed upon its heavenly mission.

More than once at the close of our patriotic festivals there were whole loaves left, and these were sold and resold like Gridley's sack of flour till the weight of jingling coin was heavy as our hearts were light.

What should we have next? A Valentine Party! And there must be an original, Simon Pure Valentine for everybody and his friend, with plenty in reserve of a mildly amorous and confiding character that might, in the seclusion of our P. O., be addressed to strangers, who would join us in honoring St. Val. for the sake of fun and the Sanitary Fund.

Pin-cushions and watch-pockets had tried my patience sorely, but for this business I had a knack, and my brain was in a jingle from morning till night. I tried to get the girls interested, but each pretty damsel had her head full of "something to wear," and no time or appreciation for the nimble muse.

But the Big Ditch had broken out, and until the water should be on again honest Jack Horner was trying to kill time by sipping up around his cabin an neglected little cabbage patch. Why not ask him to help about the Valentines? So when he came down to borrow the wheelbarrow I told him the plan of the party, and what a pity 'twould be if there were not enough Val's for the girls.

"Now Jack, here's a chance for that rusty old pen of yours. A dozen Valentines will bring in 3 dollars for the Fund; the girls will be delightfully mystified, and your secret perfectly safe, for I am the P. M."

He listened gravely, but I could see that the light in his eye was reflective rather than responsive, and I was stirring among the half-buried memories of a life I knew nothing about.

"Well mum, it's many a long year since I writ a Valentine," (here a long sigh and an impatient trundle of the barrow,) "and the last one was not meant for no nonsense but it never got no answer. If Vi'let Brown had answered back I should n't be here livin' like an old hermit. You see I told her my mind was made up and it must be yes or nothin'. But 'tain't no manner of use thinkin' about her any more."

Then he folded his arms in a manly way and began to think of her with all his might.

No woman could withhold sympathy from such a case, and I began to deal out that friendly tonic.

"Violet is such a pretty name; and she must have been a very sweet girl."

"You bet," was the hearty response of Mr. Horner, as he cast a forlorn glance at his lonely cabin.

"And possibly you were too hasty and should have tried again. The Valentine might have gone wrong in some way; or she might have sent an answer that never reached you. We often hear of such accidents, you know."

"Why mum, that's so. It must have happened that-a-way, and what a durned fool I've been! Here I've gumped round 5 or 6 year feelin' savage as a meat-ax every time I'd think of home, and now, sure as blazes, you've hit the nail right on the head. That's so," and by this time his big jack-knife was at work whittling away furiously at the gate post, and his rugged face was a curious study.

"Well, if I were you, Mr. Horner, I would certainly send her another Valentine."

"So I would, mum, but I've lost the trick of writin'. This diggin' fur gold and livin' all alone is mighty dull work and spiles a feller's courage. Jest this mornin' it might seem an easy thing to do; but when I set down over yander and git out the mouldy ink-bottle and rusty old pen, my thoughts go rattlin' like boulders down the sluice, and bring up in the mud and slumgullion all the same. Why, I haint writ home but once all these five year."

"O, that's really too bad! Your folks might think you were dead."

"Yes 'um, that's so. But let me tell you what I'll do. You spoke about me makin' up Valentines that would bring in 3 dollars. Couldn't do it fur love nor money and these girls aint my style no-how. But I'll pay the 3 dollars into the Sanitary all the same if you'll fix up a real nice one for Vi'let and tell her jest what's the matter. Is it a bargain?"

"Yes, indeed; it shall be ready for you to-morrow; but you must copy it, or sign your name in some way that she may be sure it's not a sham."

"Not any sham if I know myself. I'll fix it

all right;" and away he went to his work and I to mine; but though duly elated over the Sanitary value of this special effort, the stern reality of its character and possible consequences got such possession of my fancy that I was hardly in better condition for writing than poor Jack "over yander," with thoughts drifting into the vasty deep of slumgullion. Violet might be a happy wife and mother long before now; but if Jack did not think of that, why should I? So I hampered away at the little love story while getting supper and putting the children to bed; and late at night put myself to sleep with the comforting jingle of the last lines that vowed,—

No lovely blossom in this land of flowers
Can cheer the heart that is so wholly thine,
Until the hope shall brighten all my hours
That you will be my own, true Valentine—
Sweet Violet.

I had taken care to dwell pretty strongly upon the disappointment and lonely longing of the "five year that brought no reply," but had no idea how affecting it was until I read it next morning to the delighted Mr. Horner. The tears came to his eyes and he rubbed his knees rapturously, but the only words he said were, "That's j-a-m up." This expressive phrase he repeated in a restful, meditative way, and finally marched briskly to the table and wrote upon the folded sheet in a plain, big hand—"This is awl on the skware from yer old friend Andrew Jackson Horner." The readiness with which this P. S. was added led me to suspect that it had been studied and practiced at home, for every letter went into its place as if it belonged there.

Then the little missive freighted with love and hope drifted Eastward; and amid the distracting fun and fancy of my three-score-and-ten Valentines there was ever a truant anxiety leading far away to the unconscious Violet.

The party was a financial success; and peeped at through the delivery of my post-official den it seemed a jolly affair, but I heard some of the bright girls lamenting that they had not "known beforehand what a chance there would be for fun."

The weeks went by and Valentines were forgotten by everybody but A. J. Horner and myself. Water was on again and the rattle and slash of sluices noisy as of old, but every day as stage-time came around the Bluestone claim was deserted and its hopeful owner, seated on a big molasses barrel, whistled Old Dog Tray and watched the mail-bag business. One day P. M. Jones, with a comical twist of his crooked nose, cried out, "Hullo Jack! here's that love letter you've been a watchin' fur so long!"

Poor Jack—to keep his secret so well and have it found out so easily! But this was nothing now, and the laugh of the crowd was nothing.

Little Violet's letter! Away he marched to the Bluestone claim, and somewhere in the noisy solitudes of Dead Man's Cut he read the words that made him the happiest miner in the camp.

Before night he had sold his claim and cabin—everything as it stood—had packed his carpet bag, rolled up his blankets and was all ready to start for "home," when he called in to say good bye and show me Violet's letter.

The great, tender-hearted man was so full of joy he could hardly speak; and so grateful for the "jolly good lift" I had given him, he "didn't reckon as there was any way to git even fur that."

"Why, you did pay the biggest price ever heard of for a plain Valentine; but as you say that was for the Sanitary I will, if you please, take something now for myself, and that is a copy of Violet's letter for a keepsake. Are you willing?" "O, yes mum! willin' indeed; and you should have the letter sure's you're born, only that's all the one I've got. While you're a takin' off the copy I'll go round and say good bye to the boys. You see, I can't happen round any too quick there to home fur that uncle Jim she speaks about is a—well a reg'lar old bugger. That's so, mum. He won't be glad to see me, but Violet will."

And here is the copy of Violet's letter:

"DEAR OLD FRIEND JACK!—I did not expect to have another valentine in this World and hear is yours come away from California. Who made it up in Poetry for you? I would not dare to think it is really from you. Only there is your writing on it, and your own Name just as you always wrote it on your copy Book and in mine two, at school, do you remember? And I have got your name in another Place, the old valentine you sent me just before you went to California. I did answer it, and wondered what made you go off and never come near me; but what can a Woman do? only keep still and feel bad. About 2 years after that we was making rag carpets and cutting up all the old truck we could lay our hands onto, and mother was riping an old coat and cried out—sakes alive, what's this! I knew it in a minute, the answer I sent to you slip down in the Hinnings of father's old Sailer jacket. I gave it to him to put in the postoffice because it was too stormy for me to go with it. And he forgot it. Father is dead now almost a year, and uncle Jim says the Place belongs to him, but mother and I can't understand it, for it don't seem Possible. Perhaps you think I might have let you know about the Answer that got lost in the coat, but none of your Folks could tell where you was stoppin', and they are all moved away now to Nebraska, and a lot of the neighbors gone there too."

"So I reckon you will never come back this way, but I should be very glad to see you, and mother would. 5 years makes a great Difference in some people, but if you are a Good man as I thought you was, I am just the same your true friend,
VIOLET."

Swiftly and safely home went Jack, and by and by came a newspaper from the Erie shore, and broad pencil marks led my eye straight to the marriage notice of "Mr. A. J. Horner (late of Cal.), and Miss Violet Brown."

The wisest man—in his own estimation—is the man who knows something dreadful about the condition of the business he is engaged in, and the state of his neighbors' affairs; this he pours into the ear of those who listen to him. The true motto of business should be "speak no ill of your competitor in business," in endeavoring to drive a business or bargain yourself.

How to Catch a Hat.

The moaning winds of November, carrying sadness to our hearts and high plug hats under country wagons, are here. It behooves every man to take care of his health, and hang on to his hat. But, as some will be apt to neglect their hats in their anxiety for their health, we have thought fit to give the following advice for their recovery: When you feel your hat lifting, immediately plunge your hands into your hair and give it a twist. This will attract the attention of everybody to you, and make you feel as if you were not quite alone in the world. Then, as soon as the hair lifts from your eyes and enables you to see your hat skimming along the road, start for it. Don't trot after it, but gallop, and while you gallop, smile. A smile goes a good way on such an occasion. It ents off other smiles by showing what an excellent joke chasing a hat is, and that you like it. Don't turn out of the way for other people. Some of those you meet may not take that interest in the affair a neighbor should, and if you can knock them down and step on them they will become thoroughly engrossed in the subject at once. As soon as you see the hat stop, immediately slacken your gait; you can renew it again as soon as it starts up; and when you get right opposite it, immediately prostrate yourself upon it, and then get up and go for it again. Never neglect to fall down upon it when you can, as that gives the beholder better satisfaction, and at the same time relieves the chase of much of its monotony. Don't forget your smile. This is one of the most attractive features of the whole performance, and should not be omitted on any consideration. The moment you stop smiling, people will think it is all an accident, and losing their tempers will commence to jibe you. When you have the hat fairly in your reach, give it a good kick, and then chase it again, and when you are surfeited with the amusement, jam it down on your head without smoothing your hair, and dart into the first store to warm yourself.—*Danbury News.*

FRANKLIN TIED HIS MONEY UP.—Dr. Benjamin Franklin, in a codicil to his will, left his native town of Boston the sum of one thousand pounds to be lent to the young married artificers upon good security and under certain other conditions. If the plan should be carried out as successfully as he expected, he reckoned that this sum would amount, in one hundred years, to one hundred and thirty-one thousand pounds. It was his wish, and so expressed in his will, that one hundred thousand pounds should be spent upon public works, "which then may then be judged of most general utility to the inhabitants; such as fortifications, bridges, aqueducts, public buildings, baths, pavements, or whatever makes living in the town more convenient to the people, and renders it more agreeable to strangers resorting thither for health for a temporary residence." It was also his wish that the remaining thirty one thousand pounds should again be put on interest for another hundred years, at the end of which time the whole amount was to be divided between the city and the State. The bequest at the end of the first hundred years may not attain the exact figure he calculated, but it is sure to be a large sum. At the present time it is more than a hundred and eighty thousand dollars, and it has about seventeen years to run. Franklin died in 1790.

A HUMMING-BIRD FEIGNING DEATH.—A gentleman caught a humming-bird, and, wishing to feed it, says:

"It immediately suggested itself to me that a mixture of two parts of refined loaf-sugar with one of fine honey, in 10 of water, would make about the nearest approach to the nectar of flowers. While my sister went to prepare it, I gradually opened my hand to look at my prisoner, and saw to my amusement as well as suspicion, that it was actually playing 'possum'—feigning to be dead, most skillfully. It lay on my open palm, motionless, for some minutes, during which I watched it in breathless curiosity. I saw it gradually open its bright little eyes, and then close them slowly as it caught my eye upon it; but when the manufactured nectar came, and a drop was touched upon its bill, it came to life very suddenly, and in a moment was on its legs, drinking with eager gusto of the refreshing draught from a spoon."

A GREEN-GROCEER—one who trusts,

A String of Pearls.

To do good to men is the great work of life; to make them true Christians is the greatest good we can do to them. Every investigation brings us round to this point. Being here, and you are like one who strikes water from a rock on the summits of the mountains; it flows down all the intervening tracts to the very base. If we could make each man love his neighbor, we should make a happy world. The true method is to begin ourselves, and so to extend the circle to all around us. It should be perpetually in our minds.—*J. W. Alexander.*

FREEDOM is indeed not doing as we like, not everybody following his or her own way (even if that were possible,) but "self-control." Self-control, plus a control or command of our subject, gives "freedom," but a person who has no control over any subject or right use of any faculties, cannot have freedom.—*Miss Nightingale.*

EVERY good man is not born with the gift of public speech. There are deep-minded, devout, and earnest Christians who can do everything else better than address a mixed assembly. They are constitutionally timid and slow-tongued; there is pure gold within them, but they cannot coin it readily into current words.

ONE may live as a conqueror, or a king, or a magistrate, but he must die a man. The bed of death brings every human being to his pure individuality, to the intense contemplation of that deepest and most solemn of all relations, the relation between the creature and the creator.

THERE is no sort of wrong deed of which a man can bear the punishment alone; you can't isolate yourself, and say that the evil which is in you shall not spread. Men's lives are as thoroughly blended with each other as the air they breathe; evil spreads as necessarily as disease.

IN the Christian warfare, to maintain the conflict is to gain the victory. The promise is made to him that endures to the end. The object of our spiritual adversaries is to prevent this. Every day in which you are preserved from going back, they sustain a defeat.—*Payson.*

VICIOUS habits are so great a stain on human nature, and so odious in themselves, that every person, actuated by right reason, should avoid them, though he was sure they would be always concealed from both God and man, and had no future punishment entailed upon them.

NO MAN is so happy as a real Christian; none so rational, so virtuous, so amiable. How little vanity does he feel, though he believes himself united to God! How far is he from abjectness when he ranks himself with the worms of the earth!—*Pascal.*

VARIOUS TALENTS NEEDED.—There is a strong disposition in men of opposite minds, says Sidney Smith, to despise each other. A grave man cannot conceive what is the use of wit in society; a person who takes a strong, common sense view of a subject is for pushing out, by the head and shoulders, an ingenious theorist, who catches at the lightest and faintest analogies; and another man, who scents the ridiculous from afar, will hold no converse with him who tastes exquisitely the feelings of the heart, and is alive to nothing else, whereas talent is talent, and mind is mind, in all its branches. Wit gives to life one of its best flavors; common sense leads to immediate action, and gives to society its motion; large and comprehensive, views its annual rotation; ridicule chastises folly and impudence, and keeps men in their proper sphere; subtlety seizes hold of the fine threads of truth; analogy darts away to the most sublime discoveries; feeling paints all the exquisite passions of man's soul, and rewards him by a thousand inward visitations for the sorrows that come from without. God made it all good! We must despise no sort of talent; they all improve, exalt and gladden life.

THE ROPE OF OENUS.—Oenus was a poor but industrious Greek laborer who had a lazy wife who was a very poor housekeeper and wasted all he earned. The trials of poor Oenus inspired the great Grecian painter Polygnotus with the idea for a celebrated picture. He represented a man making a rope out of straw, whilst an ass beside him cat up the rope as fast as it is woven, thus rendering the work of the rope-maker useless. This painting gave rise to a favorite proverb among the Greeks; for to say, "It is labor lost," they repeated enigmatically, "It is the rope of Oenus." Metaphors often condense truths.

How to Tell 'Em.

Eli Perkins says the ear marks of ill-bred people are as follows:

If the lady comes into the parlor with a diamond ring on the outside of her glove, it is safe to ask her how much she gets a week.

If, when that new family enter or leave a room, the gentlemen rush ahead, leaving the ladies to follow, there is something "shoddy" somewhere.

If, when they go in to dinner, they do nothing but loudly order the waiters around, and talk about the wine you can make up your mind that they are the first waiters they ever had, and the only wines they ever drank.

If, when a gentleman sits in a parlor talking to a lady, he don't sit up straight, but sprawls all over the sofa, puts the soles of his boots on the lady's dress, on the furniture, or wipes his shoes on his own pantaloons, you'd better refuse an introduction to him.

If, the ladies in that party whitewash their faces, redden their lips, black their eyebrows or bronze or yellow their hair, just you think this is a sign which Providence put up so you can shun them. Enamel and dyed hair are social beacon lights to enable you to keep off the rocks of Cypria. Just you keep away from such people, for they are wolves in sheep's clothing.

Voice from a lady—"But we want to look beautiful."

But this will not make you beautiful, my children. Any sweetheart who is so shallow as to take whitewash for the human skin, or rouge for the rose cheeks of nature, is too much of a saphead to make a good husband.

THE PROVINCE OF THE LEGITIMATE.—The annals of journalism prove that a public journal, to be successful and gain the confidence of the people at large, must guard with a jealous watchfulness what ever tends to the general good, and be ready at all times to defend its interests when assailed. This is the province of legitimate journalism, and when it falls short of this standard, it is unworthy the name of journalism, and entitled to no respect or support from the public. The masses rely almost exclusively upon the newspapers of the day for every species of information allied with their welfare. They are the guardians of the public weal; in fact, they are servants of the people, upon whom they are dependent for support, and hence their existence, and nothing should induce them to swerve from their plain line of duty; but it is a fact to be deeply regretted that many of our journals, if not openly allied with some scheme gotten up for the ostensible purpose of a public benefit, but really for individual enrichment at the public expense, allow them to pass unnoticed, either for want of enterprise in ferreting them out, or for other considerations best known to themselves.—*Progression.*

WASTE NO TIME.—After allowing yourself proper time for rest, don't live a single hour of your life without doing exactly what is to be done in it, and going straight through it from beginning to end. Work, play, study, whatever it is, take hold at once and finish it up squarely and clearly; then to the next thing, without letting any moments drop out between. It is wonderful to see how many hours these prompt people contrive to make of a day; it is as if they had picked up the moments that the dawdlers lost. And if ever you find yourself where you have so many things pressed upon you that you hardly know where to begin, let us tell you a secret. Take hold of the first one that comes to hand, and you will find the rest all fall into file, and follow after, like a company of well drilled soldiers; and though work may be hard to meet when it charges in a squad, it is easily vanquished if you can bring it into line.

TROUBLES.—Now, you are going to have your troubles as well as your pleasures. A person is not worth anything that has not had troubles. You cannot subdue selfishness without a struggle. You cannot expect to go through life without bearing burdens. But you are going to have help under circumstances that will redeem you from these things. You are going to experience more victories than defeats. Your suffering will be only here and there, little spots in a whole field of peace and joy.

A CLERGYMAN removing from one city to another, marked a large box containing his sermons, "Keep dry." They did.

YOUNG FOLKS' COLUMN.

Letters to Boys—No 4.

[Written for the Press.]

DEAR LITTLE MEN:—Willie Spencer, the little man of whom I told you in my last, is polite. Behaving well in the presence of strangers, is not all there is to politeness, but it is something to be able even to acknowledge an introduction. Willie's mother taught him years ago to be a little gentleman in the presence of strangers. When introduced to a person, he bows politely, and if spoken to, responds. Very little acts, to be sure, but if Willie, or any child learns them, it will be easier for them to mingle with strangers, when they go away from home. When Willie wishes to remain in the room with his mother's friends, he is very quiet, seldom speaks unless spoken to, but is always ready to do a kind act, if there is an opportunity. If there are any restless three or four-year-olds in the company, it is safe to trust them with him; and they soon forget their nervousness, while looking at the chickens and rabbits, or Willie's play-house. The relieved papas and mamas say, "What a little man he is! I wish our little boys were as polite and gentlemanly." So Willie has his reward for that kindness. Then he knows that his parents and friends love and trust him. They can give him a nice book without a fear that they will find it soiled and "dog-eared" in a short time. He has a trunk for his books, papers, letters, etc., and they are kept nicely in their places. One of his friends has promised him a nice gold watch when he is twelve. But if he were a rough, careless boy I do not think they would trust him with it. Now I do not know "for certain" but that every boy who will read this letter, is very careful, but it seems just as though I could hear some little fellow, who does so like to hang his hat up on the floor, and whose boots and playthings persist in scudding away out of sight just before they are wanted, and whose hair is determined to look as though it had not been combed for a week, and to whom the nails seem to fly just on purpose to tear his jacket—I seem to hear him say, "O my! Guess I'd be careful, if I could have a real running gold watch; just try me and see!" But, my dear little fellow, did you ever know a bent, crooked tree to straighten up all in a moment? Remember, "As the twig is bent, the tree's inclined," and if you have got into the habit of being careless, you will have to try hard before you get out of it. I fear your watch would get into a sad habit of running down.

But every boy can be a gentleman if he tries in the right way, for all can have a spirit of gentleness and kindness which will make them truly polite. But in trying to be a true gentleman, do not take Willie for a pattern; for although he is usually very good, he sometimes gets out of patience, and scolds his little sister, and is quite cross.

There is but one perfect pattern. He says of children, "Forbid them not to come unto me; for of such is the kingdom of heaven."

A LESSON FROM THE GARDEN.—A story is told of a king who went into his garden one morning, and found everything withered and dying. He asked an oak that stood near the gate what the trouble was. He found it was sick of life, and determined to die because it was not tall and beautiful like the pine. The pine was all out of heart because it could not bear grapes like the vine. The vine was going to throw its life away because it could not stand erect, and have as fine fruit as the pomegranate; and so on, throughout the garden. Coming to a heart's-case, he found its' bright little face lifted, as full of cheeriness as ever. "Well, heart's ease, I'm glad to find one brave little flower in this general discouragement and dying. You don't seem one bit disheartened." "No, your Majesty. I know I'm of small account, but I conclude you wanted a heart's-ease when you planted me. If you had wanted an oak, or a pine, or a vine, or a pomegranate, you would have set one out. So I'm bound to be the best little heart's-ease that ever I can." We may have a lowly place, but let us fill it with cheerfulness and courage,

THE house-fly is not generally regarded as a tall insect, but is a "six-footer" nevertheless.

GOOD HEALTH.

Experiments on Gastric Digestion.

Experiments on dogs with gastric fistula, consisting in introducing given quantities of albumen enveloped in muslin into the stomach, confirm Schiff's previous statements that the energy of gastric digestion is in a high degree dependent on the physiological state of the animal as to hunger, or exhaustion of the stomach by just completed digestion. In regard to the latter, he found that the stomach was able to digest only a very small quantity of albumen, as compared with a stomach in a normal state of digestion. The difference could only be in the condition of the pepsin. Schiff has made a number of experiments to determine the digestive power of the stomachs in different conditions. He finds that the digestive power does not depend on the mere quantity of pepsin, but to a great extent on the relative quantity of water and acid in the artificial infusion. The ordinary quantity of water employed to make an infusion of the mucous membrane of the stomach is inadequate to bring out its full digestive power.

Various experiments are recorded, having for their object to determine the maximum degree of dilution. The research is not yet complete, but a remarkable result has been arrived at, viz., that the stomach of a dog in good condition requires 200 centilitres of water to bring out its full digestive powers. Such an infusion has been found to be capable of digesting 60,000 grammes of albumen.

Schiff's former researches with infusions of stomach led him to state that an infusion of one stomach might, under very favorable conditions, digest from 150 to 180 grammes of albumen—an amount which was considered by several physiologists as too high. The present results, therefore, are the more likely to draw attention.—*Druggist's Circular.*

ARSENIC IN HYDROPHOBIA.—In a late number of the *Correspondenz-Blatt* Dr. Guisan gives a number of cases showing the value of arsenic as a prophylactic in hydrophobia, and even as a remedy also after symptoms are marked. He relates that a rabid dog, between the 7th and 9th of June, bit thirteen persons in various towns of the canton of Freiburg. All were recommended to be treated with one-twentieth of a grain of arsenic morning and evening, as a prophylactic measure. Eight submitted to this prophylactic measure, and none were affected. Four declined, or were not allowed to take the arsenic. Of those four, two remained unaffected, and two died. One began the arsenic treatment, but speedily left it off; she was attacked, but at a much later period, and died. Dr. Guisan recommends not only the internal employment of the arsenic, but that the wound should be dressed with it.

SLEEP NECESSARY.—"A man who would be a good worker," says Henry Ward Beecher, "must be a good sleeper. The quality of mental activity depends upon the quality of sleep. Men need on an average eight hours of sleep a day. A lymphatic man is sluggish, moves and sleeps slowly. But a nervous man acts quickly in everything. He does more in an hour than a sluggish man in two hours, and so in his sleep. Every man must sleep according to his temperament—but eight hours is the average. Whoever by work, pleasure, or sorrow, or by any other cause, is regularly diminishing his sleep, is destroying his life. A man may hold out for a time, but the crash will come, and he will die. There is a great deal of intemperance besides that of tobacco, opium or brandy. Men are dissipated who overtax their system all day, and undersleep every night."

CAMPBOREIN.—During the recent cholera epidemic in Vienna, a new remedy called *campborein* was used with great success in the hospitals. It is prepared simply by passing chlorine gas into pure turpentine oil until saturated; it gives a thick, heavy oily fluid of brown color, with a strong smell of chlorine. It must be freed from muriatic acid, which may be done by washing with water. The remedy is applied by placing a portion in a flat vessel and holding it to the patient to inhale. This indicates that oil of turpentine is the best absorbent of chlorine gas, and therefore can be employed with advantage in operations and other cases where chlorine is evaporated in large quantities.

A GOOD PLAN.—R. Hampson proposes that physicians in prescribing usual doses, that is, in excess of the maximum adult dose of the Pharmacopoeia, or exceeding those commonly administered, should affix to their prescriptions some sign by which the person dispensing the medicine will understand the formula to be intentional, and be relieved from much anxiety. In many instances much delay and perplexity would thus be obviated. Under the existing system a feeling of oppressive personal responsibility obtains in the mind of every careful druggist, when called upon to prepare ordinarily dangerous prescriptions.

As the result of more than thirty experiments on the feeding of animals on meat taken from tuberculous creatures, M. Collet concludes that such flesh does not develop tubercles in healthy animals. Where other experimenters have obtained opposite results, he believes that they have experimented on animals already diseased, or have allowed portions of tuberculous matter to gain admission to the lungs of the animals in the air they breathed.

Replantation of Teeth.

Dr. J. O. Smith writes to the *Dental Cosmos* that a recent article in that periodical leads him to state that in his practice replantation of teeth has nearly ceased to be an experiment: Within the last three years I have successfully performed the operation on five teeth (two for one patient). In each case the tooth was badly decayed, and the root ulcerated. After extracting and treating the tooth socket, I treated the root, and filled not only the cavity but the nerve-canal in the root, and replaced the tooth, and without an exception each operation has been a perfect success.

The first patient whose tooth I treated in this way was a young man with whom I was very intimate; he had an ulcer, which gave him much trouble, on the superior incisor. It had been filled several times with different materials without satisfactory results, and he was obliged to have it extracted, and as an experiment I offered to undertake the operation of replacing it, after removing the ulcer and properly filling the tooth. The operation consumed about seventy minutes. There was much sensitiveness about the tooth at first, which soon subsided, and about a year afterward he had the other superior incisor treated in the same manner.

It is now over two years since the last operation, and to use his own words, "They are the best teeth I have." Since then I have performed the operation on three different patients, and every case has proved a perfect success.

WHO SAYS WE ARE DEGENERATING?—A few years ago, at the Eglinton tournament in England, it appeared that the famous knights of three and four centuries ago must have been smaller even than the Englishmen of to-day, for it was impossible to put on their armor. And now come vital statistics to prove that we are more hardy and longer-lived than our fathers. The statistics kept at Geneva since 1560 show that the average term of life has been steadily lengthening. At that time the average was only 22 years; it is now 40. In the fourteenth century the average mortality in Paris was 1 in 16; the rate has been reduced in our day to 1 in 32. In England, less than two centuries ago, the mortality was 1 in 33; now 1 in 42. The laws of life are better understood; the comforts of life more widely distributed, and habits of living improved; even consumption, the fatal malady of our New England climate, is yielding slowly to a wiser method of treatment, and the annual percentage of deaths is smaller than fifty years ago. If, by sound system of diet or exercise, the constitutions of New England girls could take on a higher vitality and vigor, the outlook for the future would be hopeful.—*Ex.*

INSECTS IN MEDICINE.—Insects had a prominent place in the *materia medica* of former days, and were administered with as much confidence in their efficacy as is now given to the medicinal plants of the garden or the tinctures of the apothecary. They were generally given in the form of pills. Five gnats were equal to three grains of calomel. A lady-bird was a sovereign remedy for colic and measles, and a cockchafer for hydrophobia, and the plague. Ants were considered to be invaluable against leprosy, and of great efficacy in strengthening the memory and giving wonderful vigor to the frame. An Italian professor declared that the finger imbued with the juice of a little insect having the pretty name of *rhinobatus antidontalgicus*, will retain the power of curing the toothache for a year!—*Jour. of Chemistry.*

SUCCESSFUL FOR SKIN-GRAFTING.—Under the heading of "Skin-Grafting Superseded," the *Medical Press and Circular*, referring to Dr. Fiddes's statement that no skin need be taken, but merely a few epidermic scales, editorially suggests a professional trial of a popular method of healing old ulcers by means of the "skin of a new-laid egg." The egg must be fresh laid; and the membrane, which is easily detached from the inner surface of the shell, is to be smoothly spread over the ulcer. Our contemporary has lately heard of a case in which this method "was completely successful after years of ordinary treatment had failed." It is not stated whether the cicatricial tissue manifests any tendency to grow feathers in such cases.—*Cincinnati Lancet and Observer.*

BONE FELON.—Of all painful things, can there be any so excruciatingly painful as a bone felon? We know of none that flesh is heir to. As this malady is quite frequent, and the subject of much earnest consideration, we give the last recipe for its cure, which is given by that high authority, the *London Lancet*: As soon as the disease is felt, put directly over the spot a fly-blister, about the size of your thumb nail, and let it remain for six hours, at the expiration of which time, directly under the surface of the blister, may be seen the felon, which can instantly be taken out with the point of a needle or a lancet.

ONE CURE OF DYSPEPSIA.—If you do not want to become dyspeptic, you must avoid the habit of gormandizing outside of regular meals. Give the stomach an occasional rest, and it will stand out the longer under the repeated pressure of huge meals and indigestible confections. All the stomach needs is occasional rest. Hearty meals and incessant lunches furnish ample cause to account for most cases of dyspepsia.—*Manufacturer and Builder.*

BROMIDE OF CALCIUM, in doses of from 15 to 30 grains, is recommended by Dr. Hammond as an excellent hypnotic. It must be kept in the dry state, as the solution decomposes quickly.



PUBLISHED BY

DEWEY & CO.

T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

RINOIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO

Saturday, Feb. 14, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Native California Fruits; Grapes for Raisins; Do we Use Sufficient Seed? California Beans, 97. Guano and How to Use It; The State Legislature; The Late Robert Blacow, of Centerville, Alameda County, 104. The Work of the Farm, 105. Patents and Inventions, 108.

ILLUSTRATIONS.—The Flee Seed; The Danbury News Man, 97.

CORRESPONDENCE.—A Common Sense View of the Irrigation Question; The Gum Tree Blown Down; Barron Fig Trees; Equine Neuralgia, alias Rattle-weed; Is the Flare Indigent? Farm Help; A Jute Factory; Work on the Farm; Enterprise; Growing Lateral Roots; Farming in Texas, 98.

POULTRY YARD.—Winter Chickens; Cheap Poultry Yard; Scaly Legs; Small Pens and Thorough-breds, 99.

THE VEGETABLE GARDEN.—The Potato in the Sierras, 99.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 100-101.

HOME CIRCLE.—Vi'let's Valentine; How to Catch a Hat; Franklin Tied his Money Up; A Humming-Bird Feigning Death; A String of Pearls; Various Talents Needed; The Rope of Oonus; How to Tell 'Em; The Province of the Legitimate; Waste no Time; Troubles, 103.

YOUNG FOLKS' COLUMN.—Letters to Boys—No. 4; A Lesson from the Garden, 103.

GOOD HEALTH. Experiments on Gastric Digestion; Arsenic in Hydrophobia; Sleep Necessary; Camphorene; A Good Plan; Replantation of Teeth; Who Says we are Degenerating? Insects in Medicine; Succedaneum for Skin-Grafting; Bone Felon; One Cure of Dyspepsia, 103.

POPULAR LECTURES.—Mechanics' Institute Lectures—Illustrated, 105.

THE DAIRY.—Winter Meetings of Dairymen's Associations; Make Your Business a Study, 105.

HORTICULTURAL.—Fruit Culture; Orange Culture at Riverside; About Grape Cuttings, 106.

DOMESTIC ECONOMY.—Gem Recipe; More Graham, 106.

USEFUL INFORMATION.—Transparent Paper; The Refining of Cotton Seed Oil; A Durable Paste; Electric Sea Lights; Testing Bread for Alum; Utilizing Petroleum; Vegetable Glue; Cement for Iron; Preparation of Floor Wax; Chamoote Flour; Preservation of Mushrooms; Rendering Moulds Conductors; The Age of the Earth, 107.

AGRICULTURAL NOTES from various counties in California, Nevada and Oregon, 108.

MISCELLANEOUS.—California Price Catalogue; Silk Worm Eggs, 98. Naptha as Fuel for Locomotives; McGarrahan Again; New Use of Manganese; Accidents in Coal Mines; New Agricultural Machine; Mine Schools; Chemical, Telegraph, 99. San Jose Farmers' Club, 105. Decorating Wood by Printing; Determination of Potassa; Sulphate of Magnesia in Dyeing, 106.

RECEIVED.—Schem's Statistics of the World, containing, area, form of government, head of government, population, expenses, debt, paper money, standing army, navy, merchant vessels, imports, exports, chief produce, coins and their value, liquid and grain measures, weights, capitals and principal cities, population, etc. A valuable semi-annual publication by Prof. A. J. Schem. Published at 103 Fulton Street, N.Y., by G. J. Moulton. Price fifty cents.

"On Scissors," thought Mary Mountain, when she sent us some short scraps for our "Home Circle" department. Well, we hope other friends will send us along some of the good things they observe in other publications, and thus kindly help our "scissors man." Mark the name and date of publication, and don't be offended at what does not appear at once. It takes variety to make a good paper and suit all tastes.

ON FILE.—Free Trade; Jute Manufacturing; Fruit Culture; Morning Glory; Homes Among the Foothills; Walla Walla; Silk Culture; Cranbury Culture; Culture of Pumpkins; Goat Husbandry; Hungry Hollow; Kern Lake; Tacoma Cor. and Stockton Cor.

FLAX SEED.—A correspondent asks us where he can obtain flax seed. We refer him to the advertisement of Pacific Oil and Lead Works in another column. More on flax culture next week.

Guano and How to Use It.

A Napa correspondent desires information in regard to the proper time to sow guano; what quantity to the acre, and whether it is better to sow before or after a rain. As guano is coming more and more into use in California, and particularly with market gardeners and fruit growers, it may not be amiss to speak somewhat at length of the use and application of this most important manure. Valuable however only when it can be obtained of good quality; for when poor, it is not worth the trouble of its application, much less the cost of the article.

Guano, like farmyard manure, it is hardly necessary to state, may be applied with advantage to almost any kind of soil, as well as to most of our cultivated crops, as it contains every element necessary to their growth, independent of the quality of the soil, one great point being attended to, that the land be in good till; for, otherwise, the tender roots of the vegetables would meet with obstruction, and become crippled in their growth. Poor, well-tilled soils receive the most advantage from this fertilizer, as they are most generally deficient in some essential necessary to the growth and perfection of the plants. In regard to the amount to be applied to an acre, this will depend upon the variety of guano employed, the nature of the climate and state of fertility of the soil, the kind of crop to be raised, the number of applications in a season, and whether the guano is to be used alone or in conjunction with other manure.

Quantity per Acre.

Taking the best Peruvian guano as a standard, in a soil of medium quality, an acre of wheat, barley, hemp, or flax will require about 250 pounds mixed with ten times its bulk of earth, garden mould, well-rotted peat or swamp muck, and sown broadcast, and plowed or harrowed in with the seed just before a rain. If the soil be rather poor, 300 pounds will be necessary; if good, 200 pounds will suffice. For oats, peas and rye, 200 pounds will be enough. Grass lands of several years' standing may be renovated or greatly improved by sowing about 300 pounds broadcast in wet weather, soon after the young blades begin to shoot. For turnips, potatoes, cabbages, tobacco, and Indian corn, 200 pounds may be applied broadcast to an acre at the time of planting or putting in the seed, in connection with decomposed peat, swamp or pond muck, vegetable mould, etc., previously thoroughly ploughing the land, and then well harrowing in the guano.

For wheat, let from 200 to 250 pounds of guano to an acre be scattered broadcast, just before the seed is sown, and plowed under to a depth of six or eight inches, and there remain undisturbed, bearing in mind this important rule as regards all fertilizers that are soluble by rains or melting snows: that there be at least ten inches in depth of loam mould, or clay directly beneath the manure; otherwise, the most valuable parts may sink deep into the earth, as they are carried downward by the rain, and consequently will be lost.

Guano for the Orchard.

For grape-vines, the apple, pear, cherry, plum and other fruit-trees, as well as the orange, lemon and coffee trees, guano stands unrivaled in its effects as a manure. If the trees or shrubs are small, and are ready to transplant, holes may be dug to receive them, of dimensions proportioned to the depth and extent of the roots, leaving at least six inches of mould at their bottom before the guano is put in. Then around the edges of the bottom of the holes, that is, near the foot of the sides, scatter from one-fourth to one-half of a pound of guano, which should be covered with a little light earth or mould, in order that none of the guano may touch the roots when the vines or trees are consigned to the ground. Then, into each hole about two quarts of water may be sprinkled, and the further process of transplanting left till the next day. The trees may now be planted in the position they are intended to grow, and the holes filled up with light soil, leaving a slight depression around each, in order to make the most of any rain that soon after may fall. If the trees or vines have long been planted and have attained a considerable size, the ground about their roots may be forked or trenched in the spring, and the guano scattered broadcast over the surface around each tree, and followed immediately by a copious watering by hand or by a drenching rain. By these means a portion of the guano will become dissolved, sink into the soil about the roots, the good effects of which will be apparent in a few weeks.

Other Modes of Application.

Guano may also be employed as a steep for weeds, or applied directly to the plants, in their second leaf, in a diluted and liquid form; or it may be advantageously composted with an equal weight of common salt or soot, or with ten times its bulk of vegetable mould, rotted peat, swamp or pond muck, or green-sand marl, mixed with a small proportion of gypsum or charcoal dust, but never with wood ashes, carbonate of soda, potash, magnesia, nor common lime; for these will liberate the free ammonia, and thus diminish the value and effects of the manure.

It would always be well to mix the guano, before applying it to a dry soil, with charcoal or common salt, on account of the power which

they possess of attracting moisture, in dry seasons from the atmosphere. A mixture of about three parts of salt or charcoal to one part of guano, has been attended with the most important result as regards the increase of crop. The mixing of Peruvian and Mexican guano in the proportion of 250 to 300 pounds of the latter to 100 pounds of the former to an acre will add much to the increase. This is obvious from the fact that the Mexican contains an excess of some constituents in which the Peruvian is deficient, so that a mixture will possess the valuable properties of both.

Peruvian guano is unquestionably the best possible manure for all plants that require manure at all, provided that the soil is kept open by digging in leaves, vegetable rubbish, etc., from time to time. If the weather be dry, one of the best ways of using it is to dilute it with water and apply the solution thus obtained. A quart of the best guano may be dissolved in thirty gallons of water, and applied in quantity as circumstances may require, by means of a garden engine, liquid-manure cart, or a syringe. In this state of dilution, it can do no harm to the plants, not even to the more delicate kinds of flowers.

The State Legislature.

A majority of the members of both houses appear to be anxious to push forward the work of legislation, with all reasonable dispatch. The daily sessions are unusually protracted, and the interest in the debates well kept up. No less than twenty-eight bills were introduced in the House on the sixth instant. The grand fights, so far, have been made on the Freight and Fare Bill, the No Fence Law, and the Apportionment Bill. Considerable interest has been manifested in the Apprentice Bill. No small portion of the time of the honest members is necessarily employed in hunting for "thieving clauses" in the various bills and amendments introduced from day to day.

THE NO-FENCE BILL has become a law, and gives very general satisfaction. It will introduce a new era of prosperity into those counties for the benefit of which the bill has been devised.

THE FARE AND FREIGHT BILL is still kept back in the Senate. The latest report from it was a secret session of the Senate Committee to consider the bill from which all newspaper reporters were excluded, while Gov. Stanford was invited to confer with them!

THE APPORTIONMENT BILL, to which the agricultural counties look for a re-adjustment whereby they may hereafter receive a fair representation, is still opposed by the railroad interests at every step. It was to have come up for consideration on Thursday, the day we go to press; and the prospects are flattering for a desperate struggle to keep for another two years the present unequal representation.

ADULTERATING MILK.—A bill is now pending which proposes to punish by fine and imprisonment all persons who water, or adulterate with chalk or other substances, milk. This bill ought to become a law, for there is no knowing how many lives are lost by the use of poisoned milk in our large cities.

UNIVERSITY AFFAIRS.—In accordance with a request of the Regents of the State University, a joint Committee was appointed on Saturday, of last week, to enquire: First, what instructions have been given in agriculture and the mechanic arts in California, whether the same have been defective or not, and if defective, wherein such defects consist, and what is the cause, as well as the remedy. Second, what has been the management by the Regents of the University of California of the 150,000 acres of agricultural lands donated to the University. Third, whether or not the Regents have properly administered the funds of the University which have been intrusted to them, and if not, in what particular. Fourth, also upon any other matters relating to the University upon which, in the opinion of the Committee, information may be of use to the Legislature or the public.

TAKING GROWING CROPS.—Barton, of Sacramento has introduced a bill to release growing crops from taxation. There is no more reason in such an assessment than there is in counting chickens before they are hatched; and with the hope that the bill will become a law, we shall watch its progress with much interest.

LAWFUL FENCES.—Bryan's bill on lawful fences has been killed.

EXTENDING TERMS OF OFFICE.—Edgerton's bill to extend the terms of county officers from two to four years, might be good, if made to apply only to such as may be elected for such term—but doubtful. We shall watch it.

FARE FIVE CENTS.—The bill fixing the street car fare in this city to five cents has passed the House. The railroad interest will fight against it hard in the Senate.

SARGENT'S AGRICULTURAL ADDRESS.—The President of the State Agricultural Society authorized the statement by Mr. Freeman in his railroad speech that Mr. Sargent was only invited to deliver the opening address before the State fair of the Agricultural Society, because no other public man could be found to respond; but it was not anticipated that he would take advantage of the occasion to subserve the interests of the railroad.

AN ORIGINAL STORY, worth more than the price of this sheet will be found in our "Home Circle."

The Late Robert Blacow of Centerville, Alameda County.—

A Sketch of His Life from the Records of Centerville Grange, P. of H.

By the kindness of J. L. Beard, Secretary, we have been furnished with the following:

Born in Kirkham, Lancashire, England, on the sixth day of December, 1814, and died December 22, 1873.

He went to work in a manufactory at a very early age, his only change for attending school being in the evening; consequently, his educational privileges were somewhat limited. Notwithstanding, he took advantage of every opportunity for self-instruction; always taking a lively interest in every new enterprise.

While yet a boy he was made preparer in the manufactory; and, for faithful application, was promoted to overseer, which position he held until he left England for America, in the year 1839; at which time he was very much interested in the repeal of the Corn Law. Landed in New Orleans on the 24th of December of the same year.

He remained in that city, being engaged in repairing the machinery of a mill, until June, 1840, when he went to the State of Illinois; where, for a few years, he followed successfully vegetable gardening.

He then purchased a milk dairy, in the State of Missouri. In June, 1845, he married Miss Helen C. Deering, making his home in Missouri; where he continued the dairying business until 1848, when he bought from Captain J. M. White, the herd of blooded cattle which he (Captain White) imported from the famous Esri Spencer Herd, that being the foundation of his well-known stock.

Returned to Illinois, purchased a home for his family, and on February 1, 1849, left Illinois for California. After a long and perilous voyage, (the water having given out the crew were almost perishing; when, through his ingenuity for producing fresh water from salt, the lives of all on board were saved) he arrived in San Francisco in September of the same year.

Shortly after, he went to the American River and was engaged in mining. In the spring of 1850, cultivated vegetables in Sacramento; in the fall of the same year he located in Alameda county, and went to farming.

In January, 1851, he purchased the Lannch, "Lalla Rookh," for the purpose of conveying across the Bay fencing lumber; which, at that time, he was having taken out of the Redwoods. In the spring of 1852 he went to Santa Clara; and cultivated land for potatoes, but did not succeed in producing a crop. During this time he had continued successfully his farming operations in Alameda county.

Thinking it now time to return for his family, he began building; and, leaving in the hands of one whom he supposed to be an honest man, a well-stored granary, a growing crop, and ample funds for completing the building, he left California for his former home, in February, 1853.

Arriving in Illinois, he at once sold his farm, purchased a flock of sheep; and with his family, cattle and sheep, set out across the plains in April, he walking nearly the whole distance.

With the usual ups and downs of such a trip, he arrived in Salt Lake, where he was compelled to sell the sheep, they being foot-sore, and unable to travel further, and leave the cattle in the care of Brigham Young, until he could send for them. Continuing with his family, he arrived at his new home on the evening of 20th Oct., 1853.

Instead of finding things as he expected, he found himself indebted to the amount of about \$40,000; his friend is now how nobly and patiently he struggled to liquidate that debt, paying the rate of 2½ and 3 per cent. a month, interest compounded quarterly.

In 1854 he sent for the cattle he had left in Salt Lake; and here again met disappointment, as some of the best of his herd were reported dead.

In 1855, he went to a great expense to get out of the Alameda Creek, and haul to Mayhew's Landing, cobble-stones and rock, which were used in paving the streets of San Francisco; for which he never got a dollar in return. He then continued farming and stock raising, without further interruption until June 1860, when he purchased from J. D. Patterson, 16 head of French Merino sheep, which had been imported from the French Imperial flock at Rambouillet; for which he paid the sum of \$6,500; paying for the ram, Napoleon II. \$1,500, an investment he never regretted.

When he purchased these sheep they were much smaller, and imperfect in form, not shearing more than 16 or 18 lbs, the choicest ram shearing about 30 lbs. He applied himself to the improving and breeding up of these sheep, and gained his points in every particular. They are now much larger, well up in form, and greatly improved in wool and mutton qualities; being now by far the heaviest shearers in the world. They will now average about 23 lbs. per head, some of the choicest ewes will clip 35 lbs. one years growth. One ram clipped, at two years old 46 lbs, twelve months growth, the same ram sheared last Aug. 51½ lbs., sixteen months growth, being the heaviest fleece ever taken of one sheep for that length of time.

From this number he has sold all the increase of rams, and 180 ewes, and now having a flock of 600 head, which are considered by all judges of sheep to be superior to any of the same breed in the world. By this personal effort, he has made his name famous among sheep breeders.

POPULAR LECTURES.

Mechanics' Institute Lectures.

The Great Lava Overflow of the Pacific Coast—by
Prof. Joseph LeConte—No 3.

[Reported Especially for the Press.]

Prof. Joseph LeConte delivered the third of the series of lectures now being given before the Mechanics' Institute, on Saturday night last, before a large audience. The subject was an exemplification of his Theory of the Formation of Mountains, as illustrated by the great lava overflow of Northern California and Oregon.

The Great Lava Bed

Of the region named, the lecturer stated, commences near the middle of California, where it appears in separate streams; but passing northward it unites, increases in bulk, covers almost the entire surface of Oregon and Washington Territory, and extends far into British Columbia on the north and Idaho and Montana on the east. This immense flood of lava covers a region of country some 700 miles in length by from 300 to 400 miles in breadth, and varying from a few hundred to some 4,000 feet in thickness. The thickness where it is cut through by the Columbia river is 3,700 feet. The DesChutes river, running at right angles with the Columbia, runs for 140 miles through a narrow cañon or gorge, on both sides of which lava is piled up to the height of from 1,000 to 1,500 feet, and still the river has not cut its channel more than half way to the bottom of the deposit. Mr. King has traced this lava for at least 300 miles along the Snake river.

The Sources of this Great Outflow

Are to be found in the immense fissures in the Coast and Cascade mountains, the lava so running together as to make one universal mass. It occurs in layers, one above another, so distinctly separated that there can be no mistake about the fact of there having been several distinct overflows. The lecturer

Illustrated His Remarks

With plans on the blackboard, which we here-with reproduce, as previously introduced in connection with his paper on the same subject, published in the proceedings of the Academy of Sciences; which institution has kindly furnished us the engravings for this purpose. The lecture thus illustrated furnishes a series of most interesting and remarkable facts and discoveries.

One of the illustrations given was similar to Fig. 1, showing the different ledges of lava, as they appear at the Cascades of the Columbia river. In this figure (a) represents a coarse conglomerate, extending from the water level, 15 feet upwards, to (b), which is a veritable ancient ground-surface as it was before those ancient convulsions of nature, by which it was buried to a depth of some 3,000 feet or more. On this ancient loam are now seen silicified stumps, with roots running down into the soil beneath. Immediately above this ground-surface is seen, first, a layer of sandstone (c), two feet thick, filled with leaf-impressions. Above this, again, lies a conglomerate (d), irregularly stratified in spots, containing fragments of silicified drift-wood. Upon this uneven surface (e) rest the lava layers, one above another, as shown, to the height of nearly 3,000 feet.

Figure 2 is an ideal section, representing a section of the cliff, as seen at this place; but there is no uncertainty about the actual relation of the lava to the conglomerate, etc., as shown. In Fig. 2, b most unmistakably marks an old forest ground, where the stumps still remain in the very spot where they grew. The trees were destroyed by water, which first overflowed the country, and which gradually covered the earth to a depth of several hundred feet with a coarse deposit, upon which the lava was subsequently poured from the fissures as mentioned. The outflows of lava probably continued at intervals throughout all the later years of the Tertiary period, from fissures; as the fissures gradually closed, or were filled up, the flow has been continued in spots, by crater eruption, until very nearly the present time.

The Geological Age of the Outflow

Is readily determined by the leaf impressions and silicified wood which have been found in the water-drift underlying the lava. The earliest of this lava flow undoubtedly occurred near the end of the Miocene period, and coincident in time with the formation of the Coast range of mountains. The underlying portion, upon which these vegetable remains grew, was no doubt originally a low ridge, composed of granite and slate, like the Sierras, and probably of the same age.

Figure 3 is a diagrammatic section along the Columbia river cañon, at the Cascades. The wide part enclosed between the cliffs, a, a, is about five miles across, and was doubtless once entirely covered by the waters of the river. The erosion has occurred during the post-Tertiary, either by ice or water, or more probably both. During the present epoch, the greatly shrunken river has cut its way into the underlying conglomerate, moving gradually southward, until it has formed on the southern side quite a high, perpendicular bluff, as shown.

Prairie Mounds—The Devil's Potato Patch—Formed an interesting division of this most

interesting lecture. They occur near the southern extremity of Puget sound, in a series of glades or openings. They are narrow, ramifying glades or grassy prairies, entirely destitute of trees or shrubs, but in the midst of dense fir forests. These mounds are about three or four feet high and thirty or forty feet in diameter, regular in size and shape. There are millions of them. They are made up mostly of small pebbles and coarse gravel, and are covered with ferns and small grass.

Much speculation has been indulged in as to their origin. Some suppose them to have been ancient Indian burial grounds, or raised foundations for huts, on a wet soil; others think they were formed by fish while the ground was still submerged under a shallow sea. Close examinations, however, have led scientists to attribute their origin to erosions under peculiar circumstances. From the Dalles to the DesChutes river, a distance of some 30 miles, the country is also covered with these mounds. On the mountain verge of the valleys of California, where the original soil has not been disturbed by the plow, the same phenomena may also be frequently observed. In this State, especially in the San Joaquin valley, such localities are called "hog wallows," and in Oregon, the locality in which

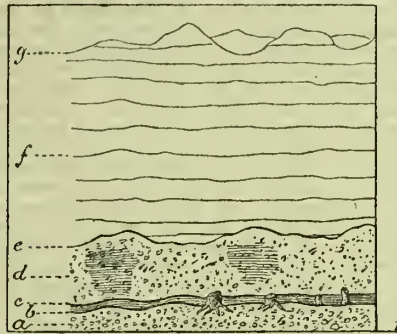


Fig. 1.

they are most conspicuous is properly known as "The Devil's Potato Patch."

This interesting and instructive lecture was listened to throughout with marked attention.

Italian and Australian Rye Grass.

We have received the following from J. S. Ward, Los Angeles, under date of Feb. 4th, 1874.

EDITORS PRESS:—Will you or some of your readers who are acquainted with the culture and productiveness of the Italian rye grass, give me information as to the mode of culture and its adaptation to California soil and climate.

Rye or Ray grass, is the *Solium perenne* of botanists, two varieties of which are grown extensively in England, the "Italian" and the "Improved." The Italian is said to differ considerably from the English or "Improved," in coming earlier to maturity, has larger leaves, is of a deeper green and grows to a greater height and better adapted to a dry climate. It is greedily eaten by cattle, green or dry and yields fifty per cent. of dry hay.

The "Improved," which was early introduced into Australia—hence its name here—possesses several desirable properties, which recommended it to the attention of cultivators, the principal of which are, its adaptation to a great variety of soils, the facility with which it is propagated, by reason of its seeds being produced in abundance, and their uniformity in ripening and the fibrous structure of its roots.

The latter, however, does not fit it eminently for culture in California except upon ground naturally moist. It has no deeply descending roots like the clover or alfalfa, and cannot stand the long drouths of our summer like alfalfa; but where the climate is moist or fogs are common in summer, and the soil is rich, enormous crops are produced for hay, two or three in a year; or if devoted to pasturage, yielding an immense quantity of feed, and producing a turf so compact and firm as to sustain the weight of cattle with little or no injury to the roots even when the ground is saturated with water.

In commencing with this grass, we would recommend its culture on a small scale only, by way of experiment. The seed at the rate of 16 or 18 pounds to the acre is sown in winter or spring on land prepared as for wheat, but not sown with any other crop. The seed should be lightly brushed or rolled in, or brushed and then rolled. The first summer will show a fair yield of hay as a single cutting, and the next year the product will be more than doubled. In suitable soils and a warm moist climate, it makes a permanent and valuable forage grass.



Fig. 3.

All these and many other subjects tending to the dissemination of useful information and facts of general interest to dairymen and manufacturers of butter and cheese are fully and freely discussed. The meetings are always interesting and instructive, and invariably result in good to many, for their discussions are disseminated by the papers all over our country. Now we believe the time has arrived when the dairymen of the Pacific coast, should inaugurate a dairymen's association for mutual benefit, and the advancement of an interest hardly second to any other under the head of agricultural industry. Let the dairymen of the State and delegates from adjoining States, at our next annual fair, assemble in convention and issue a call for a meeting to be held some time in January for the formation of such an association as we have proposed, and we believe it would meet with a hearty response and co-operation from a large number of our most enterprising dairymen and farmers.

GOOD COWS VERSUS POOR ONES.—One good cow is worth fifty poor ones for dairying purposes. Good milkers eat but little if any more than poor ones, they take no more care in the pasture and it takes but a trifle longer to milk them. It takes as many hands in a corral of poor cows as one of good ones. A good cow will make you as much money in ten days as a poor one will in a year. Dairymen look to your herds, cull out all your poor cows and beef them, and if you cannot get good ones to re-

THE DAIRY.

Conducted by J. H. Hegler, Manager of the Dairy Department of California Granges.

Reports of Experiments, Communications, Hints, Suggestions and all Facts that will be of interest to Dairymen are particularly solicited for this Department.

Winter Meetings of Dairymen's Associations.

In almost all the Eastern, Northern and Western States, the dairy interest is assuming immense importance and magnitude. The butter and cheese factories of those States are the largest and the best managed in the world. Their products, particularly of cheese, find a ready sale in the English markets, so that any surplus beyond our own wants, is as certain of demand as our wheat. These facts have given an unusual impetus to the cheese making department of the Atlantic dairies.

Accordingly, we see extraordinary efforts put

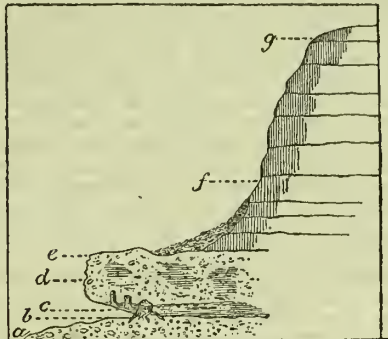


Fig. 2.

forth, not only to give increased prominence to this industry, but to its improvement, resulting in the organization of dairymen's associations, for the purposes of mutual co-operation, and the dissemination of facts tending to increase its importance and value to individuals and the public. Thus, we have in our Eastern exchanges the proceedings of the New York State Dairymen's Association, American Dairymen's Association, Vermont Dairymen's Association, The New England Agricultural Society, The Milk-Producing Association, of Massachusetts and New Hampshire, Northwestern Dairymen's Association and others.

These associations have all held their "winter meetings," as they are called, and held them at that season because the time can be better spared than during the more busy summer season. We give an extract or two from the proceedings of one of their meetings in this week's RURAL, as showing the kind of discussion entertained, which, however, takes the widest range, including the different breeds of cows—their milking qualities as regards yield of butter or cheese; the management of calves; the best food for the production of milk summer and winter; the relative profits of large and small dairies; of the butter or cheese dairy, or the combining of the two; the best methods of securing the cream, and process of churning; the putting up of the products for market; the best mode of disposing of the same and securing certain and satisfactory returns.

It is only now and then a year when the seasons admit of carrying on all the operations of the farm smoothly and easily. As a general rule, either the farmer is enabled to crowd his work, keeping up with every detail of farm routine, or the work crowds him. If we are not greatly mistaken in the signs of the times, or in plain words, the condition of the soil, from the long protracted rain, this season will be one in which the work will crowd the workmen.

There is no denying the fact but that there is a very large extent of ground, on which it was intended to sow wheat, that is really too wet to plow. Had the rains held up two weeks ago, thousands of acres would have been added to our aggregate of wheat lands the present season. If the acreage, which was intended to have been completed in January, is not done, it calls for double work in February, or it is not done at all. It is this condition of things wherein the work crowds the farmer, and yet with no fault of his.

place them with, rather go without them and use your land for other purposes. A dairy of a few good cows properly cared for and with plenty of good feed and good water is a paying investment and something that will always pay; but poor cows and perhaps poorer feed for them is criminal and an abomination.

Make Your Business A Study.

There never has been anything extant so productive of good results to the farmer as the interchange of ideas in the Grange, where farmers meet for consultation.

The result of experience of practical farmers is what we want and there we can get it.

Particularly is this so with Dairies where cows, milk, cream and buttermilk, or cheese must each be treated separately and properly, a mistake or damage to either of which would result in a poor article for market, and a loss of from twenty-five to one hundred per cent in price.

Hints to Butter Makers.

It is much better to cut your butter cloths with a sharp instrument than to tear them. In the latter case they unravel and show too many threads, whilst in the former case the roll will look smooth and even. If you can always put some nice stamp on your butter it will certainly sell better.

Pack your butter closely so as not to fall or get mashed in the box while transporting. Any butter that is tastily put up will get a preference in the market.

DON'T CROWD YOUR COWS FOR FEED.—The dairies of California are getting completely overstocked, this is particularly so with dairies that are leased, the owner of the dairy crowds all the cows he can possibly on a small tract, the result of this is that the grass no sooner starts than it is eaten off by the already half starved cows and don't get an opportunity of growing, and you have no grass for a year. As our grasses are nearly all annual, and as no seed is suffered to mature, the grass crop falls short the following year, and so on for a few years the land soon becomes bare. Of course, if a cow does not get sufficient feed she will fail in both the quantity and quality of her milk. Again, the cow becomes poor during the year, and in the winter she becomes so very poor and weak that she is good for nothing the following year even though she were on good feed.

POTATOES AS FOOD FOR COWS.—In nearly all that section of this State where dairying is carried on, potatoes grow abundantly and are generally cultivated. Next to beets potatoes are the best feed for cows that are milking. The milk will be plentiful and very rich and makes a very rich, hard and savory butter. After a few trials cows grow very fond of potatoes, which, if not small, should be cut small, least the cow chokes on them. Apples too are good for cows and they are very fond of them, but I am not prepared to say that the apples has lacteal virtues. Hundreds, and perhaps, thousands of tons rot in the fields annually of both that might be turned to good account. I think I am not mistaken when I say that half the apples and potatoes now in the market could be used more profitably on the farm by being fed to stock than by shipping here.

The Work of the Farm.

It is only now and then a year when the seasons admit of carrying on all the operations of the farm smoothly and easily. As a general rule, either the farmer is enabled to crowd his work, keeping up with every detail of farm routine, or the work crowds him. If we are not greatly mistaken in the signs of the times, or in plain words, the condition of the soil, from the long protracted rain, this season will be one in which the work will crowd the workmen.

There is no denying the fact but that there is a very large extent of ground, on which it was intended to sow wheat, that is really too wet to plow. Had the rains held up two weeks ago, thousands of acres would have been added to our aggregate of wheat lands the present season. If the acreage, which was intended to have been completed in January, is not done, it calls for double work in February, or it is not done at all. It is this condition of things wherein the work crowds the farmer, and yet with no fault of his.

The most he can do is to "rest upon his oars," keep his teams and tools in order, ready to dash in for extra labor and exertion the first moment that presents. Lauds should be carefully examined by turning a few furrows day by day, here and there, with the view of ascertaining how soon it will be possible to "pitch in." There are some soils that will do to turn much sooner than others in the immediate vicinity, owing to a greater proportion of sand in their composition. These should be looked up, and the plow put to its work even between showers. Our rains have been more than abundant, and now we only want the opportunity, and the largest wheat area ever cultivated in this State will be grown this year.

FANCY STOCK.—A. E. Burbank, of 43 and 44 California Market, has just received per C. P. R. R. another invoice of Golden Pencilled Hamburgs, which took first premiums at Buffalo in 1873. Also, silver gray Dorkins which took first premiums at Buffalo in January, 1874. We would call the attention of fanciers to this new importation, and to the advertisement of same in another column.

HORTICULTURE.

Fruit Culture.

[The following essay upon this subject was read before Napa Grange, No. 2, P. of H., at Napa City, Jan. 24, 1874, by Mr. Wm. H. Nash. It was written by him at the request of the Grange, and the reading was received with such hearty admiration that the thanks of the Grange were voted to Mr. Nash, and a resolution passed that the essay be published in the local papers and in the PACIFIC RURAL PRESS.]

Having for many years devoted much attention to this particular branch of culture, and feeling deeply interested in its success, I have prepared the following essay, in the hope to supply at least in part the popular need of definite information on the subject.

The subject of this essay is one in which almost all classes of community are interested, and more or less practically engaged. Indeed it is the desire of every man, whatever may be his pursuit or condition in life, whether he live in town or country, to enjoy fine fruits, to provide them for his family, and if possible, to cultivate them in his own garden, with his own hands. Fortunately, the soil and climate of California are so favorable to the production of fruit, that farmers, if they do not already, must eventually become a community of fruit growers.

People are but just beginning to learn the uses of fruit, and to appreciate its value. The rapid increase of population alone creates a demand to an extent that few people are aware of.

The city of San Francisco has added 100,000 to her numbers in ten years; and see what an aggregate annual amount of new consumers it presents. After twenty years' experience in fruit growing in California, we think it will be excusable in us if we presume to offer to the farmer a few suggestions relative to the soil and climate best adapted to the growing of fruit, as well as some suggestions as to the proper season and manner of planting the trees.

In our California climate our winters are so mild that it will do to plant at any time from the commencement of the first rains till the first of March. It has now become a well known fact that many varieties of fruit, when planted near enough to the coast to be exposed to the winds from the ocean, are almost total failures; but when this cause of defect is removed by planting these same varieties in the orchard lands of the interior, they become not only thrifty and productive, but the fruit is unsurpassed in size and flavor. All trees should be selected with reference to the climate and soil where they are to be planted.

The pear tree in California is much more hardy than the apple tree, and will grow and produce good fruit in almost any locality, but succeeds best in a deep, rich and moderately dry soil.

The peach tree succeeds best where the climate during the summer months is warm ranging from 60 to 90 degrees, and the soil rich, moist and loose. In a cool place, this fruit is often of an inferior quality, juicy, but insipid.

The plum tree should have a rich moist soil, and when planted in poor land, manure should be used unsparingly.

The cherry may be grown to the highest state of perfection when the land is deep, rich, sandy loam, the water at no time standing nearer than eight feet of the surface of the ground, and where the temperature during the summer months ranges from 40 to 80 degrees. On Mahaleb stocks, the cherry can be grown quite successfully where the soil is much more wet and heavy.

The quince, valuable for preserves and jelly, can be grown on moderately low and wet land, and will produce enormous crops.

We have been experimenting with two varieties of the almond for a few years, and they have fruited to some extent. Like the apple, it succeeds best when out of reach of the coast winds, but cannot stand the heat nor the late frosts of some of the interior valleys. We know of no better recommendation than to say that, as a general rule, where table grapes can be grown the almond will flourish.

The grape may be said to do well in almost any location in California that is out of the damp winds and fogs that prevail along the coast; even in some sheltered locations very near the coast they may be grown quite successfully, but not of the best quality for wine.

The currant is one of the most valuable of all the small fruits, and is being used extensively for jelly as well as for table fruit and pies. Like the cherry, it should have a cool summer climate, and a loose, rich soil.

The gooseberry should have a warm

and moderately dry soil, with plenty of manure and good cultivation. If grown in cold, damp places the fruit will be subject to blight and mildew. The Hawton's seedling, however, may be grown in almost any location.

The blackberry should have a warm, moist soil to succeed well.

Preparation of the soil: Plow the ground at least twice, and as deep as possible; the subsoil plow may be used to a great advantage, and when the ground is hard, its use should not be omitted.

Pruning the trees at the time of transplanting should be carefully attended to. The ends of the roots, that always are more or less bruised in digging, should be cut off with a sharp knife, and the branches should all be cut back to a bud within two to four inches of the main stem, leaving them in a proper shape for the formation of the top.

We will give our method of planting and think it will do to work by as a general rule. Dig the holes circling, three feet in diameter and two feet in depth; the rich soil of the surface should be thrown out on one side, the balance on the other side of the hole. In refilling the hole throw in the surface dirt first, which will leave the richest part of the soil where the tree will receive the most benefit from it; fill up the hole a proper depth to receive the tree without bending the roots, keeping it about the same depth that it stood in the nursery. Fill in about the roots with loose dirt until the ground about the tree is level; then the planting is done. From the time of planting, the ground should be kept well tilled and free from grass and weeds. A crop of carrots, beets or beans may be grown between the trees, but should not be planted nearer than four feet to the trees, until after these have grown at least one year; or currants and gooseberries may be planted between the trees in the same manner, and may be allowed to grow until the trees are ten or twelve years old.

The distance that the trees should be planted apart, are:

Standard Apples.....	24 ft each way.
Pears.....	18 " "
Standard Heart Cherries.....	24 " "
Duke Cherries.....	16 " "
Almonds, Peaches, Plums and Nectarines.....	20 " "
Apricots.....	24 " "
Gooseberries (English).....	3x5 ft "
Hawton's Seedling.....	6x8 " "
Currents.....	2x5 " "
Blackberries.....	8x8 " "
English Walnuts.....	40x40 " "
Grape Vines (in vineyard).....	7x7 " "

The very common practice in regard to manure, is to apply a very large quantity immediately around the trunk of the tree, which is decidedly wrong, as it creates an excess of heat, and enfeebles the growth of the tree. The proper way is to apply a sufficient top dressing, broadcast between the rows; this should be well plowed in where it can reach the extremity of the roots. There are many rich soils where manuring is unnecessary.

Mulching should be practiced in very dry soils and only with newly planted trees. Would recommend sand to be thrown around the trees to the depth of three or four inches and about six feet in diameter. It should be applied early in May.

In protecting trees from the heat of the sun in summer, it is only necessary to protect the trunk; this may be done by means of two boards set together forming an angle; this is placed on the south-west side of the tree.

Orange Culture at Riverside.

EDITORS PRESS:—There are many persons in California this winter, looking for homes here, and there are many thousands more yet in the Atlantic States, looking with longing eyes towards this our beautiful land, and praying that the time may come when they may be enabled to reach it.

While every part of this State has its attractions, some for one thing, and some for another, there are none that can compare with San Bernardino and Los Angeles counties for the production of the semi-tropical fruits.

Los Angeles has never lacked for tongue to sing her praise, until she is known everywhere as the home of the orange; while San Bernardino, her equal in everything, and her superior in many, is but little known outside of her own limits.

In view of these facts, I have been induced to pen these lines, though more used to the pruning shears than the pen.

There is a plain of table, or mesa land, on the southeast side of the Santa Ana river, commencing six miles below the town of San Bernardino and extending down the river about twenty miles, and from one hundred to one hundred and fifty feet above the river, sloping gently back to the foothills from two to eight miles distant. About twenty-eight thousand acres of this plain can be irrigated from the Santa Ana river.

Upon this plain is the town of Riverside, started by the Southern California Colony Association, three years ago, and it now contains about three hundred inhabitants, who are supplied with water from a ditch constructed by the company. The ditch supplies water for domestic and irrigating purposes to over three thousand acres of land, one-half of which is now settled upon. The remainder is offered to the public at from \$25 to \$40 per acre. Water is supplied at prices barely sufficient to cover cost of running the ditch.

The soil is red clay, slightly mixed with sand, and is known throughout the State as the best for all kinds of fruit. The orange is no exception to this rule, as has been proven at old San Bernardino, where they produce the largest and finest oranges in the State, entirely free from black mould, scab, or louse, so common at Los Angeles.

The climate at Riverside is unsurpassed; in fact it is as pleasant here in December as May. The company have in contemplation another ditch, the water right for which is now secured and will be constructed as soon as needed, and when done will supply water to twenty thousand acres of land, more than can now be irrigated. It is the object of this article to show the beauty, cost of production and profits of orange culture: First, there can be no more beautiful place on this earth to live than in the midst of an orange grove. Second, the cost of production. Prices of trees are as follows: Two-year old, per 100, \$25; three-year, \$60; four-year, \$150; five-year, \$300; six-year, per 100, \$600. Two-year old trees are the most profitable, for the money invested; of course older ones will come into bearing sooner. Orange trees bear at eight year from the seed. Let us take one acre of land at Riverside, and calculate the cost up to bearing condition. The best land, \$40; one hundred and sixty two-year trees—as this is the number per acre we plant—\$40; fencing, say \$20; and \$25 per year for cultivation and water for irrigation from time of planting up to bearing, six years, \$150; making a total of \$250 per acre. The first crop will yield about two dollars per tree, and increase each year until twenty-five years old. At twelve years from seed, Mr. Rose, of Los Angeles, sold this year \$30 worth per tree; now, what is an acre of bearing orange trees worth? Let those who are accustomed to make from \$5 to \$10 per acre, answer.

If people in the Atlantic States could realize the beauties of this climate, and the money which can be made here, this place could be filled to overflowing in two years. We have already many thousands of trees and vines planted here, and many thousands more in nursery, and in a few years will have a little paradise of our own. P. S. RUSSELL.

January 27th, 1874.

About Grape Cuttings.

EDITORS PRESS:—I have scanned the columns of the last two numbers of the RURAL PRESS, but get no word of advice about varieties of grapes best for raisins, best early and late grapes for market, selection and preparation of cuttings, i. e.; one cutting from each shoot or as many as the shoot will make of suitable lengths? Should the cuttings be put immediately into the vineyard, or buried or heeled in for a time? If you have heretofore treated these subjects in the RURAL PRESS, don't for heaven's sake refer me to some back volume or number, as is the habit of Bro. Judd, of the American Agriculturist. Hundreds of new subscribers will be interested in the answers, and hundreds of old subscribers who read without interest and destroyed their papers, are now ready to put out vines and "want to know, you know." Also, the best distance apart and what rows are necessary? For raisins and the table, is any manure advantageous on a light, gravelly soil? If any, what kind? Where shall I send my RURAL PRESS to get bound?

Now we do not find the least fault with our correspondent for desiring us not to refer to some back number of the RURAL for an answer to his queries; but still we must use a kind of discretion in the matter, or, in comes a letter from a correspondent, complaining that the RURAL is being filled up with matter it contained a year or more ago, and asking us whether we intend to make it a mere reprint.

However, we will venture to answer our correspondent somewhat. In our last number we gave the names of those grapes, which a well known connoisseur in raisin and wine making, esteems as the best; and we rely upon his judgment until some one proposes other and better varieties. Cuttings should be short jointed; if you can get two or three of this character from a single shoot, all right. The ground being in proper order, set the cuttings where they are to stand in the vineyard. They should be set eight feet apart each way, if of the rank growing varieties; and whether they are or not, enquire of the grower of whom you obtain your cuttings. If of less luxuriant growth naturally, they can be set eight by six feet very properly. Vineyardists differ in regard to the frequency of wider spaces between certain rows, as roads admitting carts for collecting the grapes.

Perhaps we should have given a reason for preferring short cuttings; it is this: The young roots start out more plentifully immediately above and below the joints, and not as much so midway between the joints; hence the more joints under ground the more roots. Send either to Bartling & Kimball or A. Buswell,

book binders, San Francisco, or to us, and you can get two volumes (one year) in one book, in good binding for \$2.50.

DOMESTIC ECONOMY.

Gem Recipe.

EDITORS PRESS:—As one correspondent terms it, we are all Grangers here and readers of the RURAL PRESS. I have seen quite a number of recipes in the RURAL for making graham bread and gems. But I have never seen any genuine hygienic recipe yet. So I give you one in full. In the first place all the readers of the PRESS know what the cast iron gem-pans are. Place the gem-pans on top of a very hot stove, then take about two teacupful of cold, soft water in a basin; add a little salt; then stir in your graham flour by dropping it in with one hand and stirring it briskly with a spoon in the other hand; when your batter is a trifle thicker than common cake batter, grease your gem-pan, which is fizzling hot, on the top of your stove; then with a spoon drop in your batter, about two spoonfuls to each cup; then place in a very hot stove oven and bake until a nice brown; but care should be taken to have your stove very hot. Here is all the secret in baking this kind of bread. When taken from the oven they should be placed in a clean dry cloth about ten minutes before going to the table; and if you do not find them the sweetest and healthiest bread you ever ate, tell me I am no HYGIENIC.

Cressey Station, Merced Co, Jan. 20th.

More Graham.

EDITORS RURAL PRESS:—I thought after reading Mary Mountain's farm house chat in one of the December numbers that I would send in my mite, in the shape of a graham bread recipe, but various duties, have delayed my writing until the present time.

The most of the graham bread recipes say use a portion of fine flour.

Now it does not seem to me that it can be genuine graham, when made up with part fine flour. I think that sifting the graham through a coarse sieve is much better. My way is to sift a common milk pan about half full of graham flour, putting into it a small cup of hop yeast, half a cup of syrup, a spoonful of salt, then enough warm water to make a soft sponge, not so soft as to be sticky, but so it will mould out nicely; after kneading it thoroughly, leave it in a warm place over night, in the morning knead it over again, put it in pans to rise same fine flour; it always makes nice rolls for breakfast.

Now the gems; I have never been so fortunate as to eat any of the real cold water gems; have tried to make them but did not succeed to my satisfaction.

Would like to hear how Mary Mountain makes the cold water gem. The recipe from Hannah, of Butte county in January 17th, is an excellent one, I know, shall try it. A GRANGER.

Elmira, Solano county, January 26, 1870.

DECORATING WOOD BY PRINTING.—Mr. Thos. Whitburn, at a recent meeting of the English Society of Arts, described a process, recently patented by him, adapted to express, on flat surfaces of wood, effects of light figures on a dark ground, or dark figures on a light ground, or of figures light and dark in parts on a ground intermediate in shade. The designs or patterns are engraved in the ordinary way on box-wood, and, from the blocks, the wood is imprinted on a common hand printing press with printer's ink. The process is capable of being used with two or more colors, and is designed for the ornamentation of door panels, furniture, etc.

DETERMINATION OF POTASSA.—The double chloride of platinum and potassium can only be weighed, as such, upon the filter, a uniform desiccation being taken for granted. Such weighings on a counterpoised filter are, if possible, better avoided. The smaller the amount of the double salt of platinum the greater the chance of error. Dr. Mohr proposes, therefore, to heat the salt to fusion with thrice its weight of oxalate of soda in a platinum crucible. After lixiviating the residue with water the chlorine in this solution is determined by means of a decimal solution of silver.

SULPHATE OF MAGNESIA IN DYEING.—Woolen goods, intended to be fulled afterward, when dyed with anilin colors, as dahlia and methyl-violet, are found to stand the fulling process better, and generally to resist the action of alkalies, soap, etc., much better, if some sulphate of magnesia has been added to the dye-bath. The reason assigned for this action is the formation of a precipitate of a magnesia compound in contact with alkalies, which precipitate is inert so far as the dye stuff is concerned.

USEFUL INFORMATION.

Transparent Paper.

A German invention, recently patented, and which may be useful to draughtsmen and others, has for its object the rendering more or less transparent of paper used for writing or drawing, either with ink, pencil or crayon, and also gives the paper such a surface that such writing or drawing may be completely removed by washing without in any way injuring the paper. The object of making the paper translucent is, that when used in schools, the scholar can trace the copy and thus become proficient in the formation of letters and outlines without the instruction usually necessary; and it may be used in any place where tracings may be required, as by laying the paper over the object to be copied it can be plainly seen. Writing paper is employed by preference, its preparation consisting in first saturating it with benzine, and then immediately coating the paper with a suitable rapidly drying varnish, before the benzine can evaporate. The application of varnish is by preference made by plunging the paper in a vat of it, but it may be applied with either a brush or sponge. The varnish is prepared of the following ingredients: Boiled bleached linseed oil, 20 pounds; lead shavings, 1 pound; oxide of zinc, 5 pounds; Venetian turpentine, $\frac{1}{2}$ pound; mix and boil eight hours. After cooling, strain and add white gum copal, 5 pounds, and gum sandarac, $\frac{1}{2}$ pound. Thus prepared, the paper will be found to possess all the requisites for use, as stated above.—*Exchange and Review.*

THE REFINING OF COTTON SEED OIL.—Dr. Dotch communicates to the *Scientific American* the following method and proportions for refining cotton seed oil: 100 gallons of the crude oil are placed in a tank, and 3 gallons of caustic potash lye, of 45° Baume, are gradually added and well stirred for several hours; or the same quantity of oil is treated with about 6 gallons of soda lye of 25° or 30° Baume, and heated for an hour or more to about 200 or 240° Fah. under perpetual stirring, and left to settle. The clear yellow oil is then separated from the brown soap stock, and this dark soap sediment is placed into bags, where the remainder of the oil will drain off; and the sediment has a marketable value of 3 or 4 cents a pound for soap makers. The potash lye has to be made in iron pots, but the oil and lye may be mixed in wooden tanks.

A DURABLE PASTE.—Four parts by weight of glue are allowed to soften in 15 parts of cold water for some hours, and then moderately heated till the solution becomes quite clear. Sixty-five parts of boiling water are now added with stirring. In another vessel 30 parts of starch paste are stirred up with 20 parts of cold water, so that a thin milky fluid is obtained without lumps. Into this the boiling glue solution is poured, with constant stirring, and the whole is kept at the boiling temperature. After cooling to drops of carbolic acid are added to the paste. This paste is of extraordinary adhesive power, and may be used for leather, paper, or cardboard with great success. It must be preserved in closed bottles to prevent evaporation of the water, and will, in this way, keep good for years.—*Druggist's Circular.*

ELECTRIC SEA LIGHTS.—Frank Leslie has in his establishment an electric apparatus for electrotyping and photographing. On a dark, slightly foggy night last summer he put the apparatus on the roof of his building, and the light given was strong enough to show shipping in the harbor two miles away, and to enable citizens a third of a mile away to read newspapers as easily as by daylight. Electric lights should be carried at the mastsheads of all steamers, and would cost scarcely \$25 per night. The apparatus requires for its working an engine of seven-horse power, but it could be readily attached to the engine of the vessel. A French electrician has recently invented an apparatus that is said to give a light nearly four times as intense as that furnished by Mr. Leslie's machine.

TESTING BREAD FOR ALUM.—Harsley says: Take a wineglassful of water, place it in a porcelain dish, add a teaspoonful of tincture of Campeachy wood (prepared by digesting two drachms of freshly cut wood in five ounces of alcohol) and the same quantity of a concentrated solution of carbonate of ammonia in water. Dip into the pink-colored solution a piece of bread to be tested for alum, withdraw it after five minutes, and lay it on a plate to dry. If in one or two hours the bread becomes of a blue color, it contains alum; if it contains no alum, the red color will entirely disappear.

UTILISING PETROLEUM.—In Canada a burner is in use by which residuum of crude petroleum is used instead of wood or coal in brick kilns. By a simple contrivance, says the *Oil Journal*, the nozzle of the burner is made to throw the flame directly downward at the first firing, and after burning the head, as it is termed, this nozzle is replaced by a straight one, the change being effected in a few moments. The flame is thereby thrown into the arch any required distance, burning the whole kiln from one end, and doing it in much less time than by the old method.

MICE.—An exchange says these pretty little pests may be driven away by scattering camphor gum in their haunts.

VEGETABLE GLUE.—Gum arabic solutions are frequently employed instead of glue and mucilage, but are objectionable on two accounts. First, they render the unsized paper transparent, and if a piece of common printing paper is attached to any dark or printed surface the color shines through, and besides it does not attach it firmly to other paper. Neither can paper be attached to wood or pasteboard. Paper pasted on metallic surfaces with gum arabic usually separates from it in a short time. As a cement for glass, porcelain and earthenware it is utterly useless. We are informed on good authority that all these disadvantages are overcome by simply adding an aqueous solution of sulphate of aluminum, two grammes of the crystallized sulphate of aluminum being sufficient for 250 grammes of concentrated gum solution prepared from two parts gum to five of water. The salt named dissolves in ten times its quantity of water, and is added directly to the gum solution. A solution of alum does not answer as well as the simple sulphate of alumina, which can be prepared from alum by precipitating the alumina with ammonia, washing thoroughly on a filter and dissolving in sulphuric acid. The vegetable glue thus prepared will not, of course, ferment, sour or mould, which will be appreciated by those using it.—*Ex.*

EXPERIMENTS by Galletly show how dangerous it is to allow greasy refuse to lie, even in small quantities, in warm places. He found that such waste, dipped in boiled linseed oil, and wrung out, required, at a temperature of 170°, only 105 minutes at the most to take fire, and that the bulk need not be very great, as a match-boxful, at 167°, took fire in one hour. With raw linseed oil it required four or five hours; with rape oil, at 170°, over six hours; with castor oil, at 185°, over a day; with olive oil, 1½ hours; and with sperm oil it would not take fire at all. The heavy coal and petroleum oils were found so retard oxidation by excluding the air. Silk waste did not take fire, but gunpowder placed in it was fired in an hour; and in cotton, under similar circumstances, only after 1½ hours.

CEMENT FOR IRON.—A correspondent of the *English Mechanic* says that he has used the following recipe with the greatest success for the cementing of iron railing-tops, iron gratings to stoves, etc., and with such effect as to resist the blows of the sledgehammer: take equal parts of sulphur and white lead with about a sixth of borax; incorporate them so as to form one homogeneous mass. When going to apply it, wet it with strong sulphuric acid and place a thin layer of it between the two pieces of iron, which should then be pressed together. In five days it will be perfectly dry, all traces of the cement having vanished, and the iron will have the appearance of having been welded together.

PREPARATION OF FLOOR WAX.—Two ounces of pearlsh, to ounces of wax, and about half a pint of water are heated to boiling in a dish, which is frequently agitated, until a thick fluid mass is formed, from which, upon removal from the fire, no watery liquid separates out. Boiling water is now cautiously added to the mass, until no watery drops are distinguishable. The dish is again set on the fire, but its contents are not allowed to boil, otherwise myrion would separate out, 8 or 9 pints of water being added, little by little, with constant stirring. Coloring matter may be added if desired.—*Nessler.*

CHAMOTTE FLOUR.—This is pulverized chamotte stone, found in the kaolin or porcelain earth near Halle, Germany, and its equivalent in many other localities. Chemical analysis proves that it is a silicate of alumina, colored with some oxide of iron. It contains 85 per cent. silica, 11 to 12 alumina, and 2 to 3 oxide of iron. It is of course therefore very fire-proof, and may probably be replaced by many other ingredients possessing similar virtues, such as pulverized asbestos, soapstone, etc.—*Manufacturer and Builder.*

PRESERVATION OF MUSHROOMS.—Dr. Remsch, in *Les Mondes*, proposes to cover the fungus with a film of collodion and place it in an airy position. He states that the contraction of the mushroom is equal in every way, and that the chemical and anatomical constitution remains the same. An exact form, preservative against insects and germs, and the keeping of the substance for future experiment, are the advantages obtained.

RENDERING MOULDS CONDUCTORS.—In order to render moulds of plaster or gutta-percha, used in electrotyping, conductors, the use of a solution of 1 gramme silver nitrate, 2 grammes water, 2.5 grammes ammonia (sp gr 0.96), and 3 grammes absolute alcohol is recommended; before the coat is quite dry, it is exposed to a current of sulphurated hydrogen.

SPILLER recommends a mixture of pulverized iron borings, kaolin, and syrupy silicate of soda as a lute for fixing on the heads of stills which are required to stand a high temperature. We should judge the same might be found useful in other situations, such as the joints of cast-iron furnaces, for instance.

It is reported that hemp, when the blossoms are just opened, is an infallible preservative of textile fabrics against the attacks of moths. The stalk, with leaves and flowers, is cut when blooming (about July), and dried in the shade. It is said to preserve its properties for several years.

A pure white vinegar can be made, it is said, from the juice of watermelons.

The Age of the Earth.

A new mode of finding the age of the earth, attempts to determine approximately the time at which the fiery liquid earth-ball for the first time covered itself with a crust. This is done by means of the differences at the longest and shortest diameter of the earth. According to the calculations of Newton and Huygens this would be 1-578, if the rotation of the earth had always been completed in twenty-four hours, while in fact it amounts to 1-298, which is equivalent to a rotation time of seventeen hours and sixteen minutes, which must once have been the earth's time of rotation. It is, however, probable, for reasons which need not be gone into here, that at the time the earth was covering itself with a firm crust, the time of rotation was also a mean between the original and the present time. That a retardation of the rotation time has taken and is still taking place is now as good as proved, although formerly it was strongly doubted. Of all heavenly bodies it is the moon which astronomers know best, and have most exactly calculated from her movements. Now, the co-efficients of the secular acceleration of the moon's course, as found on the one hand from the oldest observations of eclipses, on the other from the theory, are at variance, and there are differences which ought not to exist in the calculations of so well observed a body. Agreement can only be obtained when it is supposed that during the two thousand years which have passed since the Greeks first calculated the eclipses, the rotation of the earth has been retarded 0.01197 seconds. Their exists no difficulty about the causes of this retardation, which is perfectly well explained by the tides. From the cipher thus found, it is easily calculated how much time will be required to cause a retardation of nearly four hours, and the result is that since the firm crust of the earth formed itself, more than two thousand millions of years must have elapsed!—*Exchange.*

It is stated that a mill has been recently started in England in which flour is made by crushing the grain by small trip hammers instead of grinding it.

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.

San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,

Subscribed, \$3,000,000. Paid in, \$1,500,000.

Remainder subject to call.

DIRECTORS IN LONDON.—Hon. Hugh McCulloch, Renhen D. Sassoon, William F. Schollfield, Isaac Seligman, Julius Sington.

MANAGERS:

R. G. SNEATH and IGNATZ STEINHART, SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v27-eowbp

SAN JOSE INSTITUTE

—AND—

Business College.

A Day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department

Is under the supervision of James Vinsonholier, who for many years was at the head of Business Colleges of San Francisco.

The Twenty-fourth Session commences January 19th, 1874.

For circulars address

3v7-2m JAMES VINSONHALLER.

AGENTS WANTED FOR MONOPOLIES AND THE PEOPLE.

Being a full and authentic account of the struggles of the American Farmers against the extortions of the Railroad Companies, with a history of the rise and progress of the Order of Patrons of Husbandry; its objects and prospects. It sells at sight. Send for specimen pages and terms to Agents, and see why it sells faster than any other book. Address,

A. L. BANCROFT & CO., 721 Market St., S. F.

Jan31-1m

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to

2v6-1v ELWOOD COOPER,

President Board of Directors.

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it. WILLIAMS & MOORE, Props., 3v7-3m Stockton, Cal.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F.

de27-1f

LANDS & HOMES FOR SALE

RANCHOS FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho.

Apply to

ALFRED ROBINSON, Trustee.

542 MARKET STREET,

N. E. corner of Montgomery.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

FOR SALE OR TRADE,

680 acres fine farming or grazing land, with frontage of three-quarters of a mile, on a fine stream of water. Located in Shasta valley, Siskiyou county, within three miles of a large town. Commanding a back range of from 60,000 to 60,000 acres, well adapted to sheep or cattle. Will sell for cash, or trade for city property, or a small improved farm in any of the hay counties.

Apply to McLAREN, JONES & CO., 605 Clay Street, Room 10, S. F.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP, On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery St., S. F. bptf

A RANCH OF 160 ACRES.

With Barn and House, thirty or forty tons of hay, and with all the necessary farming implements, to be let for a term of years, either by the acre or on shares; situated between Midway Station and Moore's Landing, 2½ miles from either place. For particulars, enquire of CHAS. ALPERS, 238 Bush street, at 1 P. M. 1v7-2m

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street, (Russ House Block), San Francisco. Wholesale and retail dealer in Mens', Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods; also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of Steves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission St., S. F. C. H. Gruenhagen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

Encaustic & Geometrical Tiles.

BEAUTIFUL DESIGNS.

Reproduction of Ancient Work.

IMPERISHABLE PAVEMENTS

—FOR—

CHURCHES, INSTITUTIONS, HALLS, SCHOOLS, CONSERVATORIES, CORRIDORS, CLUBS, VESTIBULES, DAIRIES, ETC

Suitable for All Climates.

Manufactured of the celebrated Jackfield and Broseley Clays, and arranged in the most beautiful patterns.

GLAZED HEARTH TILES. WALL AND BATH TILES.

Designs and Estimates on application to

CRAVEN, DUNNILL & CO. (Limited,)

JACKFIELD WORKS, NEAR IRONBRIDGE, SHROPSHIRE, ENGLAND. ja17-6t

H. K. CUMMINGS, 1858.

H. H. RALETON, 1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1v

AGRICULTURAL NOTES.

BUTTE.

GROWING CROPS.—*Enterprise*. The question whether or not growing crops shall be taxed is at present agitating the mind of the agricultural community throughout the State. In Butte county the farmers are almost universally opposed to the policy. Not that they have any disposition to shirk the taxes essential to the support of the Government, but because they believe no fair or just and uniform taxation can be had under the rate. The declaration that the Assessor can approximate the cash value of a growing crop is a false one, the prospects may be fair and promising at the time of assessment, but in a climate where the Spring rains have so much to do with the yield of the crop, it is indeed an uncertain hazard to fix a value. There is no fixed rule for the government of the officer in the duty imposed upon him, and hence, in some places, the value may be fixed at one price, and in another at more or less. The rule adopted by some of the Assessors to fix the cost of putting in the crop as value, is a wrong one—for it costs as much to put in a poor piece of land as it does a rich one, while the yield in one case will often be above the assumed tax, and in the other not nearly equal to it.

Again, the diversified character of our crops and the times at which they are planted preclude the possibility of embracing them all in the assessment. March is generally the time to assess. The wheat crop will necessarily be subject to assessment, while corn, buckwheat and other products sown in June or July escape assessment. These are a few of the objections urged. In the determination of the value of the growing crops at the time of the assessment, enters the marketable price of the product at the season of selling, the uncertainty of season, the difference of transportation, all of which are beyond the possible knowledge of the assessor, and more often works unfairness, inequality and hardship than any good to be accomplished.

Our farmers ask that the tax may be repealed, and that the State may be left to reap its "blow" out of the money realized or the improvements made upon real estate out of hand and visible in the succeeding year.

CALAVERAS.

RAIN.—*Chronicle*, Feb. 7: We have had but one day's rain so far this week—something remarkable for this season. It does a fellow good to see the sun, occasionally, and the past two or three days have given us the only opportunities of that character we have enjoyed for a couple of months. The weather is fair now, and the grass and crops are growing finely.

LAKE.

EXPERIMENTAL FARMING.—*See* Feb. 5: We have received a statement of a little "experimental farming" made by Mr. Isaac Alters, of Papadise Valley. Mr. Alters is one of Lake county's most enterprising farmers, and rejoices in one of the most delightfully located homes in California. We take pleasure in publishing his experiments and all similar ones for the benefit of the agricultural portion of our readers. He informs us that he received four packages of wheat and one of rye, containing two pounds each, from the Department of Agriculture, Washington, D. C. This seed was sown broad cast Dec. 13, 1873, on black gravelly loam—the same being in corn the previous year. No. 1, "Fidelity Wheat," said to be a new and hardy variety, was cut June 15th and yielded 93 lbs. No. 2, "Ponzelle," white kernel; cut, June 22d, yielded 107 lbs. No. 3, "Arnold's Hybrid," a new variety imported from Canada; cut June 22d, yielded 150 lbs. No. 4, "Tappahannock," cut June 15th, yielded 125 lbs. No. 5, Rye imported from Scotland; cut, June 15th, yielded 151 lbs. Mr. Alters adds that No. 1 and 2 being very soft straw are adapted to a poorer quality of soil than that on which he sowed. Nos. 3 and 4, he thinks, are well adapted to almost any kind of soil. He pronounces No. 3, the finest variety of wheat he has ever seen, having a very plump white kernel. He will sow the entire proceeds of his experimental crops and we hope to hear a good account from him next harvest.

COLUSA.

TAXING GROWING CROPS.—*Sun*, Feb. 7: The following very truthful and sensible remarks are from the Colusa *Sun* of last week, and we commend them to the careful consideration of our readers. There never was a class of sovereign people more imposed upon than are the farmers of California, caused partly by reason of unequal representation in our State Legislature, and partly because of our system of taxation being imperfectly understood by our few representatives. "Our Constitution says that taxation shall be equal and uniform, and yet we are very far from it in practice. We tax the prospective value of the farmer's crop, and exempt the mine that will sell for millions of dollars. Is there any reason for this? There is one, and only one. Farmers are content to delve along day after day and allow the law-making power to take care of itself, while the large mine owners are gentlemen of leisure—bankers and others whose business calls them around the Legislature. No human creature can tell what a growing crop is going to make, any more than one can tell how much a gold or a silver mine will yield during a year. The company whose mine will yield for millions of gold coin, is assessed for the few shovels and picks used in getting the gold out, while the farmer is assessed on the speculative value of his crop. Is this right? More than this; by reason of the non-assessment of mining property, some of the mountain counties are hopelessly in debt, and the State is called upon to assume them, and the growing crop is taxed to pay them. Yet the farmer plods along under his burden, as uncompensatingly as the ass carrying the gold and eating the thistles along the roadside. And if perchance a Club or a Grange utters a complaint they are met with the cry, 'On, you can't help running into politics!' If bank stock, and insurance stock, and mining stock, and all other kinds of stock, and business interests, and big houses, and the lands of the non-producers are taxed at what they will bring in gold coin, and the speculative values attached to everything, the farmers will not complain at having their crops taxed. This Legislature will do nothing to equalize all this, but the next one will. Mark that!"

MERCED.

THE WEATHER.—*Tribune*, Feb. 7: During the latter portion of the week the weather has been warm and pleasant. Vegetation is growing rapidly, and our farmers and stockmen are happy over the bright prospects before them.

S. J. & K. R. CANAL CO.—From Mr. Blackwell, of Blackwell's Store, on the west side of San Joaquin river, we learn that active preparations are being made to complete an extension of the above canal from Los Baños creek to Orestimba creek, a distance of thirty miles. J. Mora Moss is President of the Company, and John Beuchley, Vice-President and Business Manager. Among the Directors are John Beuchley, W. S. Chapman, Charles Lux and W. C. Ralston. The section of the canal above alluded to is to be completed by the 1st of December next. There is already subscribed to the work \$25,820 acres, at \$1.50 per acre. For purposes of navigation there have been subscribed over 5,000 acres, at \$1 per acre. Miller & Lux have subscribed over 6,000 acres; W. S. Chapman, 5,760 acres; Chapman & Ralston, 1,928 acres. The remaining number of acres is taken by small land owners along the route of the proposed canal.

NAPA.

Reporter, Feb. 7: In Putnam Cañon there is a pack of wild dogs which are killing the sheep of the residents there. These dogs have gone wild and make their descent from the mountains on the sheep, killing them more for sport than want of food.

LATE PLOWING AND SOWING.—*Register*: There is much

complaint in Sonoma and Lake counties, on account of the long continued rains, and Napa county may well join in. The bad weather commenced with a heavy snow storm on the 3d of September, and from that time until yesterday—and even two months—we have had not only almost constant rain, but the rawest and most inclement weather ever witnessed in California. As a result little plowing has been possible. If good weather continues, a fair amount of grain may be put in, but we fear that it may be considerably less than would have been seeded had the rains been less constant and violent.

Nevada.

MEAT QUESTION.—*Union*, Feb. 7: We are informed by a gentleman who is posted that cattle and sheep are dying by the thousands on the plains below, and that it is not possible to get animals for hutching purposes in this State. Most of the bees have to be brought now from the State of Nevada. The late very cold weather over the mountains has caused some falling off of the supply of good animals from this quarter. There are no many cattle for the grass grown in this State—and that is what's the matter. The markets in Grass Valley are well supplied however, according to all appearances.

Tidings.—Eight inches by six and a half, plump measure, is the size of an egg laid upon our table by a boy—no that was done—laid by a hen at Weed's ranch just out of town, and dedicated to our use by a good looking youth, one day this week.

APPLES.—It is estimated that there are ninety tons of good merchantable apples stored in and about Grass Valley at this time.

WHAT HAY IS SAID TO BE about the best kind used, and the product per acre is large. It is time seed was in the ground for a sure crop of this hay hereabouts.

WHAT INDUSTRY DID.—The correspondent of a city paper was riding with a teamster along the foothills of a neighboring county recently, and as they passed a large vineyard of about one hundred acres, with improvements of houses, etc., near it, remarked that it was a nice place. "Yes," replied the teamster, "a Frenchman owns it. Eight years ago he came here with two dollars and a half in his pocket, and cleared two acres of land. In 1868 he got me to plow it for him out 'tick.' He then began to set out vines, and last month he refused \$40,000 for his place."

SANTA BARBARA.

Press, Jan. 31:—The strange freaks of the weather for the last few days excites considerable comment. The mercury fell one or two degrees below forty several nights, and we have had slight white frosts. The days, however, are clear and not nearly so cool. Several theories have been advanced to explain the unusual coolness of the air at times, such as that there may be snow in the interior, icebergs from the Arctic region floating along the coast. We do not know that any of these are correct. If the thermometer should be taken in and placed by a fire, perhaps that would bring about a change.

SANTA CLARA.

EVERGREEN.—*Mercury*, Feb. 4: In driving through Evergreen the other day I saw something worthy of note. A goodly number of the people of the school district were busily at work upon their ample and beautiful school grounds, making drives, walks, planting trees, etc. I could not, from the road, see enough to get a clear idea of the plan of improvement, but everything I could see looked nice and workmanlike. I noticed they were planting a broad belt of trees, composed of blue gum, Monterey cypress and pine. All around their grounds; the center being nicely graded, and rolled almost as smooth as a floor.

Now this is progress in the right direction. Loving, bountiful nature has done much for this spot, and the mantle of her inspiration has fallen on the wide-awake people of the district to carry out her designs of beauty. Should the plan of this good work of improvement, so well begun, be carried out for a few years, these grounds will present a beautiful park-like appearance—a perfect gem of a place, compared with the average bare, dirty, neglected, treeless school grounds of the country.—*Cor.*

J. S. Finch was in Gilroy again last week to continue his search for land on which to plant ramie. Numerous offers have been made him elsewhere, but he is so well suited with the soil and climate in the vicinity of Gilroy, that until all hope is gone he will not give up his search there.

SACRAMENTO.

PIGEONS.—*Telegraph*, Feb. 7th: Wild pigeons made their appearance in large numbers in this vicinity, affording rare sport for the sportsmen hereabouts.

BARLEY.—Mr. H. T. Knight has sown two hundred acres of barley, and weather permitting, proposes to sow two hundred more. Barley is a good crop—pays equally well, if not better than wheat.

MARIN.

Journal, Feb. 6th: The past few days have witnessed a very favorable change in the weather. They have not been all sunny or clear by any means, as we most devoutly wish they were, but the temperature has so far moderated as to hasten the growth of feed and all kinds of vegetation, and temper the winds to the exposed and half famished cattle. No doubt the rains of January were heavy enough to drown out the grain which had been sown on low lands, though this could entail no heavy loss, for the wet was so continuous from the time it started that but little could be put in. We hear of serious losses to stock owners, in some cases large numbers have died. Many perish after they get the new feed, being so reduced that it physics and takes them off.

TULARE.

BRIGHT PROSPECTS.—*Times*, Feb. 7th: Never in the history of Tulare county has so bright a future loomed up before it. The prospects of crops are exceedingly bright. Immense quantities of grain have been sown, and as the "no fence" law is now a living reality, to bless the farmer, his bright anticipations will no doubt be realized. Improvements are everywhere manifesting the new life infused in the people. The great undeveloped mineral wealth will soon be unlocked from its slumbers. From all parts people are looking to this region, and no doubt before one year the population of the county will be doubled. Tulare county has greater inducements to call in immigration than any other county in the State. Her mineral wealth is unexcelled, the mountain timber is almost inexhaustible, immense quantities of land can be procured at very low rates, and the soil and climate are adapted to an endless variety of products.

Delta, Feb. 6th: The country between Visalia and Porterville begins to show the benefit of the generous rains that have so far fallen. The plains are covered with peaceful flocks of sheep in charge of their graceful shepherds who have little else to do but play on their lutes and be happy; and from the broken lutes that occur in the shape of green-necked beer bottles that must have strayed from our friend Malloch's brewery in Visalia, they must get happy very often. Malloch will have to go out on the plains and make a rodeo. There are now on the plains thousands of young mutton that look like they had only lately gone into the wool growing business most of them will make a success of it if it don't get too cold for them.

The vast and fertile plains, from the number of houses in sight, is fast becoming the home of actual settlers that are long we will have all the tillable land under cultivation, presenting one large field of grain. Then good-bye wild cattle and wilder vaquero—you must move!

SAN LUIS OBISPO.

CHOLERA CORRESPONDENCE.—*Tribune*, Feb. 2: Some of the sheep-owners in this vicinity have lost a great number of sheep during the winter. Since fall shear-

ing the losses may be put down in round numbers as follows: R. B. Turner, 1,200 head; Lybecker Bros., 1,500, J. Carter, 800, Miller & Watsworth, 700, Butchart & Sons, 600, Dr. Still, 650; or, in other words, about twenty-five per cent of the whole—a thing which is unprecedented in the annals of sheep-raising in this part of the State. I have conversed freely with several of our sheep men, on this subject, and they are all unanimous on one point, viz: that the sheep in many instances are removed beyond any possibility of recovery, by a malade quite as fatal as death, itself. Here then is a problem for the Solons of the Sheep-raisers' Association to solve; and I think that worthy society would do well to give this matter serious consideration at its first meeting, and should they succeed in unraveling this mystery, and arresting the progress of this dreadful malady, we will hail them as benefactors of our country.

The weather for the last eight or ten days has been magnificent, and the farmer and stock-raiser alike anticipate a bountiful year. On looking around the adjacent country, I see the hills and valleys are green and beautiful; and with a few weeks of genial sunshine, there will be an abundance of luxuriant grass.

SUTTER.

HIGH WATER.—*Banner* Feb. 7: Last Tuesday the river at Sacramento City was 21 feet and 3 inches above low water mark, the highest point it has reached this season. The Feather river has only been ordinarily high.

The high water on Saturday, January 17th, was 16 inches higher than during the winter of 1871-2—others say it was 2 feet higher—and 3 feet 2 inches higher than 1862. The break which occurred in our levee about 2½ miles above Nicolaus was 164 linear feet long. It was caused by the workings of slunks and ground squirrels, but it fortunately happened on almost the highest natural ground in the district, and will be repaired by tomorrow night. The rest of the levee stood it well, considering that at different places the water came even with the top of it; but fortunately all the deep fill—and District No. 2 has many of them—along the entire levee line, stood the pressure.

OREGON.

Oregonian, Jan. 31: It is feared that much suffering has been experienced by stock east of the mountains during this last cold spell.

One farmer in Douglas county has recently lost over one hundred lambs by the rapacity of the wolves. Others in the same district have lost many.

The principal business in Eastern Oregon is stock-raising; it now contains about 60,000 square miles, and upon this broad surface of fine pastures there are at present 100,000 head of cattle, 100,000 head of sheep, 20,000 head of horses. This makes only about three animals to each section of about 640 acres, or 170 acres of land for each animal to roam over.

A meeting of several farmers, representing 100,000 bushels of wheat, was held in Corvallis, last week, for the purpose of devising ways to sell their grain in the San Francisco. What steps they took, we did not learn.

The winter wheat in western Washington Territory is pronounced by those who have traveled through that section to be looking very well, and the late freeze having come when most of it was covered by snow, has left it uninjured.

The following in relation to the wheat crop of the Swinomish flats were handed the *Mail* by Mr. McGart last week: Mr. Thomas Calhoun planted 168 acres, 36 of which yielded 100 bushels per acre, and the balance 63 bushels per acre; Mr. John Cornelius, 80 acres, producing 5,330 bushels; Mr. Charles Streamer, 83 bushels to the acre; Mr. James Harrison, 60 acres, producing 3,500 bushels. This is the kind of land they have back of La Conner, near the mouth of Skagit river.

Of the 38,400,000 acres of land in Eastern Oregon, not to exceed 100,000 have been plowed. The *Mountaineer* says: "After making reasonable deductions for lands appurtenant to homesteads, it is within bounds to place the capacity of this region at one animal to every ten acres, or, in other words, 3,840,000 animals can be reared and kept in fine condition in Eastern Oregon. To thus stock the grazing land of Eastern Oregon an addition to the present amount of more than 3,000,000 animals must be added."

NICE WEATHER.—*Sentinel*: It is our guess that our winter weather has come and gone for another year—at least the severest portion of it. For the past week we have only had an occasional warm rain and the balance of the time it has been as pleasant as May—clear sky, warm and pleasant atmosphere and beautiful moonshine. The rain has somewhat interfered with plowing, we are told, but then it has given the miners an "extension of time," as the lawyers say, and they are making good use of the advantage.

A SQUIRREL EXTERMINATOR, THAT IS NOT PATENTED.—Mr. John Kelsey, who lives close to the foot hills back of Oakland, has for many years made it a principle to keep his land, which is mostly devoted to fruit trees and nursery stock, free of gophers and squirrels. He has proved that laziness is the only excuse for allowing these pests to overrun the country. Having leased a tract of forty acres on which to raise vegetables this season Mr. Kelsey has been abating the squirrel nuisance with a vengeance. A few doses of strychnine made a slaughter that might have satisfied anyone who was not bent on extermination. There were still however, some of the rascals who could not be caught with chaff, not even sound grain. A supply of steel traps was procured and placed in charge of the Chinese field hands. Half a dozen or so of squirrels were captured, cooked and eaten by the celestials. Having once tasted squirrel stew the boys are not content with the uncertainty of traps. They now spend most of their spare time in digging out their game. A terrier is found of great use in keeping on the right track when the burrow forks. The exterminators have killed about sixty squirrels within a week past, working on rainy days and other odd times. Instead of skinning them, they scald, and scrape the hair off.

We hope that others will encourage this mode of fighting the rodents and we know from experience that squirrel fricassee is good eating for any man, whatever his color.

HOW LIKE CALIFORNIA.—We have a report of the fifth annual fair of one of the Southern States, and we give the substance of the whole proceeding. First, it was half-mile heats, the premiums being \$600, \$400, and \$150. The start was in good order; all the horses kept well up to the line; in the first half-mile it becomes apparent that, etc.; nearly abreast, etc.; came in ahead, etc.; 1:52; etc. Second heat, etc.; dropped behind, 1:54, etc. Third heat, sharp; great excitement; betting five to one, etc.; came in on the last quarter; tremendous enthusiasm, 1:58, etc. Then came the pedestrian trial, led by "Prof." O'Hara; walked half a mile backwards, 41 minutes, etc. The next great feature of this great fair comes under the sub-head of "Machinery Department," in which a space of five lines is given, and it relates only to a patent cotton press.

San Jose Farmers' Club.

The Farmers' Club met Saturday Feb. 7th, President Casey presiding.

The following preamble and resolution were adopted as the question for next week's discussion:

WHEREAS, There exists in this State a combination popularly called the "Teachers' Ring," whereby teachers' wages are held at more than a fair remuneration for the services rendered, greatly to the detriment of public instruction; and

WHEREAS, It has been demonstrated that the root of this evil exists in the provision in our school law which excludes from the office of Superintendent of Public Instruction and the Boards of Examination, all persons except professional teachers; therefore,

Resolved, That the present Legislature should not be adjourned before they annul said law, so that any competent citizen may be eligible to these offices.

One of the members desired the opinion of the Club on the advisability of modifying the present game laws, so that they may be made applicable only to sportsmen and marketmen. The Club was divided on this point.

Another member delivered a short address on intemperance, taking strong ground against the use of alcoholic drinks. He read some alarming statistics showing the crime in the United States is caused almost entirely, either directly or indirectly, by the indiscriminate use of intoxicating beverages. He urged the passage of a law by the present Legislature which would prohibit the sale of alcoholic liquors within a radius of two miles of the Normal School. A committee, consisting of Holloway, Erkson and Holson, was appointed to circulate a petition memorializing the Legislature to this end. In this connection, it was stated that the Governor had already signed two bills of like import, one in reference to the State University and the other to the Branch Insane Asylum.

The regular question, "Whereas, in all civilized countries, agriculture is recognized as the source of all other industries; therefore resolved that all compensation, whether public or private, should be reckoned with reference to the earnings of the farmer."

One member held that if the resolution was carried into actual practice, it would greatly advance the prosperity of the State, and very considerably lessen the rate of taxation. He held that there were more professional men and politicians in the country than were needed, and all that kept them up was the formation of rings. They could make enough in a few months to last them a year, while the poor farmer and farm laborer, had to work all the time to maintain himself and family. There was no justice in the present arrangements of affairs.

Another member thought it would be a difficult matter to make a standard for the value of labor, and still more difficult to make a value for agricultural products. The supply and demand must always govern.

Other members spoke on the subject, and their opinion was that it would be an impossibility to fix a standard, and the condition of things must regulate these matters.—*Mercury*.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Feb. 10, 1874.

FOR WEEK ENDING JAN. 27, 1874.

CAR PROPELLER.—Fayette Mace, Jackson, Cal. **FINGER BARS FOR HARVESTERS.**—Victor N. Collins, Dixon, Cal.

APPARATUS FOR CONVERTING MOTION.—Romulus R. Stevens, assignor to self and Lewis M. Cutting, Stockton, Cal.

SHIRT.—Ismael Zacharias, S. F., Cal.

PLANK ROADWAYS.—Cornelius McGowan, S. F., Cal.

COMPOSITION FOR DRAIN PIPES.—Francis J. Bondryl, assignor of one-half interest to J. Mihy.

SHEARS.—Edward Nunau, S. F., Cal.

AIR COMPRESSING APPARATUS.—Wm. Johnston, Lima, Peru.

"The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with greater security and in much less time than by any other agency.

RAMIE PLANTS AND HOP ROOTS.

100,000 Cuttings (Roots and Layers),

For sale in quantities to suit, at prices that will justify persons in planting them out. Send for Circular and Price List. Apply, or send orders to,

P. H. BOGGS, Emmonat, Sacramento Co. Or to R. WILLIAMSON, Capital Nursery, Sacramento, Cal. feb14-1m

GRAIN & STOCK FARM FOR SALE.

A FINE FARM OF 1140 ACRES; Good Grain Land; all plowed and ready for seeding and promising fine crops, and 360 acres of good tillable land adjoining; excellent pasturage; situated in Suisun valley, within a mile and a half of landing at Suisun City and one mile of a railroad station. Has a good house, barn, corral and fences; also, work-horses and a full assortment of agricultural implements, seed, feed, etc. Price moderate and terms easy. Apply to BERRY & CAPP, 418 Montgomery street, Real Estate Agents. feb14-4w

SAN FRANCISCO METAL MARKET.

WEDNESDAY M., Feb. 11, 1874.

WEDNESDAY M., Feb. 11, 1874.

Metals generally are quiet. Braziers' Copper has declined.

Tin Plates are firmer. Cast Steel is in slightly better request. An exchange says that during the past year there has been a considerable increase in the use of American Lead for all purposes except corrodng, and a corresponding decrease in the importation of ordinary foreign Lead. While Missouri has produced a little more than in previous years, and Galena its usual amount, the Nevada and Utah mines have been greatly developed. The percentage of Gold and Silver in the hullion produced by Mines in these last named Territories is so high that the Lead is of secondary consideration.

Scotch Pig Iron, per ton.....\$52 00 @ —

White Pig, per ton.....52 00 @ —

Refined Bar, half assortment, per lb.....— @ 4

Refined Bar, good assortment, per lb.....— @ 4 1/2

Boiler No. 14 to 20.....06 1/2 @ —

Plate, No. 5 to 9.....06 1/2 @ —

Sheet, No. 10 to 13.....07 1/2 @ —

Sheet, No. 14 to 20.....7 @ 8

Sheet, No. 24 to 27.....08 @ 09

Horse Shoes, per keg.....50 @ 8 00

Nitrate.....9 1/2 @ —

Norway Iron.....8 @ —

Rolled Iron.....6 @ —

Other Irons for Blacksmiths, Miners, etc.....5 @ —

COPPER.....

Braziers'.....— @ 37

Copper Tin'd.....50 @ —

O. Niel's Pat.....55 @ —

Sheathing, per lb.....— @ 25

Sheathing, Yellow.....— @ 25

Sheeting, Old Yellow.....— @ 10 1/2

Composition Nails.....25 @ —

Composition Bolts.....25 @ —

TIN PLATES.....

Plates, Charcoal, IX per box.....— @ 16 00

Salmon, per lb.....12 00 @ 14 00

Roofing Plates.....13 00 @ 15 00

Banca Tin, Slabs, per lb.....40 @ 42 1/2

STEEL, —English Cast, per lb.....20 @ 25

Drill.....18 @ 22

Flat Bar.....18 @ 22

Tame, do, per doz.....02 25 @ 17

ZINC.....9 1/2 @ 10

Zinc, Sheet.....9 @ 10

NAILS—Assorted sizes.....5 1/2 @ 8

LEAD.....

Pig, per lb.....5 1/2 @ 6

Sheet.....— @ 9

Pipe.....— @ 8 1/2

QUICKSILVER, per lb.....— @ 1 25

San Francisco Retail Market Rates.

WEDNESDAY M., Feb. 11, 1874.

POULTRY, GAME, FISH, MEATS, ETC.

Eggs are much lower, and bring only 37 1/2c per dozen for Hens' and 40c for Ducks'. Poultry is in good supply. Meats of all kinds are steady at prices somewhat higher than during the past fall and winter. Better weather has influenced the Fish market, and the supplies now sent are constantly improving. Flounders and Salmon have declined 5c per lb, each. Rock Cod are again in market. No Fresh Herring. Tirrapin are scarcer, and command an advance of \$2.00 per dozen. A very few Green Turtle have been received, but not in quantity to establish quotations.

Spring Chickens 62 1/2 @ 75

Hens 75 @ 90

Eggs — @ 37 1/2

do Ducks' — @ 40

Turkeys, per lb — @ 25

Ducks, Canby, pr — @ 00

do Mallard, pr — @ 00

Tame, do, per doz 2 00 @ 25

Teal, per doz — @ 00

Geese, wild, pair — @ 75

Tame, per pair 3 50 @ 00

Snipe, per doz...2 50 @ 00

Quail, per dozen 50 @ 00

Wild, do..... — @ 00

Squabs..... — @ 50

Hares, each 37 1/2 @ 75

Rabbits, tame 50 @ 75

Wild, do, per doz 10 @ 15

Squirrels, per lb 10 @ 15

Beef, tend, per lb — @ 25

Corned, per lb 8 @ 10

Smoked, per lb 16 @ 18

Household, per lb 15 @ 18

Round, do 10 @ 12

Pork, rich, etc., per lb — @ 15

Chops, do, per lb 15 @ 18

Veal, per lb 12 @ 18

do, do, per lb 10 @ 20

Mutton, per lb 12 @ 15

Lug Mutton, per lb 10 @ 12

Lamb, per lb — @ 15

Veision 10 @ 15

Tongues, heat 75 @ 00

do, do, per lb — @ 00

Tongues, pig, per lb 10 @ 18

Bacon, Cal., per lb 16 @ 18

Hams, Cal., per lb — @ 18

Hams, Cross's, do — @ 18

Choice D'field 18 @ 20

Whittaker's 18 @ 20

Flounder, per lb — @ 25

Salmon, per lb — @ 20

Mackerel, per lb 12 1/2 @ 15

Pickled, per lb — @ 6

Salmon hollies 30 @ 35

Rock Cod, per lb 15 @ 18

Od Fish, dry, do 8 @ 15

Peron, a water, do 12 1/2 @ 15

Fresh water, do — @ 15

Lake Big Trout — @ 35

Smelts, large, doz — @ 20

Small Smelts... — @ 15

Ham, do 75 @ —

do fresh — @ —

Pitchards, per lb — @ —

Tomcod, per lb — @ 15

Terrapin, per doz — @ 8 00

Smelt, per lb 12 1/2 @ —

Fresh, do, do — @ —

Sea Bass, per lb — @ 30

Halibut..... — @ —

Sturgeon, per lb — @ 5

Oysters, per 100, 1 00 @ —

do fresh, do 1 1/2 @ —

Clams, per 100..... — @ 50

Mussels do..... — @ 25

Turbot..... — @ 1 00

Crabs per doz..... 1 00 @ 50

Soft Shell..... 1 1/2 @ 50

Shrimps..... 12 1/2 @ 37 1/2

Sardines..... 8 @ —

Anchovies..... — @ —

Soles..... 50 @ 60

Young Trout, per lb 75 @ 1 00

Tomatoes, per doz 25 @ 50

Salmon Trout eat — @ 50

Skate, each..... 25 @ 50

Whitehail, per lb — @ 15

Crawfish, per lb — @ 12 1/2

Green Turtle..... — @ —

do lb — @ —

FRUITS, VEGETABLES, ETC.

Fruit present much the same appearance. The supply of Oranges and Limes is full. Most of the Oranges now on sale in this city are from Los Angeles. Asparagus is coming in more plentifully, and a decline of 25c per lb. is noted. Lettuce is very scarce, and will bring an advance of 15c per dozen upon last week's prices. Marrowfat Squashes sell at 1c lower. Rhubarb is in market, at 25c. Dry Peppers have advanced considerably.

Lady Apples, per lb..... 12 1/2 @ 15

Apples, per lb..... 4 @ 10

Pears, per lb..... 5 @ 8

Apricots, do..... — @ —

Psaches, do..... — @ —

Tomatoes, per doz..... 25 @ 50

Pine Apples, each 50 @ 10

Grah Apples..... — @ 10

Grapes..... — @ —

Bananas, per doz..... 50 @ 1 00

Canteleups..... — @ —

Watermelons..... — @ —

Blackberries..... — @ —

Cal. Walnuts, do..... 20 @ 30

Green Almonds..... — @ —

Cranberries, Or, g..... 50 @ 00

do, do, do..... — @ 00

Huckleberries..... — @ —

Strawberries..... — @ —

Raspberries, do..... — @ —

Gooseberries..... — @ —

Currants..... — @ —

do Black..... — @ —

Cherries, per lb..... — @ —

Nectarines..... — @ —

Oranges, per doz..... 25 @ 00

Quinces..... — @ —

Apples, do..... 50 @ 75

Limes, per doz..... 12 1/2 @ 25

Figs, dried Cal..... — @ 25

Figs, fresh..... — @ —

Figs, Smyrna, do..... 40 @ 10

do, do, do..... 40 @ 10

Artichokes, doz..... 50 @ 50

do Jerusalem..... 6 @ 8

Beets, per doz..... 20 @ —

Potatoes, per lb..... 2 @ 3

do, do, do..... — @ 3

Broccoli, each..... 15 @ 20

Cauliflower, t..... 15 @ 25

Cabbage, each..... 10 @ 15

Oyster Plant, hch 10 @ 15

Carrots, per doz..... 20 @ —

Celery, per doz..... 75 @ —

Cucumbers, ea..... — @ 50

Tomatoes, per doz..... 25 @ 50

Green Peas..... — @ —

String Beans..... — @ —

Egg Plant..... — @ —

Cress, per doz bun 20 @ 3

Onions..... 3 @ 5

Turruis, per doz — @ —

hunches..... 20 @ 25

Brussels Sprouts 20 @ 35

Escalots..... 20 @ 25

Dried Beans, per doz..... 25 @ 50

Garlic, per lb..... 12 1/2 @ 15

Green Corn, doz..... — @ —

Lettuce, per doz..... 25 @ 50

Mint, per lb..... 8 @ 10

Nutshrooms, per lb 75 @ 50

do, do, do..... 75 @ 50

Okra, dried, doz..... — @ —

do fresh, do..... — @ —

Pumpkins, per lb..... — @ 3

Parsnips, doz..... 15 @ 20

Flubbing, per lb..... 15 @ 20

Pickles, fresh, per lb — @ —

Radishes, doz..... 20 @ 25

Sage..... 25 @ 35

Sumner Squash..... — @ —

Marrowfat, do 2 @ 3

Flubbing, do 2 @ 3

Per Lima, ah, r..... 8 @ 10

Spinage, per hskt..... 25 @ 50

Rhubarb..... — @ 25

Green Chillies..... — @ —

Doze radish..... 25 @ 35

Pepper, dry, 25 @ 35

Butter Beans..... 6 @ 8

Italian Chestnuts..... — @ 50

TWENTY THOUSAND ALMOND TREES.—An acquaintance of ours has the above number of thrifty Almond Trees, which should be transplanted soon. He is willing to set them out and attend to them for two or three years, on shares, with some person who will furnish land in a favorable locality. Address this office.

METROPOLITAN NURSERY.

MILLER & SIEVERS, Propr's.

We can now offer for sale a fine assortment of

NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,
(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.

Nurseries on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.

Letters by Mail or express will reach us.

ja10 MILLER & SIEVERS.

PRYAL'S NURSERIES.

Fruit, Ornamental and Evergreen Trees,
SHRUBS AND PLANTS,

Vegetable and Flower Seeds, Greenhouse and Bedding Plants, embracing all of the most desirable kinds, are now ready and for sale.

BLUE GUM & OTHER VARIETIES OF EUCALYPTUS.

Boxwood Plants for Garden Walks.

Roses of all the New and Old Varieties.

Correspond with me, and, if possible, come and see my trees, etc. All orders will receive prompt attention.

Address: A. D. PRYAL,
Oakland, Alameda Co., Cal.

DEPOT AND SEED STORE—Broadway, opposite the City Hall; Nursery and Greenhouse, 3 1/2 miles north of Oakland, and one mile from Oakland Horse Railroad depot at Temescal.

Botanical collectors in all parts of the world are requested to correspond. 25v6-tf

TREES, TREES, TREES

—AND—
PLANTS.

In any quantity from one tree to 100,000, both wholesale and retail, at lowest market rates. Fruits guaranteed true to name. I have many new varieties of fruit in my collection which are far superior to the old standard varieties. Among them is the celebrated Beatrice Peach, guaranteed true; this Peach is 20 days earlier than the Hale's Early, and in every respect a fine peach.

My stock of Shade Trees and Grape Vines is the largest in the State, and a fine assortment. Have also small fruits, hedge plants and hop roots.

Send stamp for printed Catalogue, Price List and directions for planting and training, or come and see the stock, at the CAPITAL NURSERIES. Office and tree depot U street, between 15th and 16th streets, Sacramento, Cal.

ROBT. WILLIAMSON, Prop'r.
Special rates to Patrons of Husbandry. 24v6-3m

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway,
Oakland, Cal.

GREEN HOUSE PLANTS,

EVERGREEN TREES,

SHRUBS, ROSES, ETC.

100,000 MONTEREY

CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM TREES, including:—EUCALYPTUS GLOBULUS (Blue Gum)—extra fine street and shade trees. EUCALYPTUS VIMENALIS—both sorts very popular. ACACIAS in variety. Monterey Pines, Lawson's Cypress, etc., etc. Orders attended to. Address:

M. KING, Nurseryman,

23v6-3m OAKLAND, CAL.

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph
Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental
Trees, Shrubs, Roses, GREEN HOUSE
PLANTS, ETC.

We are constantly adding to our varied stock the NEW-EST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call.

LANDSCAPE GARDENING attended to. ja24tf

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address: W. H. & G. B. PEPPER,
Petaluma, Sonoma Co., Cal.

BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESALERS AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Dahlias, Arbutus, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Eucalyptus, Acacias, Peppers, Cypress, Pines, Junipers, Cedar of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tube Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine. 2v7-3m



My business is to supply what every farmer of experience is most anxious to get, perfectly reliable Vegetable and Flower Seed. With this object in view, besides importing many varieties from reliable growers in France, England and Germany, I grow a hundred and fifty kinds of vegetable seed on my four seed farms, right under my own eye. Around all of these I throw the protection of the three warrants of my Catalogue. Of new vegetables I make a specialty, having been the first to introduce the Hubbard and Marblehead Squashes, the Marblehead Cabbages, and a score of others. My Catalogue containing numerous fine engravings, taken from photographs, sent FREE to all.

JAMES J. H. GREGORY,

ja17-sa Marblehead, Mass.

FRUIT AND ORNAMENTAL TREES.

GLEN GARDENS,

ONE MILE EAST FROM SACRAMENTO.

My stock embraces all the most desirable varieties known, including several new Peaches, among which are the Beatrice, Louise, Early Rivers, Rivers' Early York, Stanwix Early York, Victoria, Prince of Wales, and several others, (all hybridized by S. Rivers of England) and fruited on my grounds this year for the first time in California.

The Louise and Beatrice are 15 and 20 days Earlier than the Hale's Early.

Being the first to import these new fruits, including many sorts not mentioned, purchasers may rely upon getting trees true to name. Also, the FREEMASON and SALWAY, the most valuable late peaches in cultivation.

Blackberry, Raspberry and Strawberry Plants; fresh Locust Seed—CHEAP FOR CASH.

E. F. AIKEN,

de27-1m Proprietor.

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;
SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Finley Peach, Georgia freestone Seedling, the first offered in the State, its flavor being richer and superior to the finest of the old varieties; it is the best for eating and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

BRYAN & DOMINGOS,

4v7-2m P. O. Box 151, Sacramento, Cal.

Brooklyn Nursery,

13TH AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cypress, (\$3 to \$15 per hundred), 10,000 Australian Blue Gums, and about 3,000 assorted Roses. Also a choice selection of the various kinds of ornamental shrubbery, etc. Special attention given to the laying out of landscape gardens. Orders received at the Nursery, or at the office of J. P. SWENY & CO., Seedsmen, Nos. 409 and 411 Davis St. S. F. 24v6-3m

JOHN CAREY, Proprietor.

THOS. A. GAREY'S

Semi-Tropical Nurseries,

San Pedro street, two miles below the Court House,

LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit

Trees in Southern California,

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

Ornamental and Evergreen Trees for Sale
at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses. Maple and Larchum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrus Decadear, or De-vine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubbs' Hotel.

Send for Catalogue. ja10

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy BLACKBERRY SETS, for sale at LOWEST RATES. Orders may be addressed through DREW & CO., of the Rural Press, San Francisco; ROBT. WILLIAMSON, Capital Nurseries, Sacramento; or to me,

CALVERT T. BIRD,

25v6-3m San Jose, Cal.

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN Trees, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good reference must accompany all orders. Lombardy Poplars, 1 1/2 to 2 inch trunks, 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists,

K street, between 8th and 9th, SACRAMENTO, CAL.
4v7-3m

TREES FOR SALE.

The undersigned offer for sale at their
Nurseries,

Near Niles Station, Central Pacific Railroad, Alameda county, Cal., a fine stock of STANDARD FRUIT TREES of the orchard varieties, best adapted for California. Our Trees are one and two years old, and all well grown and well rooted, and true to the label.

We invite Planters and Dealers to examine our stock before purchasing. Send for a Descriptive Catalogue and Price List. Trees can be sent by regular freight routes or by Express, as directed. Careful attention given to packing for shipment. Local Agents wanted, to whom a liberal commission will be paid. Address the undersigned, either at Centerville, Alameda Co., Cal., or at 418 California St. San Francisco, Cal.

SHINN & CO., Proprietors.

AUSTRALIAN

GUM TREES.

250,000 on hand for this season, at rates to encourage forest culture. Also, 50,000 Cypress, in shipping order. Nursery on 12th street, one block north of Tubbs' Hotel, East Oakland, Cal. Or address, Box 80, Oakland.

BAILEY & CO., Proprietors.

Beautiful fresh Cypress Seed, \$3 per pound, sent by mail, warranted pure and of the finest quality.

25v6-3m

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT TREES for sale, from three to five years old. The five-year old Orange Trees are the largest ever offered for sale in this country. For Price, address,

MILTON THOMAS,

5v7-2m P. O. Box 304, Los Angeles, Cal.

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF
EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California.

My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnice & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS
EXTRA QUALITYCalifornia Alfalfa, Kentucky Blue Grass,
Red Clover, White Clover,

Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,

Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the
Pacific States and the Interior.All the better grades forwarded by mail (post-paid),
at catalogue rates. Money forwarded in postal orders,
registered letters or express, at my risk.My Agricultural Almanac and Price Catalogue is
ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a rates that, with proper cultivation on suitable land, will make them among the most profitable crops grown. For further particulars address

PACIFIC OIL AND LEAD WORKS,

12v6-3m 3 and 5 Front street, San Francisco.

P. O. Box 1443.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street, San Francisco.

19v6-1f

SEED WAREHOUSE.

(Established in 1850.)

ALFALFA—Pure California, Cheap, in lots
to suit.

Timothy, Blue Grass, Red Top, Rye Grass, Red and White Clover, Mangel and Sugar Beet, and all other varieties for Field and Garden Culture.

S. W. MOORE & CO., Seedsmen,

ja24-1m 420 Sansome St., near Clay.

PURCHASERS please say advertised in Pacific Rural Press.

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who
raiseVegetable, Flower and Tree Seeds of
all kinds.

Long experience, extensive practice, and the abundant production of this year's seed crop, enables us to offer a selection of Superior Seeds for California and Foreign Soils, and also places us in a position to maintain the lead in the market for Pure Seeds, and much cheaper than those sold by other seedsmen.

A large assortment of Imported DUTCH BULBS and GLASSES just arrived.

ALFALFA, CLOVER, TIMOTHY, KENTUCKY BLUE GRASS, ORCHARD GRASS, and all other varieties.

FRUIT TREES, SHADE TREES, HARDY SHRUBS, and a general assortment of all kinds of VEGETABLE PLANTS.

NOTICE.—We will send, free of postage, on receipt of order, 25 varieties of garden seeds in small packages price, \$1.25; or the larger size packages—price, \$2.50.

Send for Catalogue and Price List.

SEVIN VINCENT & CO.,
607 Sansome St., San Francisco.

18v6-4m

WAKELEE'S

SQUIRREL EXTERMINATOR.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time. The squirrels die in their holes from its effects.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is so good that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger of fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

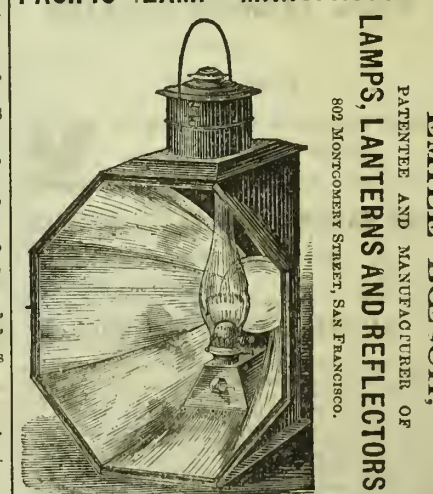
H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed.

3v7-3m

PACIFIC LAMP MANUFACTORY.



New Jining & Mill Lights.

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,
San Francisco.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,
MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO.

21v2-17

New Inventions!

Of real merit, if brought plainly before the public when fresh, are most likely to become profitable to the patentee. For this reason, patentees (of worthy devices) should have the best of Engravings Made, and published in the PRESS. Superior Engravings Made, at reasonable rates, by artists in this office. hp-1f

TO FARMERS.

WE ARE PREPARED TO CONTRACT FOR NEXT SEASON'S CROP OF

FLAX SEED at 3 1-4 Cent per Pound,

Delivered at our works in this City. Will also furnish Seed for sowing, to be paid for from the contracted crop. Will also advance

Money Necessary for Harvesting Crop.

If required. Farmers can ship direct to us, thereby saving all

EXPENSES OF COMMISSION.

Now is time to sow. For further information apply immediately to

THE PACIFIC OIL & LEAD WORKS,

3 and 5 Front Street, San Francisco.
feb14-16p-1m

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdans and Black Spanish, Game Bantams, Crested Combs, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, (first premium at Buffalo, 1874) Silver Spangled Bantams, Golden Bantams, Poland, Black Poland, White Cresta, Brown Leghorns, White Sultans, La Fleche and Silver Game Imported Direct from Belfast, Ireland.

At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK.

43 & 44 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C. O. D. feb7-1f

WHITE LEGHORN CHICKENS

-AND-

EGGS.

CHOICE FOWLS AND FRESH EGGS AT REASONABLE RATES.



ALSO A FEW GOOD

DARK BRAHMAS AND BLACK SPANISH.

F. N. WOODS & CO.,

feb7-3t 67 California Market.

VALUABLE FARM FOR SALE.

The well known farm of Tower & Bisbee, Salt Spring Valley, Calaveras County, is offered for sale. The farm drew the premium as second best grain farm at the San Joaquin Valley Fair, and the premium as the best improved farm. The diplomas they now have. The farm contains 800 acres of land, with perfect title, and four hundred with title secured. Mr. Bisbee, one of the proprietors, wishes to go East to live with his aged parents, and rather than sell an undivided half, they offer the whole ranch for sale at a bargain, including team, wagons and farming tools, of which there is a large supply and of the most improved kinds. Also fifty head of cattle, besides other stock necessary on a farm. The farm is eight miles from Milton on the stage road to Murphy's and Big Trees, and is a desirable location to keep public house, and now has a good custom. Last year, as dry as the season was, there were over 300 tons of hay raised on the farm, with good market at the door for everything raised on the farm. The land is all enclosed with good and substantial fences and suitably divided. Four large and substantial barns, that will hold 600 tons of hay, large store-house for tools, house for hired men, granary and blacksmith shop. Also large two-story house, hard finished throughout and built in the most substantial manner, with a good garden attached and a never-failing stream of water running in the house and yard. The farm contains about 400 acres of land suitable for alfalfa or any other kind of deep-rooted grass. The farm to be appreciated must be seen, and will be sold at a good bargain to any one wishing to purchase a valuable and perfect home, where the climate is as good as in any other part of the State. Any one wishing to purchase the property can correspond with the proprietors by directing to "Milton, Calaveras County, California, to TOWER & BISBEE." feb14-3t

ALMOND TREES.

40,000 Brier's Lanquedoc Almond Trees,

One year old from the bud—CHEAP FOR CASH.

Liberal deductions to the trade and to those planting large numbers. The tree grows rapidly, bears young and constantly, blooms late, is hardy. The almond is large and sweet, with a soft shell.

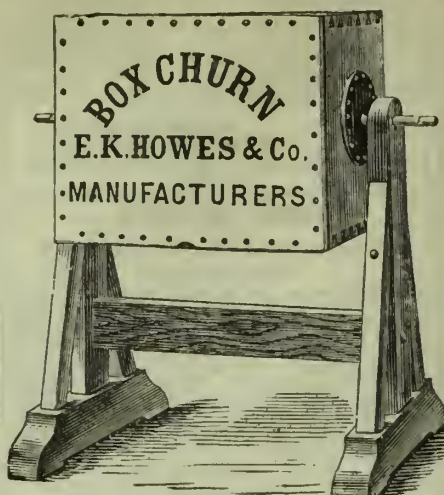
Send your orders for these and all kinds of fruit and nut trees, to

W. W. BRIER,

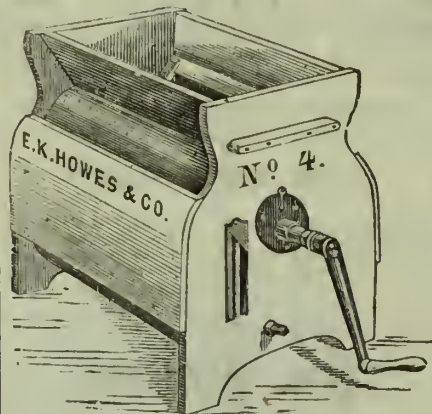
feb14-3t Alvarado, Alameda Co., Cal.

E. K. HOWES & CO.,

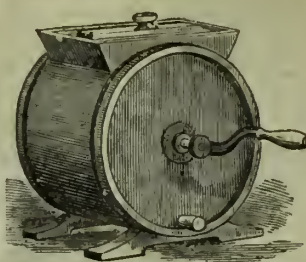
NOS. 118, 120 AND 122 FRONT STREET, SAN FRANCISCO.



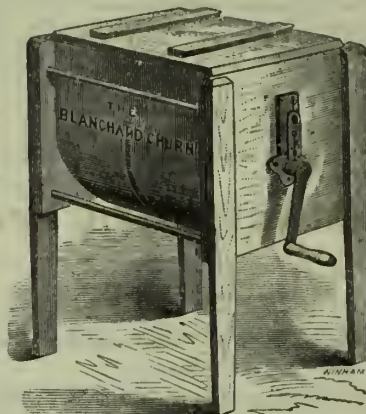
BOX CHURN.



THERMOMETER CHURN.



CYLINDER CHURN AND DASHER.



BLANCHARD CHURN.

SOLE MANUFACTURERS ON THIS COAST OF

All Descriptions of Churns, Butter Workers & Moulds, Butter Tubs, (35. 50 & 60 Pounds), Butter Kegs—Plain and Gal Hoops—Wholesale & Retail.

Send for Price List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired. feb7-16p-cow-3m

Songs for the Million.

Dublin Bay,
The Female Annoticer,
Young Gal from Sonoma,
The Great Sentimental Song,
Shells of Ocean,
The Green and Gold,
Is there a Heart in Erin's Isle?
Tramp, Tramp, Tramp,
The Bonny Jumper,
Noll Flaherty's Daughter,
The Old Arm Chair,
The Old Hog Hole,
Don't be Angry, Mother,
Ever of Thee,
Whisper what Thou Feelest,
Didn't She seem to Like it!
Wearing of the Green—as Sung by C. Wheatleigh, in "Arrah-na-Pogue."
On, on, on, the Boys came Marching,
Brigham Young,
Erin, the Tear and the Smile
In Thine Eyes,
Lizzie Dies To-night,
No Irish Need Apply,
The Irish Jaunting Car,
Judy McCarthy.

Paddy Haggarty,
Mille of the Vale,
Larry O'Brien,
We'll Fight for Uncle Abe,
Write a Letter to my Mother,
Our Union Right or Wrong,
Just Before the Battle,
Mother,
Wearing of the Green—Original Version,
Farewell to Ireland,
Digging for Goodie,
The Captain,
O, Whistle and I'll come to You, my Lad,
That's what's the Matter with Hannah,
Kitty Walks,
Aunt Jemima's Plaster,
The Quaker,
Bell Brandon,
Jeff Davis' Dream,
Brother, Tell Me of the Battle-Cry of Freedom,
I Loved that Dear Old Flag the Best,
Dear Mother, I've come Home to Die.

The whole of the above songs sent FREE to any part of the United States for 3 three cent postage stamps. Address, NOVELTY, 513 Hayes street, San Francisco, California. feb14-lam-2m

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock: one of the oldest and best yards of pure bred poultry in the United States.



M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure White-faced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California.

ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS. feb7-1f 16p2

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GESE.

58 pounds to the pair, at maturity.



BRAHMAS, LEGHORNS, HOUDANS, HAMBURGH, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List. The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address:

M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage. feb7-3m-16p-sp

SEEDS!

SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER,
WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVERSTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. feb7-16p-1f

CALVERT'S



CARBOLIC

SHEEP WASH.

Sole Agency on the Pacific Coast at

feb14

T. W. JACKSON'S,

416 Sacramento Street, San Francisco

THE PACIFIC RURAL PRESS has a larger Circulation than any other Pacific Coast Weekly, independent of a daily issue.

Improve Your Poultry.

It Costs No More to Keep Good Fowls than Poor Ones!



Buff Cochins! Buff Cochins!

A few Trios and Cockerills of the famous Herstine & Williams strains for sale, not related to my last years importations. Eggs, \$8 per dozen, and guaranteed to reach customers safely.

SEND STAMP FOR ILLUSTRATED CIRCULAR Containing a full description of all the best known and most profitable Fowls in the country to

GEORGE B. BAYLEY.

Importer and Breeder of Blooded Fowls, and agent for the POULTRY WORLD, a monthly magazine devoted entirely to Poultry—tells how to keep Fowls for pleasure and PROFIT. Subscription only \$1.25 per year.

Address GEO. B. BAYLEY,

Box 659, San Francisco.

[ESTABLISHED IN 1852.]
New York Seed Warehouse,
R. J. TRUMBULL,
427 Sansome street,.....San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE.

BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th. E. J. TRUMBULL, 15v6-6m-16p 427 Sansome st., San Francisco.

BEST SHADE IN USE.

—THE—

RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture IS FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE

Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS

Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the Bottom,

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are simple, work to perfection, and never get out of order.

Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers. feb7-16p-3m

McLAREN, BRYDGES & CO.,

DEALERS, MANUFACTURERS AND INTRODUCERS OF NEW INVENTIONS FOR THE PACIFIC COAST.

Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.

—ALSO—

Real Estate and General Business Agency.

NO. 605 CLAY STREET, SAN FRANCISCO, CAL. ja10-hp-3m

More than double the number of Farmers and their families read the PACIFIC RURAL PRESS than any other journal on this Coast.



Volume VII.]

SAN FRANCISCO, SATURDAY, FEBRUARY, 21, 1874.

[Number 8.]

Fish Culture.

Within the past few years considerable attention has been paid to the culture of fish; and to the credit of California, be it said, that a number of persons are now engaged in raising trout and other fish in this State. The efforts of the California Acclimatizing Society in this direction are much to be commended, since they have not only set a good example, but have attained excellent practical results, and have been enabled to furnish eggs for hatching to individuals. There are thousands of places in California where trout could be raised with very little trouble, if a few dollars and a little

they are of little trouble, and produce an abundant return for the time and money expended.

To those persons engaged in fish culture on a large scale, an improvement in hatching boxes, recently perfected by Mr. John Williamson, Secretary of the California Acclimatizing Society, will be of interest. We give an engraving of this box which possesses some peculiar features. Mr. Williamson calls it the improved double riffle hatching box. Its special features can easily be seen by reference to the cuts. The upper figure shows a trough with light hatching boxes, and the lower figure is a section of the box, one-quarter of full size.

The usual way of arranging these hatching boxes, is to place the eggs on the bottom and allow the water to flow over them. A box the

Who are Your Nurserymen?

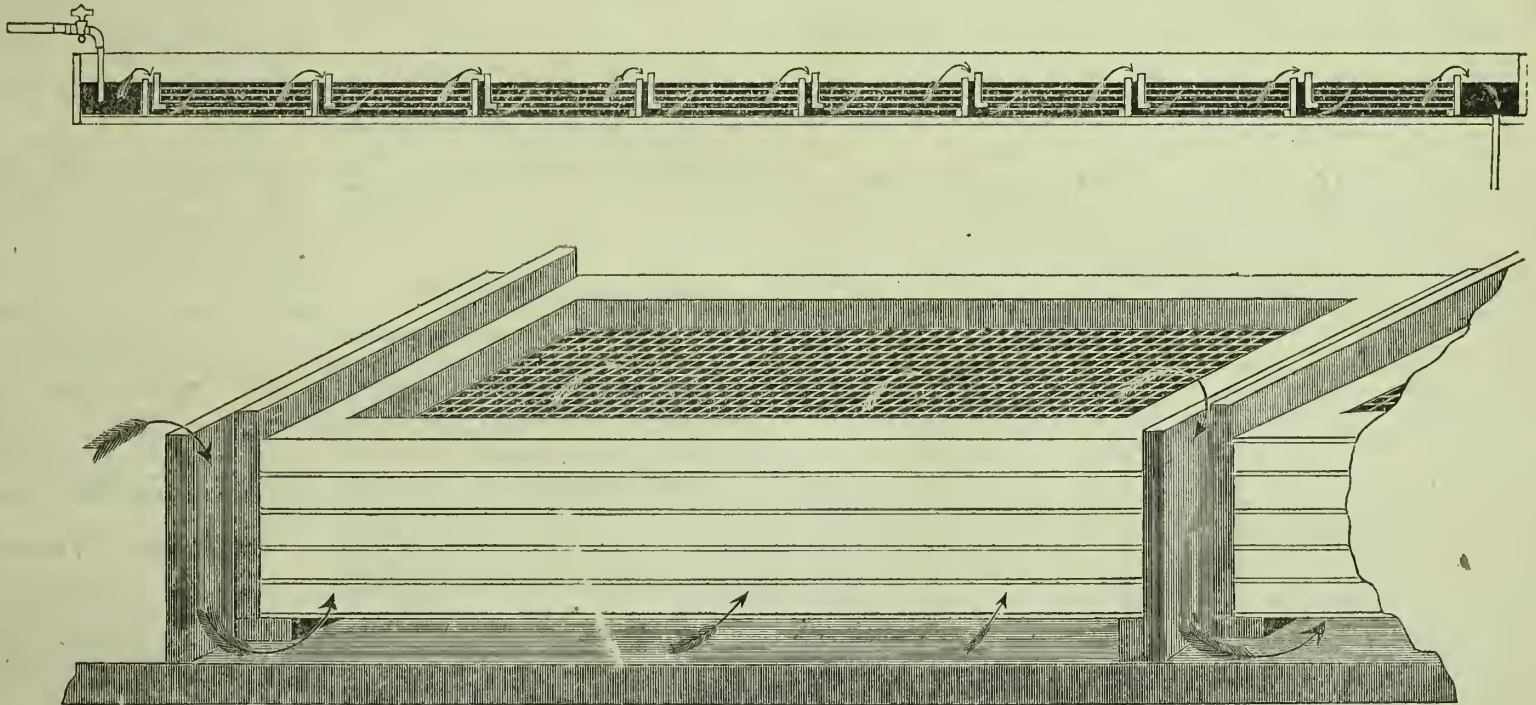
What disappointment can be greater than for one to purchase a large lot of fruit trees, prepare the ground, and plant them with the greatest care, cultivate them year after year, trim, prune, and shape them into nicely formed trees, with the fullest expectation that they will finally repay him for all his care, and then, on showing their first fruits, he finds he has been deceived—that the money paid for the trees was no better than squandered, that the use of the ground has been lost, and all his time and attention upon the trees been no better than thrown away?

Instead of the finer varieties of fruits which

Twenty-five Per Cent. Lost.

On looking over our exchanges from different sections of the State wherever large herds of sheep most abound, we find that an unusual per cent. of loss has occurred during the months of December and January. If we were to inquire into the cause of this loss we would find that a very large per cent. of it occurred from sheer exhaustion from lack of sufficient food. Now if one-fourth of the flocks die the other three-fourths or many of them, must come very near dying, or are in a condition barely to live it through.

Now there are many sheep breeders in the State who are evidently earnest in their en-



IMPROVED DOUBLE RIFFLE HATCHING BOX.

labor were expended in fitting up ponds, etc. In this connection it may be remarked, that it is rather surprising that the facilities for raising fish in many places are so entirely disregarded. Many farmers who live on bacon and beans, and occasionally a little fresh meat, are, from their distance from the seaboard, denied the use of fresh fish—a good and wholesome food. By the expenditure of a small amount of money and a little time, they could have an abundant supply of trout on their tables.

The writer remembers, on the occasion of an extended horseback trip, as far south as Santa Barbara from this city, stopping at a sheep ranch, on the borders of San Luis Obispo and Santa Barbara counties, where there was a fine stream of water within thirty yards of the house. He asked the people on the ranch whether there were any fish there. One man, who had lived there for two years, remembered having seen a fish caught in the brush dam during a freshet in the winter, but nobody had ever tried to catch any others. These men lived entirely on sheep meat, bread and onions, with occasionally potatoes. Beef, perhaps, once a month, as they were thirty-five or forty miles from a butcher shop. Being supplied with tackle brought from the city, on the evening of his arrival, the writer went down to the creek; and, before making a cast, saw several fine salmon trout in the pond. It took but a few moments to land a fine mess—enough for the whole party—two of them weighing nearly three pounds. With this delicious food close at hand, the rancheros had lived on mutton from one year's end to the other, without taking the trouble to even see whether the creek contained any fish or not. This, perhaps, is an isolated case, but facilities equally as good, are neglected in other localities. After once starting ponds,

same size as the one represented, will then hold 20,000 eggs. Mr. Williamson puts in the box, five trays, 19½ inches long and 18 inches wide with a frame ¾ of an inch thick and one inch wide, with a wire bottom, having eight squares to the inch. By this means he has space to hatch 120,000 eggs, where he only had before, in the same box, space to hatch 20,000 eggs. This is of great importance in hatching houses where room is desirable. The hatching box holding the trays, is made of ¾ inch ends, and one inch bottom. The ends are 5 inches high. The water is made to flow in under the upper end and out over the lower end, as the arrows indicate. By this means all the eggs are thoroughly covered by constantly changing water, and less sediment is deposited on the eggs. The end of each box near the head of the trough is made higher than the lower end to cause the water to flow in the manner indicated. The trough is 16 feet long, 8 inches deep, and 18 inches wide. The longitudinal section is made on a scale of ½ inch to the foot.

Seth Green, the great fish culturist, used a trough somewhat similar, but he led the water in and out of each box by means of a pipe which caused a steady flow only near the mouth of the pipe. In Mr. Williamson's box the flow is equal on all parts, and the eggs have plenty of fresh water. The upper current runs up through all the eggs; and the eggs being on top the sediment does not collect on them. There being so much more surface to place eggs in the same relative space, considerable room is saved in the hatching house. The California Acclimatizing Society are beginning to use these boxes at their hatching house at Point Pedro, in San Mateo County. The device is not patented.

he bargained for, he finds he has only common seedlings, of which not one in ten are worthy of culture. He finds he has been outrageously deceived by his nurseryman; or, perhaps, itinerant vendor of fruit trees, of whom—unless he is the vendor of his own nursery-grown trees—you are seldom sure of obtaining what you bargain for. Cases like these we have heard of repeatedly, and even some nurserymen are always ready to fill any order one may make, particularly if the trees are to be sent to a considerable distance.

Next to this fault of, we hope, very few of our nurserymen, is that of filling the order in the next nearest conscientious way; which is this: If they have not all the varieties ordered, will fill up the blank with other kinds, which they are ready to warrant to be equal or even superior to those ordered; as though they knew better what was wanted than the purchaser himself. There is, therefore, a great responsibility resting with nurserymen, and none other than those of the strictest integrity should be patronized for a single year. And if he be a man fit for his place, he would no more knowingly sell a tree not true to name, than he would filch money from your pocket; and more, he would take every pains to have the strictest accuracy prevail in all his nursery operations, so that there be scarcely the possibility of an error.

GLINES' SLATE-ROOFING, PAINT AND CEMENT.—Every person designing using this paint, or wishing further information about it, should see the advertisement in the Press. One hundred and twenty-five packages are now on the way to this coast; so we are informed by the patentees.

deavors to improve the blood and general condition of their flocks, and show their earnestness in the constant addition of the best sheep they can import at whatever cost. Do not these sheep men know that the perfection they are aiming at, was produced in the better animal, almost solely by the care and high feeding bestowed upon the originals? Judicious selections and these well kept at all seasons of the year, may improve a breed of sheep; but all the care of mere selection of breed or blood will never improve the progeny, if dams and lambs are kept through the winter on starvation fare.

In the general suffering of the flocks this year are found not only the ewes which are to produce their young within a month or two; but the lambs of a year old or less. How can it be expected that half starved dams weakened in body and everything which constitutes life energy, can bring forth strong, healthy lambs? or that year old lambs will ever come up to the standard of their progenitors of high blood and high keeping, upon a fare of dry weeds and straw the first and most critical winter of their lives? It is simply strange that breeders who know how important it is that any animal be kept growing thriftily till they attain their full growth without set back, should so utterly neglect to provide against this stunting process of starving for a short season.

It is the most effectually degenerating process that can be devised, and our flocks cannot be kept up to their present standard of purity and constitutional vigor by such treatment. Until we adopt the rule to keep no more animals than we can keep well the whole year, and then act up to the rule, we can never make much advance in the march of improvement in stock breeding.

CORRESPONDENCE.

Jute Manufacturing Again.

EDITORS PRESS:—Your correspondent, S. T. C., takes exception to your very just remarks in relation to jute manufacturing and the duty on jute goods. I don't appear as a manufacturer or as the manufacturers' defender, but as one looking to the best interest of the country. Independent of all political creeds, I will notice some of his statements for the purpose of correcting errors into which he has fallen, creating false impressions, and will pass lightly over those remarks where he seems to have dipped his pen in gall. He has stated repeatedly that we pay one million of dollars annually in the way of duties on an article that pays no tax in any other section of our country. It is true that we are large consumers of jute goods in the shape of grain sacks, which is a small amount when compared with the jute goods used in the Atlantic and Middle States. There are seven jute factories in the Atlantic States, and yet they do not produce one-half of the requirements. Then it is not true that we are the only people that pay duty on jute goods. Again, he is in error about the million we pay. Let us calculate. I believe the demand for grain sacks has never yet reached fifteen millions in any one year. The duty is paid on the invoice price, which seldom exceeds seventy dollars per thousand. Fifteen millions at these rates would amount to one million five hundred thousand dollars. Forty per cent. on this amount would be four hundred and twenty thousand dollars instead of one million. The above amount includes what he has been pleased to call a subsidy. Now I am not opposed to the repeal of the law imposing a duty on jute goods, although I never did believe it could be done with all the opposing interests to contend with, together with the long established policy of the government.

I would not be opposed to the repeal of the law had I been a jute manufacturer, believing, as I do, that the business will sustain itself against Persian importation, independent of the duty. It is now very apparent that the duty will not be taken off the sacks and sack material. Had we made a more reasonable demand, and only asked for the suspension of the duty for one or two years, and included jute machinery, it would have shown a disposition on our part to provide for supplying our wants at home with the much-needed article of jute goods. Such a request would doubtless have been granted, and it would have offered inducements for capital to invest freely in jute machinery, which is not built in the United States. I believe this would result in more lasting good to the Pacific States than the repeal of the law imposing the duty. It is safer to rely on competition amongst manufacturers, to keep down extortion, than it is on importers. So long as we rely on the latter to supply our wants, just so long we may rely on being cornered on every favorable occasion. But your correspondent seems to be unfriendly to the tariff system of raising revenue for the support of the Government. The policy of protecting home industry was originated and adopted by the Fathers of our Country, which has been adhered to by the wisdom of our national councils—through every change of administration to the present time—the old apostles of Democracy, Jefferson, Jackson, Calhoun and others, supported it as the bulwark of our independence and prosperity. Your correspondent has sadly degenerated and lost sight of those broad, national views entertained and promulgated by those illustrious names. Hear what he has said:

"Indeed when this whole system of protection is denuded of the tinsel logic with which corruptionists have decorated it in the interest of manufacturing monopolies, nothing remains but the loathsome and heinous liniments of robbery and plunder."

Now hear what Andrew Jackson said on the same subject: "Sir, we have been too long subject to the policy of the British merchants. It is time that we should become a little more Americanized, and instead of feeding the paupers and laborers of England feed our own; or else in a short time by continuing our present policy, we shall be rendered paupers ourselves. It is, therefore, my opinion that a careful and judicious tariff is much wanted to pay our national debt, and afford us the means of that defence within ourselves on which the safety and liberty of our country depends; and last, though not least, give a proper protection to our laborer, which must prove beneficial to the happiness, independence and wealth of the community."

Here is a broader view of the subject than your correspondent has taken. Agriculture is doubtless our greatest interest, and to advance it we should contemplate it in all its requirements. Exclusive dependence on foreign manufacturers must lead to poverty and ultimate ruin. Let us withdraw the support we gave to foreign industry, and stimulate our own; it should be the object of wise legislation to multiply the vocations and to extend the business of the people by the protection of industry against foreign importation.

The great desideratum in political economy is to so apply the aggregate industry of a nation as to produce the greatest amount of wealth. Labor is the source of wealth, but it is not manual labor only, but the appliance of machinery, such have been the inventions and

improvements in machinery, that the proportion of value given to many fabrics by manual labor is so inconsiderable as to be scarcely worth calculation. Hence manual labor and the price of wages are of less account than they were in former times; it is more to machinery than cheap labor that England is indebted for her immense wealth. Let us have more jute machinery, so as to be able to supply all the requirement for jute goods on the Pacific coast and furnish more employment for our people. It has been wisely said that the best security against the demoralization of society is the constant and profitable employment of its members. I have said that I was not opposed to the repeal of the duty on jute goods, but I am in favor of duties to protect such industries as cannot compete with foreign productions. For instance: Suppose the duty on sugar to be taken off, what becomes of the Santa Rosa sugar factory now in prospective? I doubt not your correspondent is associated with the enterprise, and neglected to exempt sugar when he declared his opposition to raising revenue by imposing duties on foreign articles, denouncing it as a system of robbery and plunder.

Fulton, Feb. 2d, 1874.

BOB BUCKEYE.

Free Trade.

EDITORS RURAL:—In the first No. for the new year there appears, as I suppose, an editorial, headed: Onr Jute Manufacturers, and as it ends enquiringly, who shall decide, when interested parties disagree?

If straws indicate whence the wind blows, we must be blind if we cannot see, that the tendency of the tidal wave is to free trade. Any industry, which cannot stand on its own ground without aid from the government in the shape of a tariff, had better suspend at once. We, the farmers and laboring class, have been taxed long enough, by paying extra prices for merchandise from the New England manufacturers instead of buying them abroad, without getting one cent more for our produce, on that account in foreign markets. They have, by superior tact in manipulating congress, always outwitted the representatives from the rural districts although far in the minority, and now is the very time to put an end to that wholesale swindle.

Santa Clara, Feb. 1874.

II. G.

A Damper on the Flax Industry.

Many of the flax mills in Ohio, Indiana, Illinois, Iowa, and Michigan are now standing still as monuments of the folly of our wise men in Congress assembled. Allow me to rise to explain. When the Hon. D. A. Wells was employed as Special Commissioner of the Revenue to report what items in the Tariff Lists should submit to a reduction of duty or be placed upon the free lists he recommended with no little flourish of profound reasoning that jute, butts, flax, and gunny cloth be cut down fully one half, chiefly for the reason that American shipping would be built up thereby.

As a result, we have in the above-named States fully 125 flax manufactories, employing \$1,250,000 of capital and 10,000 laborers, and working up the product of at least a quarter of a million acres of land annually, all standing still, and they can be bought at 10 per cent. of their former valuations. In 1869-70 we made in the West, from flax, sufficient bagging to cover nine-sixteenths of the cotton crop of that season, while in 1872-73 there was not to exceed three-sixteenths of the cotton crop covered with flax bagging, and the price declined from 30 cents per yard in 1870 to 14 cents per yard in 1873. There has also been a corresponding decline in the seed product, as in many localities the farmers will not grow the crop for the seed alone, which has increased the importation of seed to a great extent, whereas we can in the West produce sufficient seed for all our use and some to export; also fiber sufficient to make bagging—pure linen bagging—to cover a cotton crop of 4,000,000 bales annually.

I am not aware that American shipping has been as greatly benefited as the honorable Commissioner presumed, as the importation is done almost wholly in foreign bottoms. We should be reconciled to the loss of this great northern and national industry by the discovery which our Commissioner of Agriculture has made by careful and diligent study, namely, that the Ramie plant may be grown in the Southern States for the fiber, which may be used in textile fabrics. He has conferred a lasting benefit upon the American people by procuring seed and scattering it freely through the south for experiment, asking a people who have a great staple crop which they do know how to raise to change to one they know nothing about. I think he would be a greater service to procure measures to encourage the great north-west in the growth of flax.—N. Y. Tribune.

Cross-Cut Saws.

EDITORS PRESS:—Will you or some one of your numerous readers tell me of a good plan of applying horse-power to "cross-cut" saw, in sawing trees into four foot wood just as they have fallen, and oblige a reader and admirer of the best agricultural journal on the Pacific slope?

E. F. S.

Have we a mechanic or machinist in the State, or any other man, who can respond to this inquiry?

Letter from Los Angeles.

EDITORS PRESS:—I received a notice from you to the effect that my time of subscription had expired and requesting me to renew. Why sir, I renewed more than two months ago; long before it had expired, I paid the money to your agent and hold his receipt for the same.

Why sir, as for letting my subscription expire and ceasing to take the RURAL PRESS, I had rather consider the propriety of living on "half rations" for I had rather "starve the body than the mind," for really I consider the RURAL essential to the existence of the farmers in this State. I have read single copies that were worth the price of the paper for one year; so you may set me down as a permanent subscriber, and hereafter if the "local" does not do better I will send the money direct to your office.

We farmers of these "lower regions" are feeling jubilant over an abundant rainfall, and as a result there will be more than double the amount of grain sown than has ever been in any one year before; and fruit trees—of all varieties—by the thousand are being planted all over this county; and we expect in a few short years to "astonish the natives," for I verily believe that Los Angeles county will be one vast farm of cereals, vegetables, fruits and flowers. Immigration is pouring into this county at an unprecedented rate; from 50 to 100 passengers arriving on almost every steamer. Seventy-eight passengers arrived in the City of Los Angeles this morning from the last "down steamer." Every hotel and boarding house is full, and they are gradually beginning to find homes in the country—the sooner the better—for all concerned.

Grangers and the Fairs.

The "Grangers," (God bless them), are doing a noble work in this county. They have organized something new in this county, an Agricultural Fair, and are now about organizing a co-operative store on a large scale. Old fogies begin to quake in their boots, and corrupt monopolies fear and tremble, and well they may; our advice to them would be "stand from under." Yours truly, J. E. McCOMAS.

Compton, Los Angeles Co., Jan. 21st, 1874.

REMARKS.—Thanks to our subscriber for not getting ill-natured over a dun and an error before explanation. He shall have the RURAL PRESS as long as he can see. We know of no person who has paid for it twice, but agents are human and will make mistakes sometimes. We hope Mr. McC. will write often. His good letter, instead of snarl, we feel sure will be appreciated by our readers as well as our publishers.—Ed.

Santa Rosa Creek Country.

A correspondent, P., writing from Cambria, San Luis Obispo county, after admitting that the Santa Rosa Creek country is hardly excelled as a dairy country, puts in a very good showing that it is also well adapted to other farm products. He says: But we occasionally raise something besides butter, cheese and pork. Now, on the old Danskin ranch, the first on the creek, was raised on five acres, near 900 sacks of 115 pounds each; merchantable potatoes, besides the small ones he feeds to his stock, in all near 1,000 sacks. That may not be a very large yield, but some of the potatoes were very large. Again, Mr. B. Phillips, who lives ten miles up the creek, planted potatoes December 15th, harvested six tons to the acre April 15th; planted the same land June 18th, harvested eight tons to the acre last of October. Now, Raffalbre ranch is said to have been settled 100 years, but his son Robert says not more than 90, but we have lived there 30 years, (that was four years ago he told me), and the land is just right to raise wheat now, and as the Spanish never use any manure, except as the sheep leave it, you may conclude that the land was good when the old mission was first started.

COTTON SEED PLANTER.—In view of the interest now being taken in cotton raising in this State, all implements connected with the growing of that crop should be studied. A new planting machine is claimed to be an improvement in the class of planters having a furrow opening plow and covering devices arranged, respectively, in front and rear of a hopper, from which the seed is centrally discharged as the machine advances. The improvement relates to the arrangement of plows or shovels in rear of a centrally discharging hopper, whereby one distributes or disperses the seed after being deposited in the furrow, and the others cover it.

EXPLOSION OF CHLORINE AND HYDROGEN.—A correspondent of Nature gives the following simple method of showing the explosion of chlorine and hydrogen by artificial light: "Equal volumes of the two gases, prepared separately by the usual methods, were mixed in a stout test tube and confined by a greased cork. This was placed upright on a little wooden stand, and kept in its place by a brass clip. About an inch of magnesium was suspended in a small tin shade by means of a wire clip. The magnesium being placed near the tube and lighted, the gases united with a report, jerking the cork to the ceiling, but in no case breaking the tube."

HORTICULTURE.

Rice Culture on Upland.

A recent inquiry in *Our Home Journal*, from R. Tuggle about planting and cultivating upland rice has not, I think, been answered. And as the season for planting is approaching, I will endeavor to give the method and results as practiced on the Pine Lands in this locality. The soil to be well pulverized with plow and harrow first, then laid off in rows from eighteen to thirty inches apart with bull tongue or marker with wooden teeth prepared for the purpose. If on cow pen or previously fertilized soil the seed is dropped in the drill at the rate of from one peck to one half bushel per acre, and covered lightly with harrow, brush or roller. If a fertilizer is required, it is well to sprinkle lightly in the drill, say of cotton seed meal (which is the commercial fertilizer mostly used here,) 200 pounds to an acre. The planting should be done last of February, or in March, as a frost after it is up does not injure it much, and by planting early it matures before the heat of summer affects it. As soon as it is up so as to follow the rows easily, run a small bull tongue as close to it as possible. Give it another sprinkle of cotton seed meal on each side, 200 pounds more per acre; then cut out with a narrow hoe, leaving two or three healthy blades or stocks from three to five inches apart, or even six inches, for, like oats and wheat it stools out sending up twenty and thirty stocks from one grain. After thinning to a stand, work the middle with a light cultivator or harrow, leaving the surface as level as possible. Do not at any time throw a furrow to the rice, but cultivate shallow as long as the grass continues to grow. Twice is usually sufficient, for if the crop is planted close enough, it will soon shade the ground and keep down the grass or weeds. Select new land or that upon which there is no crab grass, and it requires no more labor than corn. The cutting, threshing, etc., same as oats or wheat. The yield here is from thirty to eighty bushels an acre, and the straw is about as good as hay for feed. We get our rough rice dressed or polished in New Orleans, the mills charging one cent per pound as prepared for market. Some dress in hand mortars fresh as they use it, which is done quite rapidly, and thought to be better when cooked.

A measured bushel of upland or bull-rice, as it is named here, from size of grain, and rank growth, will give about twenty-two pounds when dressed. It can be procured, I presume, in large or small quantities at the seed store of E. F. Virgin, who advertises in the *Journal*.—J., in *Home Journal*.

Now who among our seedsmen or farmers, will send to E. F. Virgin, 93 Gravier street, New Orleans, for a package, however small, of this upland rice? It can be obtained through the mail at small cost, enough at least to make a beginning. There is not a doubt but that upon alluvia along our rivers, and on the reclaimed trile-lands, this variety of rice can be grown to profit, and possibly upon our plains of rich, sandy loam, where irrigation can be applied.

Cultivation of Pumpkins.

EDITORS PRESS.—In your issue of the 24th ult., you make me to recommend plowing in the beginning of April and then again in mid-April. The first plowing should be in early spring, say January or February, and the second plowing in mid-April, when the seed may be put in. It is possible to get a good crop by sowing as late as June. Last year my first sowing was cut down by the frost of May 31st, and a second sowing, early in June, produced the crops I mentioned—50 tons on about four acres.

Reason or Credulity.

In the after part of the same letter, besides sundry small typographical errors, you have printed "reason has been prescribed," it should have been "proscribed," in matters of religion. One letter makes a vast difference in a word. I wished to combat the too prevalent idea that faith consists in a blind submission to authority, and that God is pleased by our giving an unreasoning assent to certain propositions which are said to be incomprehensible.

The "Legislative" Column

Is a good addition to the RURAL. Farmers must be pleased to get a summary of Agricultural Legislation without wading through the entire business of the Legislature.

EDWARD BERWICK.

Carmel Valley, Feb. 3, 1874.

Wild Morning Glory.

EDITORS PRESS:—This is probably the "man-root," which is that large, extremely bitter root found so plentifully in this State; the way to get rid of it, to bore with a common auger down to and into it, and drop into the root a spoonful of salt and it will die directly.

WM. DRESSER.

The two are not identical at all. The "man-root" of our correspondent is a bulbous root, often of monstrous growth; the wild morning glory, root and branch, is a running vine like the common morning glory or *rose convolvulus*, and the very worst of California's pestiferous weeds.

THE VINEYARD.

Value of the Scuppernong.

EDITORS PRESS:—In your issue of the 17th, F. W. Gibson inquires if the Scuppernong grape can be had in California. Several have tried to find it, but without success. To give you an idea of the value of this grape, I cut a slip from the Mobile (Alabama) Register of January 17th, showing in what estimation it is held. It is a native of North Carolina, and the most delicious and delicate grape I ever saw. The yield of sufficient grapes each year to produce one hundred gallons of wine is no exaggeration. I send this simply for your own information, and do not want to be known in the matter at all.

Your sample copies of the Press sent to Borden Grange, were all put in the hands of non-subscribers, and I am confident the result will be an addition to your subscription list.

J. A. P.

Borden, Stanislaus Co., January 30th, 1874.

Following is the article referred to:

The Scuppernong.

Quite a new interest in this noble grape is wakening throughout the lower south, and we are glad to see it. Almost every land owner is putting out, or arranging to put out, Scuppernong vines, and he could not do a better thing, for grapes, when they succeed well, are the most profitable products of a country, and the Scuppernong, properly cared for, always succeeds.

It is estimated that California produced last year over 12,000,000 gallons of wine, of the value of \$3,500,000; 2,000,000 pounds of grapes for table use, with 250,000 pounds of raisins. The acreage under cultivation of the vine is estimated at less than 40,000 acres.

These figures look large, but they are small in comparison to what the lower south might do with Scuppernongs, and to what she will do at no distant day. Scuppernong is bound to be king over all the fruits of this country, for it bears more at a less expense and with greater certainty than any other fruit-yielding plant in the world.

We need not hesitate to put out Scuppernong vines from fear that the market will be over-supplied, leaving us without sale for our product. The production of Scuppernong wine, once we were fairly into the business, would be profitable at one dollar per gallon. But there is little danger of its running so low as that. As our wines are put upon the market a taste for them will be developed, and they will take the place of the impure and inferior "foreign wines," so called; besides, the Scuppernong makes a brandy equal to the best, and so soon as enough is raised to turn attention in that direction, there is little danger that the supply will rise above the demand.

Put out Scuppernongs liberally—there is no risk in it. It costs but little to put out a vine, and each vine put out now and well-tended, will be worth about one thousand dollars ten years hence. Putting out vines is an easy way of arranging a good legacy to leave to our children.

Some persons may think we overdo it when we say a vine well-tended will be worth about one thousand dollars ten years hence. We base our calculations upon what we know of vines now ten or twelve years old, which yield, each, at a single bearing, grapes sufficient to make a hundred gallons of wine, of a quality good enough to sell readily at \$2.50 per gallon.

Hybrid Grapes.

EDITORS PRESS:—Our wild-fire, winter, and summer grapes of the eastern, middle, and western States have been greatly improved by judicious selection, by growing seedlings and constantly selecting those that show most improvement or departure from the wild state, by hybridizing, pruning, and cultivation.

Those men who have devoted their time and energies to the improvement of the American grape—the only grape that will grow in the above-named States—are entitled to our gratitude. Bull, Shepherd, Campbell, Parker, Miller, Carpenter, Grant, Cunningham, Norton, Caywood, and others, have originated seedlings of great value. Rogers, Campbell, Underhill, Allen, Arnold, Moore, and others, have greatly ameliorated the American grape by infusing the finest strains of juice, from the European grape, through hybridizing. Those great men who, through their writings and works, have disseminated valuable information on the improvement, propagation, training, cultivation, soils, diseases, insects, etc., which bear on grape culture, may be mentioned. Downing, Elliott, Saunders, Strong, Fuller, Buchanan, Knowlton, Meunier, Husmann, Haraszthy, Grant, Hyatt, et al. These commanders have, and are, leading the little army of vine culturists on to victory. God speed the good cause, and strengthen the hearts of the inspirers of mankind!

Hybrids, in the true sense of the term, are mixtures of two different species; as, the pollen of the *Vitis vinifera*, dusted on the pistils of the *Vitis labrusca*, produces a mixture in the resultant seedling; and this we call a hybrid. A mixture of two natives, as *labrusca* and *vesti-*

valis, though generally called a hybrid, are really in the language of intelligent grape growers, not hybrids, but crosses. A cross, a resultant between "native and native," a hybrid, between the "foreign and native."

Hybrids for the Pacific coast are useless, for we can grow in perfection the "pure bloods." East of the Rocky mountains, however, the *vinifera* will not grow; for the climatic conditions there are unfavorable. Here, especially California, is "its home." Nowhere on earth can better grapes be grown than in California, of both native and foreign. I have Arnold's hybrids, Rogers' and Moore's now in bearing. They are not even equal to the Delaware, Maxatawny, or Creveling, much less the noble B. Hamburg, Chasseles, Rose, Chasseles de Fountainebleau, or W. M. d' Alexandra. Why grow them here then. We grow the best; why others of less value? We think it useless here.

Now, I am opposed to hybrids; and, on these grounds: First, the infusion of the tender blood of the *vinifera* in our American grapes makes them tender and liable to disease. Secondly, very few of them are equal, in all respects, to many of the best native grapes. Thirdly, greater real improvement in the American grape can be accomplished by crossing native and native, as Walter, Delaware, Maxatawny, etc., these being resultants of crosses between native and native. Walter is a cross between Delaware and Diana; hence its superior qualities as a table, wine and raisin grape, for the States east of the Rocky mountains. By seedlings, by judicious crossing of the best in the best, of the American grapes, we retain hardihood, vigor and adaptation to the soil, climate and culture. This is the field of success.

To retain the true American aroma, flavor and heavy body of our grapes, we must preserve intact our own as an inheritance, pure and unadulterated by foreign admixture. If, then, the process I have hinted out is followed, the little boys and girls of this generation will live to see an American grape, an American wine, an American raisin, superior to all others for the American people. Our climate, our soil, our grape, our American brain, will accomplish this great desideratum. A. F. DAVIDSON.

Salem, Oregon, 1874.

Another Type Writing Machine.

A patent has recently been issued to Mr. John Galloway, of New York for an improved writing machine, which the inventor describes as follows: There is a roller, of sufficient size to receive a sheet of the paper to be used, and covered with cloth. This is mounted on a horizontal shaft which revolves in bearings attached to the frame. The paper, in connection with the colored paper or cloth from which the color is obtained for the impression, is rolled around the roller, and its edges are secured by a clamp. To the inner end of the roller is attached a spiral thread, which works between the pins of a shaft, so that the roller may be moved longitudinally upon its shaft at the same time that it is carried around thereby. By suitable means, the teeth of the shaft may be turned down out of gear with the thread, so that the roller may be pushed back at once, when required. By suitable construction the roller is rotated by the upward movement of the forward parts of the frames, the downward movement of said parts raising a push pawl one tooth. A pawl which is pivoted to the frame, has its engaging end resting against the teeth of the wheel, to prevent said wheel from being turned back by the friction of the pawl as it is raised. A long block or hand piece is perforated longitudinally to receive a slide upon the forward bar of the movable frame. Upon the inner side of the forward end of the sliding block is formed an arm which projects through a slot in a plate, the ends of which are secured to the side bars of the frame. In the plate, at the upper and lower edges of said slot, are formed notches, and the free end of the arm is so formed that it may fit into the upper or lower notches, according as it is inclined upward or downward. Upon the top of the slotted part of the plate are formed the alphabet, the nine digits, a comma and a period, which characters are arranged in two rows, one corresponding with the upper and the other with the lower row of notches. Upon the lower side of the sliding block are formed two rows of raised type corresponding with the characters, and which project at such an inclination, that when the arm is in the notch of either the upper or lower row of notches, the corresponding row of types will be in proper position for making the impression. In using the machine, the paper is placed upon the roller and the block is grasped with the hand, and is moved to bring the arm successively into the notches corresponding to the letters of the word to be formed upon the paper. As the arm is brought into each notch, the block is forced down, and the letter is printed upon the paper. At the end of each word the roller is caused to rotate twice the usual distance, and thus forms a space between the words.

ENGLISH LEAD AND SILVER.—The keeper of mining records reports, in the year 1872, 83,968 tons of lead ore, of the value of £1,146,165, were raised and sold in the United Kingdom; and that there was produced from these ores 60,455 tons, 15 cwt. of lead, of the value of £1,209,115, and 628,920 ozs. of silver, of the value of £157,230. Therefore, in 100 tons of ore there were 72 tons of lead, and in a ton of lead 10.4 ozs. of silver.

SERICULTURE.

Sericulture, Etc.

EDITORS PRESS:—I have had correspondence lately with Mr. V. Clerc, of Ridgeway, Warren Co., North Carolina, and Mr. Paul A. Schettler, of Salt Lake City, Utah Territory. The gentleman from North Carolina is a Frenchman, a viniculturist and sericulturist, who abandoned the south of France because of the destruction of grape vines there by the terrible phylloxera, and settled in North Carolina two years ago. He is the owner of a very extensive vineyard, having imported from France 80,000 vines of the best varieties, for making wine. But last year, having gone through most of the States with the commission sent out to this country by the French government to examine American grape vines, they discovered that the phylloxera had already taken hold of the wild grape vines, and in North Carolina, too, so that then Mr. Clerc expected every month to have his splendid vineyard invaded by the redoubtable foe which so far we are unable to fight out; and he is thinking about coming over to this State with a good many of his vines. On his last trip from Europe to North Carolina, last fall, he made the acquaintance of a San Francisco gentleman, who advised him to come and settle in California, and gave him my address as that of a person competent to give him all the desired information. So he wrote me, and I have already answered his letter, and sent him the two numbers of the RURAL containing my essay on silk culture, recommending him your paper as the best means to get all the information he wants of California. I advised him to write at once for a year's subscription.

So it was with Mr. Schettler, of Salt Lake City, a gentleman much interested in silk culture. And here I will tell you frankly, and in saying so I am not in the least after any favors from you, that I consider the RURAL PRESS as a first-class paper, one of the best that I know, just the thing for the farmer's and family's fireside. Then the communications from your correspondents are generally of much interest, giving real, good, practical information. I highly congratulate you on the excellent way you are publishing the RURAL, and have no doubt that your list of subscribers goes on increasing every month, for you certainly deserve it.

FELIX GILLET.

Nevada City, February, 1874.

Growing Importance of the Silk Interest.

From the circular of the Silk Association of America we learn that the importations of raw silk for the month of December, at San Francisco were of the value of \$165,025; at New York, \$70,268. Total, \$235,293. Total for the year ending December 31, 1873, \$5,232,947. The above values represent only the foreign gold cost of raw silk, freight and charges not being included. There were also imported during the year 142 bales of Japanese cocoons for Hartford, Connecticut. The last item has a significance to California silk culturists. A few years ago, when they were raising a large number of cocoons, no market could be found for them; but now Hartford is importing cocoons from Japan. This change has been brought about principally by the improved facilities for reeling, invented by an American mechanic, and in practical use at Hartford. Another cause is found in the fact that during the Franco-German war the whole silk trade of the world was kept in an abnormal state, and that since the close of that war this trade has returned to its natural condition, with improved manufacturing facilities in the United States. Should our silk growers produce cocoons now, they would find no difficulty in disposing of them at their real value. During the month of December the value of the manufactures of silk imported at New York was, in gold coin at foreign port, \$781,216. The value of the importations for the year ending December 31, 1873, was \$24,379,322. For the year 1872, the importations of manufactures of silk were \$32,677,749, showing a falling off this year of \$8,268,557. This is an encouraging exhibit, as it shows to some extent the growth of the silk-manufacturing business in the United States.

The day should not be far distant when California should supply all the raw silk needed for manufacture in the country, and when the whole should be manufactured within the borders of our own country.

REMOVING SNOW FROM ROADWAYS.—A rather roundabout method of accomplishing this is patented by a Mr. Hart, who proposes a small locomotive engine, which is surrounded at the sides by a casing, with inclined endless belts with buckets, which take up the snow from rotating brushes or wings and convey it over connecting chutes to a separate tank, where the snow is melted by steam connecting pipes and the direct application of heat. The different parts which come in contact with the snow are heated by steam from the boiler, to prevent the clogging of the machine and insure a rapid delivery of the snow to the tank. We hardly expect Mr. Hart's plan to supersede the regular snow-plow on long lines, or to successfully compete with the system of laying down steam pipes, on short ones.

MISCELLANEOUS.

The Philosophy of the Sand Blast.

At first sight, the cutting of a diamond or other hard substance, by another so much softer as sand is, seems flatly contradictory to common experience. Still, to any one who has ever fired a rifle ball against a rock, the fact that a flying soft body will bruise or crush a harder one is neither surprising nor new. The possible perforation of a pine board by a tallow candle, fired from a musket, is an illustration of the same fact, familiar to every school-boy. In the sand blast, however, the effect seen is so manifestly disproportionate to the momentum of the individual particles that the explanation usually given in the grosser cases fails to hold good. Grains of sand, of very unequal size, appear to do precisely the same work when moving at the same rate, thus directly contradicting what has hitherto been an unquestioned law of impact.

Whence arises the discrepancy between what is and what might be expected? To answer this question, an English investigator has reconsidered the laws of impact, and finds that one of great significance and importance has heretofore been overlooked. It is this: At the moment of first contact, the pressure between impinging bodies is independent of their size.

This law has been undetected heretofore, simply because the laws of impact have been considered mainly with reference to the centers of gravity of the bodies, while little or no attention has been paid to the points of impact and what goes on there between the instant of first contact and the time when the center of gravity is changed. Even with the compact bodies, it takes time for the pressure to extend to the inner particles.

Hence, on the instant of impact, it is only those particles in contact which are affected, and the rest of the body might be removed without altering the effect. In other words, the effect of impact is independent of the quantity of matter behind the particles which actually impinge.

That the effect of the sand blast is—as this law indicates—a battering, not a grinding action, is clearly shown by the microscope. A polished glass surface, that has been exposed for an instant to the blast, is spotted with points from which scales of fractured glass have been broken away in irregular directions. Each spot appeared as if a pellet of glass had been driven in by the collision, and the wedge-like action thus set up had driven away the surrounding glass. The polariscope confirms this inference. When thus tested, each spot shows a colored halo, proving that the surface of the glass is under strain.—Sc. Am.

How Mark Twain Got "Beat."

Our friend, Almarin B. Paul, tells us a pretty good thing on "Mark Twain" as a quartz sharp, which we do not recollect ever hearing Mark say much about, in his mining experiences. Perhaps he was afraid of incorporating too many facts in his book, and this came to near home to suit him. Just after Mark returned from the Sandwich Islands to this city, he was hard up for something to do if not for coin; and to make a raise, concluded to do what many others in a like situation were trying to do—sell a mine belonging to a friend. Among others, he consulted Paul on the subject, who like all the others gave him plenty of advice if nothing else. Mark's plan was to make a large interest in the mine clear. His arrangements went on very nicely; his descriptive and persuasive powers were irresistible, and the mine was sold. When this happy consummation was reached, Mark, of course, expected to have his interest, which was not forthcoming as anticipated. It ended by his not getting the interest at all. One day Paul met him and asked how it was he "got beatso bad." "Well," says Mark, "the fact is, I talked so well and made the feller believe the mine was so valuable, that he couldn't help but take it all."

IMPROVED WOOD FENCE.—The stakes are used in pairs, set at such an inclination toward each other that they intersect or cross, and are placed at the usual distance apart to form a panel of fence. A rider is supported in the angles formed by the intersection, and an upright is placed centrally between each pair of stakes, with a rider extending across the top ends thereof. Braces are attached to the stakes at one end, while the other end rests beneath the lower angle of the latter, on the rider. The uprights are connected with the stakes by slats, and placed at an angle of fifteen degrees with the surface of the ground. Rails rest on these slats, and their ends lap past each other by placing them on opposite sides of the uprights. The fence is said to be straight, and proof against unruly stock, as well as high winds.

LIVE STOCK TRANSPORTATION.—Severance & Peet, dealers and importers of full blooded sheep at Niles Station, Alameda Co., have invented and patented a railroad car for the transportation of sheep which is said to be a good thing. Each sheep is stalled by itself in tiers one above another, with heads pointing to the center, where there is a narrow aisle running the length of the car. Feed is easily arranged in this aisle and every sheep can eat at once.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

The Grange Movement.

The strides with which this new movement is advancing is one of the greatest marvels of the times, and affords the surest evidence of the progress which the agricultural class is making towards the social, commercial and political standing to which it is entitled by its numbers, and the comparative importance which it sustains in the scale of useful industries. The farmers of this country compose nearly one-half of our entire population, and upon their success, more than upon all things else, depends the prosperity of the entire community. Why, then, should the farmer longer submit himself to the will and dictation of the small minority which has ever sought to keep him in subjection, and use him as the legitimate prey of the non-producing classes?

The husbandmen have long been but little better than the slaves of monopolists and middle-men, who have plucked them at their will, and measured the extent of their demands only by the power of the farmer to endure and live. Millions of acres of land and millions of public treasure have been given to railroad builders to aid the farmers and other producers; while the only return has been to use one portion of this same money to buy off competing lines so that freights and fares might be kept up to old prices or higher, and divide the other between themselves and needy politicians whose votes were wanted to still further increase and perpetuate this disgraceful class of legislation. Other monopolies, such as agricultural implement makers, sewing machine manufacturers, grain shippers, etc., have exercised the same power to the same end. Thus it is that the few have grown rich at the expense of the many. In view of these facts, it is to be wondered at that the American farmer has at last risen in his might to throw off this oppressive yoke, and assert the rights and privileges to which he is entitled? The war between the producer and the moneyed power, great as has been the provocation, is not one of revenge—all that is demanded is a fair show of profit, and equal fairness of taxation; and until this object is accomplished, the contest must and will go on. Already do we see the two leading political parties of the country trembling before this great uprising of the people, and humbly asking what they will have them to do. Already the good that is resulting from the Granges furnishes abundant proof of their power and utility. It has become apparent that the Patrons of Husbandry are not going to be satisfied with circulars, petitions and suggestions. It is evident to all that they mean business—that they have a policy which they intend shall be carried out. To do it they propose to exercise their privilege of American citizenship, and that too, without regard to former political associations. One of the most remarkable features of the Grange is the wonderful power which it possesses of uprooting partisan traditions and prejudices, and carrying out its objects without any new or distinctly defined political organization. This power is subtle in its influence, and so noted for its impartiality and fairness, that it is drawing to its aid all producers of whatever name, and all the better portion of even the non-producing classes of the community.

The principle of the action of the Grange is in one respect like that of a king upon his throne. The Grange can do no wrong; it is simply suggestive. The details and execution of measures are left to others. If they fail in comprehending the principle enunciated,—like the king's ministers they must retire and make room for others; while the Grange still sits enthroned, the representative of principles alone—not men.

A LEGISLATIVE GRANGE.—There appears to be a large number of Patrons in the Missouri Legislature, now in session, and it is proposed by them to organize into a Grange—a Legislative Grange. The desire for such organization is very natural, as must be evident to every Patron. It affords a most convenient mode of meeting for furthering the reformatory objects of the Order, and presents superior facilities for discussing in a quiet manner such bills and measures as may come before them in their legislative capacity. Patrons are everywhere nearly a unit on all questions of financial policy and political reforms in general, and pay very little or no regard to former political associations. There are quite a number of reforms of a local nature proposed for the State of Missouri, in addition to the great questions of transportation, banking, etc. The Grange of Missouri propose the establishment of Grangers' banks in all the principal cities of the State. They also propose to pack and market their own hogs next season.

A LARGE NUMBER OF FINE LOOKING GENTLEMEN, who never, heretofore, had thought that a farmer could rise above the plow, appear to have quite suddenly discovered that the farmers are wonderfully good fellows after all, and really can do some other things than plow, sow and reap. These gentlemen are fine looking and smart, but they are too late and can't come in.

Our Field.

As our object, as Patrons of Husbandry, should be to ennoble our calling, we propose to make brief mention of a few items by which we believe our social, moral and intellectual status may be materially advanced.

We live to behold the opening of a new era, in which the sons of the soil,—as Patrons of Husbandry—seek to open up new channels of trade and assume that they are competent to manage their own affairs, also to inculcate broad and generous principles. Already we are willing to acknowledge that "it is good to be here," and realize the astonishing fact that we are becoming acquainted with our neighbors! Prior to the organizing of Granges in this State, the farmer was little better than a hermit. Now the gate is opened wide, mind meets mind, and we behold a new and harmonious Order, in which woman takes an active part; the ear is greeted with wise and cautious counsels that bid us march right forward in the path of progress. The field is ours to cultivate; it is not hounded by States and Territories, but embraces the civilized world. Wherever man toils for honorable existence, and will cultivate head and heart as well as subdue the stubborn soil, he may gain the benefit of an interchange of thought in our association. Broad is our field, and every Brother and Sister of our working band is expected to aid in the search for hidden treasures, and thus become co-workers in the unexplored field.

In the Grange we give tone and firmness to the coming man; and woman, the central plant of our field, will we nourish that she may send forth her influence in faith, hope and charity here, to bloom forever in the paradise above. Towering above many other plants, and sending abroad its rich perfume, may be seen the flower we call Sociality. It needs but little encouragement to grow in any average community, but here it flourishes in perpetual verdure. We would not forget the adornment of our homes, but ever encourage in all old and young, the cultivation of choice fruits and flowering shrubs and the beautiful evergreens, for these are significant of refinement; and don't forget the RURAL PRESS.

We Must Plant Root Crops.

If we would be successful with our stock; this would add largely to the profits of the farm. Roots and straw would carry our stock through the winter in excellent condition. Never permit stock to suffer when our rolling, loamy hills will yield from twenty to forty tons of mangel-wurtzel per acre, and leave our land in as good condition for wheat, in the fall, as if summer fallowed.

This yield of roots should also induce us to give the sugar beet a trial; for, without the shadow of a doubt, our soil and climate will produce as large, or even a larger percentage of sugar than in some places already tried.

A Sugar Beet Factory.

There is no valid reason why we should not have a beet sugar factory on the Sacramento river, at Rio Vista or Collinsville, where wood is cheap—from \$2 50 to \$4 00 per cord—and coal abundant at \$9 00 per ton. Here, thousands of acres, if needed, of our fallowed land could be planted to sugar beets, and increase our yield of wheat, rather than diminish it. This may appear visionary to-day, but time will demonstrate its practicability.

We want implements to work our fields, and we extend our hand to the manufacturer, and inscribe upon our banner the motto: "Live and let live." We wage no war on labor in any department, but do insist that the manufacturer and consumer (for the farmer is consumer as well as producer) should deal more directly with each other, and thus dispense with the middle-man. [Read before Denver Grange, by R. H. BARKWAY, Chaplain.]

A FARMERS' BANK.—The Colusa County Executive Committee of the Patrons of Husbandry have passed a resolution requesting all farmers in the county who desire to take stock in a farmers' bank, whether members of the Order or not, to meet with them on the 25th instant for the purpose of starting the subscription and adopting by-laws for a corporation. This, says the Sun, is a very important matter, and should receive the prompt attention of every farmer. The Patrons in that county have just put on their working harness, and we are confident that much good will result from their action. Farmers should bear in mind the fact that they are expected to meet the Committee at the Sun building, Colusa, on the 25th, at one o'clock P. M.

RAILROADS.—The Michigan State Grange have adopted the declaration that railroad companies should be as amenable to State regulation as much as plank or gravel road companies. Why not? Accompanying this declaration, is an appeal to the railroad companies to remember that their interests are identical with those of the farmers, and not to kill, by exorbitant prices, the agricultural goose that lays the golden egg.

W. T. Woods, of Gridley, Butte county, sends to us for information concerning establishing a Grange. We refer his letter to State Secretary W. H. Baxter. Deputies W. M. Thorp of Chico, and G. W. Colby of Nord, are also proper persons to organize in Butte county.

From the Granges.

PESCADERO GRANGE, SAN MATEO CO.—Having been a constant reader of the RURAL PRESS for the past year, as all Patrons of Husbandry should be, I hold it as the farmers' and Patrons' best and truest friend in our common efforts to rid ourselves of one of the greatest evils that ever fastened itself on any civilized people, viz: monopoly. That kind of monopoly that hinds the producers of all kinds, with the ever tightening chain of capital in the hands of unscrupulous corporations and middle-men, who have grown in wealth and power, until the producer and consumer are literally driven to an open declaration of war. And for the purpose of carrying on this warfare to a successful issue, they have fortified themselves in nearly all the States and Territories of the Union, in the impregnable fortifications of the Granges.

In this beautiful little valley, we organized July 1st, 1873, with twenty charter members, sixteen males and four females; and perhaps there is no Grange in the State that has labored under greater disadvantages than we have. From the first, we were opposed by nearly all the wealthy men in the place. We have grown slowly but surely, until we now number between forty and fifty members of our honest and worthy citizens; and we are still growing, as we have applications at every meeting for a place in the councils of the down-trodden and oppressed farmers. We all look ahead with confidence for a better state of things in the near future.

At our last meeting, held on the 14th instant, the question of joint stock threshing machinery came up, but was laid over until next meeting for discussion. Brother Alex. Moore and others will advocate the measure. As no one here has taken sufficient interest in our Grange, to let our neighboring Granges know that we are yet alive, and have our armor on, I have thought it proper, in my weak way, to introduce this Grange to our brethren elsewhere, and perhaps some one more competent will favor the PRESS occasionally with our progress and other things of interest that may occur.

FARMER.

DAVISVILLE GRANGE, YOLO COUNTY.—Sec'y Krummer writes under date of Feb. 4th, as follows: By invitation, Bro. W. Sims, Master of Buckeye Grange, installed the officers elect of Davisville Grange. Owing to the bad condition of the roads and the short notice given the attendance was not very numerous. We had no visitors except two members from Buckeye Grange. A goodly number from Yolo Grange wished to visit us on the day of installation, but the notice given was too short to permit of notifying our neighboring Granges. We hope to do better next time as we have plenty of good working material. A good harvest feast, furnished by our energetic lady members, was enjoyed. After the repast Bro. W. Sims instructed us in the workings of the Order. This Grange is in good working condition and it may be presumed that, when plowing and seeding is over, it will do good work. The weather is now beautiful, and consequently the farmers are pushing the work of seeding from early morn till late at night.

POTTER VALLEY GRANGE, MENDOCINO COUNTY.—Lest our Secretary should not make haste to report the prosperity of Potter Valley Grange, let me tell you that we initiated forty-six members last meeting, making our membership ninety-three. We have outgrown the largest hall in the valley, and it is the unanimous conclusion that we must build a hall for our own use. As to the character of our Grange, I may say of its members—they are the bone, sinew, and soul of Potter—and there are more of the like quality left and coming. The rush reminds me of an old-fashioned "revival." One of our two saloons died a natural death some time since, and now the last has "closed out." Their decline dates from the Methodist camp-meeting held about eighteen months ago. The Good Templar organization seems to have finished the good work. Yours truly,

C. I. H. NICHOLS.

PLAZA GRANGE, OLIMPA, COLUSA CO.—W. F. Green, Secretary, writes—"Our Grange is in a healthy state and all is working like a charm. We have about forty members. There has been so much rain this winter, and the roads have been so bad that it has been hard work to get to the Grange, but there has generally been a fair turn out. We expect to have a first-class Grange as soon as the roads are good and the plowing is over. This is one of the best farming counties in the State. There is a large extent of grain sown, which is looking exceedingly well. The farmers here expect to do better next year than ever before."

POTTER VALLEY GRANGE.—We give, in another column, a few words from Potter Valley Grange, from a worthy sister, who also sends us an admirable letter which we have placed on file for next week's "Home Circle." We are also in receipt of a long letter from Brother McCowan, Secretary of Potter Valley Grange, liberal extracts from which will appear next week.

A GOOD WORD FOR THE "RURAL."—"Your excellent paper comes to us once a week, and is heartily welcome, more prized and more eagerly read than any other journal, and we take all the leading papers. You are building a magnificent monument, that will live when you have passed away."

N. L.

Salinas City, Cal.

IDAHO.—The Order of P. of H. has been introduced into this Territory.

KIEWLATTAH GRANGE, HUMBOLDT COUNTY.—This Grange installed its officers on the 31st ultimo, Jackson Sawyer, Master of Table Bluff Grange, officiating. The following is the list of officers installed: L. K. Wood, M.; H. W. Arbogast, O.; Frank McAfee, L.; James Sinclair, S.; David H. Towers, A. S.; L. F. Meachem, C.; G. B. Kneeland, T.; D. D. Averill, Sec'y; G. Zehendner, G. K.; Mrs. Kneeland, Ceres; Mrs. Pratt, Pomona; Mrs. Woods, Flora; Mrs. Sinclair, L. A. S.

The Humboldt Times is furnished with the following particulars by Lewis K. Wood:—Our meeting commenced early in the morning, and continued until about 4 o'clock, P. M. We had a full day's work to do in the harvest field; therefore had to begin early, but our brothers and sisters were working with diligence, and it being a pleasant day, we got through with our binding, shocking and hauling in, and added to our number eleven husbandmen and five matrons, and were through in time for our first harvest feast by two o'clock, P. M.

Our Grange numbers about fifty members, who, together with about thirty wayfaring individuals, partook of the feast.

I am happy to say to you, friend editor, that I don't whether there is a Grange in the State working in greater harmony than in ours at this time. We have commenced a good work, and if we will only hold fast to it, and treasure up the lessons we have learned, which are appropriate to all the walks of life, we will soon be a different community, a different class of farmers, a worthy set of Grangers, and less of our citizens will occupy rooms with our old friend Bulkeley.

BROTHER HYATT AT THE "OLD HOMESTEAD."—We are in receipt of a letter from Bro. T. Hart Hyatt, who is now on a visit to his old homestead in Danby, Tompkins county, New York. It will be seen that he is still doing good work for the cause. We extract from his letter as follows:

"Inclosed I send you some scraps from Ithaca papers, which will show what I am doing to aid the good cause in this, my old native town. We had a fine meeting last evening, January 30, at the Town Hall in Danby, and finished the preliminaries of organizing a lively Grange, among these people, who seemed not to have given any attention to the subject, until I commenced 'stirring them up,' a few days since. I have talked to them, and read editorials and other articles from the RURAL PRESS, which has been of great service to me in my 'missionary labors,' in this new vineyard of the Order.

"I addressed the Farmers' Club of Ithaca, over which the Cornell, of University fame, has presided for some years past, on the subject of the object, aims, etc., of our Order, and occupied nearly an hour. The prospects are that we shall also have a flourishing Grange in Ithaca soon. In our Danby organization, we already have twenty-three charter members, and shall have a full list, doubtless, in a day or two. I hope to be able to start for my California home in a week or two."

WATSONVILLE GRANGE, SANTA CRUZ COUNTY.—A. D. Richardson, Secretary, sends us the list of officers of this Grange as installed. We omit the names as they have already been given in these columns. Brother Richardson adds as follows: Our Order is flourishing and is composed of wealthy and substantial farmers. There is no reason why it should not continue to prosper, as we have a large list of applications for membership. Those who have joined value the social advantages fully as much as the financial benefits, and unanimously agree the Grange must result in a great benefit to the country, as it will distribute more of the profits of crops among the farmers, by means of which they will be able to improve and beautify their farms in the place of giving a large portion of their earnings to a very few men to use for their own purposes. We all appreciate the RURAL PRESS as an indispensable paper and like it, and hope it will ever remain in the interest of the farmers; asking for nothing but what is right and submitting to nothing that is wrong.

GRANGE DECISIONS.—We copy the following decisions given by the former Secretary of the Iowa State Grange, in the Iowa Homestead, believing they may be of benefit to Patrons here:

"What shall we do with members who do not attend Grange meetings whose dues are not paid?"

Ans. After notification and waiting a reasonable time for the payment of the quarterly dues, cite the delinquent member to appear, and if good cause is not given for failure, take such course as the Grange may deem proper, under any law which the Grange has adopted to meet such a case. If you have no such law, better adopt one.

To R. R. of GRANGE 743: Monthly dues are required of members when they have become full Patrons. Granges, however, may regulate the time of payment of monthly dues. In the absence of specific law we reply as above.

ANOTHER AUTHORITY STATES.—Closing and opening again at the same season so as to confer two or more degrees within thirty minutes or more before retiring from the hall is considered a violation of the Constitution. No person can receive the 2d degree until the 1st has been conferred, or the 3d unless the 2d has been conferred, nor the 4th unless the 3d has been given.

BUCKEYE GRANGE.—L. Moody has been chosen Secretary of this Grange, and all communications intended for him should be directed to Buckeye post-office, Yolo county.

Installation at Vallejo--Timely Suggestions.

BROS. DEWEY AND EWER:—I had the pleasure, assisted by Bro. A. T. Hatch, of Suisun Grange, of installing the officers of Vallejo Grange, on Saturday, Feb. 14th. We were met at the depot by Bro. G. C. Pearson, Master of the Grange, and conducted to Odd Fellows' Hall, where we had a very pleasant time for several hours, in talking over our affairs and "family secrets;" after which we proceeded to install their officers.

At the conclusion of the ceremony of installation, two sisters and two brothers were initiated into the degrees of Sheperdess and Cultivator, after which we adjourned, and our "inner man" was sumptuously provided for by our brother Patrons, as was also our fare on the cars to and from Vallejo. Our brothers and sisters of Vallejo Grange ought to succeed in their undertaking, for I am fully impressed with the belief that their "foundation" is made of the right material; it has the ring of pure metal. Success to their Grange.

Changing the subject: "Did you ever see such a wet winter?" is the one universal question asked hereabouts. The farmers have done, in a manner, nothing since it commenced snowing and raining in December, and if it quits raining now, it will be impossible for the farmers in Solano county to get in their grain in time to have any certainty of a crop. I therefore suggest to my brother Grangers of this section to try the experiment on a small scale of raising flax, sugar beets, corn, etc., or, in fact, any crop that will bear planting or sowing later than wheat or barley. That we are too much dependent on wheat or barley, is evident to every farmer of experience in the State. Our Granges in Solano are hopeful and determined. They meet at Suisun on Friday, Feb. 27th, to form a County Council, in which it is hoped all the Granges in the county will be interested and at which they will be represented. Yours in true brotherhood.

R. C. HAILE.

Suisun Valley, Feb. 16th, 1874.

Brother Garretson at the National Grange.

We are in receipt of a letter from Bro. Garretson, dated at St. Louis, February 5th—the second day of the session of the Grange—from which we extract as follows: This body is respectable in appearance and talent, and prominent among the leading actors on its floor are the representatives from the Pacific coast—Bros. J. W. A. Wright and J. M. Hamilton of California, and Bro. Daniel Clark of Oregon. While I was upon your coast last summer I was made gratefully happy by your hospitality and courtesy; and now I am made proud in the manner in which you represent yourselves in this body. Members from other States have said to me already, "Bro. Garretson, the Pacific coast may well feel proud of her representatives here. We learn that you were the Deputy sent to that coast; have they many more men of that stamp out there?" I have answered, yes, those valleys are full of them. So while you are honored, I feel that your servant is also complimented.

The Convention has not fairly got down to business yet, but from the spirit and purpose already manifest, I calculate that a pretty thorough reorganization of our movement will be effected, and that the future sessions of the National Grange will be made up on a just basis of membership rather than by the law of seniority, as now. In a word, I read in these men a purpose to popularize the Grange, conforming it to our American ideas of things, and utilizing its incalculable forces to the accomplishment of the work we have taken in hand.

Grange Decisions.

The three questions asked us by "Enquirer" are answered by the following authorities:

Any member of the State Grange may install officers of a subordinate Grange. Where a new Master is elected for the Grange, the former Master may install—he being by virtue of his office a member of the State Grange. But where the Master is re-elected—as will in many cases doubtless occur on this occasion, as many of them have only been in office a very short time, and if the Grange is well suited, they will not want to change so soon—then what? I think of no better way than to let Masters of neighboring Granges install each other.

T. R. ALLEN,

Master of State Grange of Missouri.
St. Louis, June 9, 1873.

"Is it proper for the Master of a Subordinate Grange to instruct the officers and members of another Grange in the unwritten work of the Order, without authority to do so from the Master of the State Grange?"

Ans. It is proper to do so when called upon by the Master of any Grange, in everything except the ***. It is not proper to receive the work from any one but a Deputy or acting Master.

In answer to another question: It is not allowable under any circumstances for any one but the Master of the Grange to communicate the *** except a Deputy to the Master on opening a new Grange. The Master is only authorized to communicate it to his own members, and not then unless the member is "clear of the books." Gen. Wilson, recent Sec'y Iowa State Grange, Editor Iowa Homestead.

Meeting of the National Grange.

The National Grange P. of H., which assembled at St. Louis on Wednesday, the 4th instant, closed its labors on Friday, the 13th, after a session of ten days, during which time much important business was transacted, a large portion of which, however, can only be communicated to the Subordinate Granges in the usual way, after the return of the delegation, which, we presume, will not be for several weeks.

In addition to what has already been given in these columns, we would remark that the address of welcome by Worthy Master Allen, of Missouri, has been pronounced very excellent and comprehensive. The address of Dudley W. Adams, Master of the National Grange, is also highly eulogized. It was very lengthy, but published entire in the St. Louis papers. We shall probably make some extracts from both at a future time.

Business of the Order.

After the delivery of Mr. Adams' address, the convention proceeded to the transaction of its regular business, consisting of receiving reports of the Secretary, O. H. Kelly, the Treasurer, T. McDowell, the Lecturer, T. A. Thompson, and of the executive committee. Committees were also appointed on finance, auditing accounts, co-operation, transportation, the good of the order and business agencies.

Among the Committee appointments we notice the names of the Pacific coast delegates as follows: Hamilton on the Boston Grange and on Commercial Relations, Wright on Finance and on the Centennial Celebration.

The Committee on the Good of the Order presented a partial report, one of the points being, "That the constitution and by-laws of the Grange be printed in all spoken languages, as may be directed by the Executive Committee."

Visit to the Board of Trade.

The Grange was invited, as a body, by the Board of Trade, to visit the Merchants' Exchange. The invitation was accepted, and the Grange was received by an address of welcome from the President of the Board, which was happily responded to by Past Master Wright, of California.

Next Meeting to be at Charleston.

It having been stated that the Cotton States had asked that the next meeting of the Grange should be held in one of the Southern cities, Daniel Clark, of Oregon, moved that Charleston be selected as the place for holding the eighth annual session of the National Grange. Carried unanimously.

The Grange Movement in Canada.

D. W. Aiken, of South Carolina, having presented a petition from the Grange of Canada, asking for a deputation to receive the sixth and seventh degrees and establish a Dominion Grange, on motion of Past Master Wright, of California, Eban Thompson, of Canada, was invited to make a report of the condition and wants of the Order in the Dominion. He said that there were ten Granges in Canada, some of them numbering over one hundred members; that they desired to establish a Dominion Grange, in order to have a fixed headquarters for the Order, and that they most earnestly desired to see the organization become international. The following Committee on Resolutions was appointed to prepare a platform to be placed before the public as the sentiment of the National Grange: Messrs. Wardlaw, of Florida; Hamilton, of California; Jones, of Arkansas; Maxwell, of Tennessee; Hinckley, of New York.

The Boston Grange.

The Committee on the Boston Grange discussed the matter of that organization, and the Grange has been suspended on the real merits of the case, which was argued at length. The National Grange is instructed to notify all State Granges within its jurisdiction that the Boston Grange is no longer connected with the Patrons of Husbandry, and that henceforth no recognition can be extended to it by any Grange, and the Master of the Massachusetts State Grange is hereby required to make a formal demand for the surrender of the dispensation and ritual of the Boston Grange, and when received, to return to the said Grange the money paid for the ritual, and to return them without delay. Mr. Staples, of Boston, who appeared in behalf of the Boston Grange, was not present when the Committee first considered the subject, and he considers his Boston brethren most unjustly treated, inasmuch, as he says, there are three hundred Granges all over the east and in the towns of the west with members no more directly interested in agriculture than the Boston Grange. He says it will reorganize and again apply for admission. These are Mr. Staples' views, and he thinks they deserve some currency. As to the report of the Committee, he ridicules the idea that he and a few men associated with him ever entertained the idea of ever running Massachusetts politically.

Thirty-one States were represented at this, the seventh session of the National Grange, with a constituency of fully one million. The work of the session has been important in many ways, and the result will no doubt tell largely on the general financial and political welfare of the country. Much has also, no doubt, been done in behalf of the general agricultural interests of the country. There is certainly much room for improvement in our entire system of rural economy, and this National Grange, presumably made up of the

most intelligent practical farmers of the country, gathered from and representing all sections, must certainly have been able, if any body of men could effect such a thing, of suggesting some practicable remedies for the many errors which have crept into the general farm management of the country, and all its accessories of financial facilities, transportation, tariffs, etc.

"Independent Grangers."

According to the telegraph of Tuesday and Wednesday, a movement has been set on foot by a set of politicians in the State of New York, to establish a secret political organization, similar to the Patrons of Husbandry. It is proposed the organization shall be known as the "Independent Grangers." The convention for its organization was called to meet at Albany. It appears to have, to the number of about fifty persons, met on Monday or Tuesday, and formed what it has designated a State Council, representing some 30 counties. After appointing temporary officers, and adopting a set of principles, the body adjourned until the 4th of March, when it proposes to meet again for the purpose of completing the organization. In addition to representatives from different agricultural societies and "other interests," several Senators and Assemblymen are reported to have taken part in the proceedings.

We are not informed whether any Patrons of Husbandry were present or not. It is certainly to be hoped that no Patron will be interested in any organization that will steal our name as these "Independent Grangers" seem to have done. We submit whether such application, under such circumstances, ought not to be sufficient cause for expulsion from the Order. The movement is but another trick of the politicians to inveigle the Patrons of Husbandry into their meshes. The plan won't work. From our present knowledge of the movement we should say that every true Patron should set his face against it.

The Secretary of the N.Y. State Grange has issued the following card with reference to the movement:

To the Patrons of Husbandry and the Farmers of the State of New York: For the purpose of avoiding any confusion of titles which may occur in the minds of farmers between the Order of the Patrons of Husbandry known as the Farmers' Grange and the new political organization formed in this city to-day, and who call themselves the American Order of Independent Grangers, it should be distinctly understood that there is no connection between the two Orders whatever, the Order of Patrons of Husbandry not being political in its character.

GEORGE SPRAGUE,

Sec'y New York Grange, Albany.
New York, Feb. 17th.

An Appreciative Reader.

EDITORS RURAL PRESS:—Please accept my thanks, for a continuation of your most valuable paper. As a farmer and zealous co-worker in the Grange problem, I don't know how I could dispense with so valuable an auxiliary. It is certainly a most valuable assistant, to all Grangers, and especially Grange officers, giving valuable instruction continually, and in fact to all farmers throughout our State. I have no hesitation in stating my own conviction, that the PACIFIC RURAL PRESS occupies an exalted position, as the farmers' friend, not only in California, but throughout the Atlantic States, as wherever I have sent the paper to friends East, I have invariably received the highest encomiums and most flattering comments for our great agricultural journal of the Pacific Coast. Long may it wave in defence of Justice, Truth and Equity for the farmers of California! I forward you my subscription, for which please give me credit to Jan. 1st, 1875. It was fortunate that farmers generally seeded a large portion of their land previous to the rains, as the time since the first rain has been so short, when they could plow and sow. Fall sown grain looks remarkably well. The prospects for a good crop look quite flattering indeed, causing of course, a buoyant spirit of contentment and satisfaction among the rancheros. Our installation took place Jan. 10th. [The names of the officers have already been given in the RURAL.] The ceremony passed off very pleasantly. Our Grange is continually increasing and now numbers over 100 members, with continual applications. I hope every farmer will see the necessity of putting his shoulder to the wheel and giving the long pull, the strong pull and the pull altogether, the result of which will be astounding.

Yours fraternally,

C. C. LUTHER.

ANOTHER BOSTON GRANGE.—It is said that a second Grange has been instituted in Boston, in opposition to what is known as the State Street Grange; and about which there has been so much controversy. The new Grange is said to be composed of agricultural producers—the old one of middlemen, who handle agricultural products.

SARATOGA GRANGE, SANTA CLARA CO.—The Grange in this place is growing finely, and members are deeply interested in it, knowing it is their only hope to gain their rights. We have had two harvest feasts, and they were good times, truly.

E. M. D.

Will the Millers and Merchants Make Reliable Patrons?

We are glad to see that the National Grange, at its recent session at St. Louis, has definitely settled the meaning of the article in the Constitution which states what persons are eligible to membership in the Order. There has been much diversity of opinion on this subject, and, we fear, some slack ruling. In some Granges almost anyone expressing a sympathy with the movement could gain admission; while in others every candidate has been required to show that his leading interest was agriculture, that he did not desire political office, and that he did not buy farm produce to hold for a rise.

We confess that our own inclination is towards a strict construction of the article in the Constitution referred to.

It is neither safe for the Grange, nor an act of kindness, to admit a candidate whose financial interests will clash with those of the Order.

We see that the editor of the *Scythe* says: "Bring in your merchants and manufacturers and mechanics of every kind." When called upon for an explanation of his very liberal views on this matter, he continues: "There are many persons 'interested in agricultural pursuits' who are not actual 'tillers of the soil.' We think that the miller, who grinds your wheat, is quite as much 'interested in agricultural pursuits' as the man who sows and reaps it."

We will admit that the *Scythe* is right as to the miller's interest in farming, but, from the very nature of his business, his ideas of what should be paid for grain are the opposite of the producer's.

There are certainly some of our best citizens engaged in milling; men who are contented with a fair return for the money and time invested in their business. We fear, however, that our readers are acquainted with some who will answer to the description given by John Byrom in his "Epigram on Two Monopolists" written more than a hundred years ago. It is as follows:

"Bone and Skin, two millers thin,
Would starve us all, or near it;
But be it known to Skin and Bone
That Flesh and Blood can't bear it."

Official Advice.

T. R. ALLEN, Master of the State Grange of Missouri, for the general information of the Patrons in that State, publishes the following in *Colman's Rural World*:

Can merchants, lawyers, doctors, etc., become members of Granges? Answer: Not unless they are farmers as well; and according to our constitution, their farming interest must predominate financially. Even then they must have an unanimous vote of the members, save two. Better be careful on this point, and admit none but farmers—strictly farmers. We have already enough of others not strictly identified with us. We cannot be too careful on this point.

Are all farmers to be admitted? Answer: Not necessarily. But there should be good reasons for rejecting a farmer. His character and standing among his neighbors should at least be fair for truth and veracity; his moral character should be good; he should not be in anywise connected with, or be in sympathy with monopolies of any kind; nor should he be a known aspiring politician. Better keep all such out of our Order.

While we have no antagonism with any legitimate calling, avocation or profession, it has come to be an absolute necessity that we look to our own peculiar interests as farmers, and to do this properly, we must have no entangling alliances with other interests until our own interests are first considered, our rights properly recognized and secured, and our true importance, as the basis of the prosperity of all other classes—even of their very existence in a civilized form of society—is everywhere acknowledged. When this is done, our existence as an association will perhaps be no longer needed; or, we may throw wide our gates and invite all who will to enter unimpeded.

T. R. ALLEN,
Master of State Grange of Missouri.

GRANGERS IN NEVADA.—While in San Francisco, recently, we dropped in on the head officer of the California Grangers for a little chat on matters and things generally, and the Granger movement in particular. We were told that application had been made for the requisite papers for three Granges in Nevada—one in Washoe county, one in Ormsby, and the third in Douglas. We presume, therefore, that the order will soon be flourishing like a green bay tree in the "cow counties" of this State.—*Eureka Sentinel*.

WESTMINSTER GRANGE, LOS ANGELES CO.—Is making fair progress. We had our first harvest feast, January 31st, and it proved to be a merry time. We just got through with our first class of 15, and expect to start in with another in six weeks. The weather is fine and things are looking prosperous.—So writes Henry Stephens, Secretary.

A GRANGE PAPER.—The Secretary of an Iowa Grange states: We have a paper edited in our Grange, issued monthly at our meetings, by which we endeavor to stir up the minds of the members by way of remembrance of their duty. I think if we all take hold we can make it profitable.



My Well Spent Summer.

This story is for the "common people," so if you are one of the uncommon people, or think you are—which is just the same—turn the leaf and pass on. This is not for you.

"Kitty, I'd give the world if I only knew how to keep house like you. I feel so discouraged and disheartened that it seems as if I'd just like to give it all up and die. With the children, and the housework, and my ignorance, life is a great burden to me!"

Poor cousin! Belle! a dim suggestion of a plan by which I might help her out of her trouble had been floating through my brain for several days, and this pathetic appeal brought my ideas to a focus.

For I know how to keep house. Why? Because I had a New England mother; and if there are any better housekeepers in the world than New England housekeepers, there ought to be a separate department in Barnum's for exhibiting them to an admiring world.

My mother had a "faculty." She was a gentle woman, but when she walked through a room, the chairs, tables, etc., used to marshal themselves into place, as if a general was giving the word of command to his soldiers.

All her daughters were instructed in housewifely duties. I not only served an apprenticeship as "second girl," but was "chief cook" as well, and when my father said:

"Kitty, this bread is just as good as your mother's," I thought I had graduated with the highest honors. This was my good fortune. Poor Belle had never been taught anything but piano, and as she sagely remarked, "they couldn't eat music."

This was her ill-fortune, and so it came about that poor Belle, a thousand times prettier and brighter than I ever thought of being, gotten the threads of her web of life all in a tangle, where I could have woven without let or hindrance.

Now this was my plan. Belle was naturally very quick and bright, and I could stay six months, and train her in housekeeping. All that she needed was to be taught. But—alas for the "buts" in this world—we had planned for a lovely summer at home. We had talked about it all winter. We were going up the St. Lawrence to see the Thousand Isles; to visit Montreal and Quebec; then to Mount Desert, and on to the White Mountains, then to finish up the summer at Newport.

Could I give it up and stay at this little "pokey," unfinished Western village, teaching cousin Belle what was as easy to me as Mother Goose's melodies and the alphabet?

That night when I went up to my room, I put on my "thinking cap," and sat down to make my decision.

All at once the true question at stake flashed across my consciousness. My pleasures against another's need. And so this is your Christianity, said I to myself; this is the "enthusiasm for humanity" which you talk about so loftily! Whereupon I gave myself as sound a flagellation, morally, as ever monk gave himself physically with a knotted cord, and, the question being settled, retired to sweet slumber and pleasant dreams.

"Belle," said I, next morning at breakfast, "I think there is a way out of your trouble."

"Oh!" said she radiantly, "if you only help me."

"But, Belle, if we find a way out you will have to abdicate and let me be a kind of absolute Empress of China for a few months. How would you like that?" I said, a little doubtfully, for Belle was several years my senior, and a matron's dignity must be very tenderly approached. "Kitty, you have no idea how heavenly it would be to me to have some one to tell me each day just what to do, again. That is one of my worst troubles. To think every morning when I get up that I must tell myself and everybody else what to do, when I don't know what I want done myself."

"Well, then, we will commence now," said I. "Listen, Harry and children," said she, clapping her hands gleefully, "you must all mind cousin Kitty, and so must I. We will all be young together. I begin to feel restored already."

"Very well," said I, judicially, "to day is Thursday. We will devote the remainder of the week to getting the house in perfect order. We must have a clean casket to put our jewel of a home in."

Talk about gymnastics! There may be great pleasure in throwing out a pair of wooden dumb bells and then drawing them back again, but how can it possibly compare with flying round a room and putting it in exquisite order, that those you love may be comfortable in it.

To enjoy your work thoroughly, you must idealize it, and who could idealize a pair of dumb bells?

Saturday night came, and the house was like a bandbox. Then I put my finger on a "tender spot" in the household economy.

About one-fourth of the needless work was caused by the lack of order.

The Lord of Misrule was sovereign, and it sometimes looked as if hats and coats, dresses and playthings rained down.

"Now," said I, quoting my mother's words, "the house cannot be untidy if every person puts his or her things in place."

"Hear! hear!" shouted cousin Harry, Belle's husband, mischievously.

"You may laugh, Harry," said I, shaking my head at him, "but it is true."

"That's so," he replied, there's considerable sense in that curly head of yours, after all."

"Very well," said I, "what's the use of sense if it won't help us out of our trouble? Now I am going to draw a—what do you call it?—an agreement, by which each member of the family binds himself to keep his or her things in perfect order."

All entered merrily into the arrangement. Harry drew up a formidable looking document. He and Belle signed first; underneath the children wrote in regular order, and one of them gleefully put the pen between the baby's chubby fingers and guided them to make "his mark."

Then we reduced the regular routine of the work to a perfect system, and every day cousin Belle was to devote her spare time to learning some one thing.

Monday morning came. The house was in perfect order. Belle says, cheerily:

"Well, Kitty, what is the juvenile pupil to learn to-day?"

"What would you like?"

"If I could only make such bread as you used to have at your house! It was the very poetry of food! Mine is sour, or it won't rise, or something is the matter with it, so that half the time it is not fit to eat."

"Belle," said I, profoundly, "haven't you learned from Tyndall and Huxley and Maria Mitchell and the *Popular Science Monthly* that making bread is a chemical process, and that every chemical process is governed by certain fixed, unchangeable laws?"

Belle looked a little bewildered; then smiled archly, and said:

"I haven't devoted much time to chemistry for the past ten years."

"Yes, that's the trouble," said I, "it hasn't been chemistry but something else beginning with C, viz: chance. Now, given your ingredients combined in a certain manner, and as an absolute result your bread is as sure to rise as the sun is to rise in the east. You can't keep it down unless you put a mill stone on it. I suppose you have wasted some food in your experiments?"

"Some! If you could see the pies and cakes and bread I have thrown away you would be horrified. I sometimes think we shall come to want as a punishment."

"Well, we won't waste any more. In six lessons you can learn to make as good bread as anybody, or you are not the bright woman I think you are. So this week we will make bread every day. Of course we cannot eat it all, but what we don't want we will give to the poor."

And so every day I sat by the table and gave Belle instructions, while the pretty hands, which even hard labor could not deface, moulded the bread which came out of the oven snowy within and a delicate brown without,—the sweet and odorous staff of life. Saturday I left her to her own devices, and I don't believe she blushed more when Harry proposed to her than she did when he gave her that highest praise a man can offer—"This is just as good as my mother's."

Poor Harry! what a digestion he must have had to begin with, and what a *bete noir* "my mother's bread" is to many a young housekeeper!

So here was one great trouble disposed of. Like many other troubles in life, it needed only to be grappled with, and it disappeared.

But how, in the mean time, did it fare with the order of the house?

Disorder is a chronic trouble, and, like many other chronic troubles, sometimes needs a sharp alternative to break it up.

Thursday afternoon I saw something in the parlor which made me sit down and think a little. The result was a note, thus:

"DEAR HARRY, will you come down to the house as soon as you can conveniently? In great haste, KITTY."

Down came Harry at a pace like the lope of a California horse. Breathless he rushed in.

"Is Belle sick?"

"No," I replied; "but come into the parlor a moment."

Now that he was here, I confess I was a little afraid of the result. Men have so much *amour propre*, and so hate to be made ridiculous, that I felt as if I had drawn the elephant in a race and didn't know what to do with it.

"Harry," said I severely, "you remember our compact, and the duty of parents to set a good example?"

I could see a glimmer of suspicion in his face. Then I made a desperate plunge.

"Look on the sofa. I only sent for you to hang up your overcoat."

Pause, awful to me, while Harry vibrated between anger and merriment. Finally, good fellow that he was, he sat back in his chair and laughed heartily. "Kitty, I'll pay you for this, if I live. The idea of getting a man home from his office to hang up his overcoat! What will you bet that you don't catch me again?"

"Bet! you are demoralizing! I have lived in New York, and seen Jerome Park, I have been in Saratoga, and heard about the races, but I never made a bet. However, just to make up with you, I'll bet the price of that new China set

which Belle looked at so longingly the other day."

"Very well," said I Harry, "but you see if she gets it!"

After this it was a source of much amusement to Belle and myself to see Harry every morning sauntering carelessly around the room as if he had no object whatever in view, but, slyly looking out of the corners of his eyes to see if anything of his was astray, and then pouncing upon the offending article, like the eagle upon his prey. I lost my bet.

Now, a New England house-keeper is a labor saving institution; so, one day, I took a basket and disappeared. When I returned with it full, Belle looked up aghast.

"My goodness! are we going to have a regiment for dinner?" said she.

"No," I replied, "this is for the week. One journey for fourteen."

Belle's eyes sparkled with a new thought. Once plant the gem of forethought in a woman's mind, and it will blossom out in a thousand unexpected ways.

But there is one thing in housekeeping before which the most New England-like faculty must stand abashed: there is no "laying that specter," who is continually asking for "clean dishes."

The gods of Olympus, it is said, toss aside their goblets and take fresh ones every time, but we poor mortals cannot do that, so comes the inevitable soap and water. But one can be helped through the process, and so one day I walked to the shop of a kind of half-way Hoosier carpenter and gave him directions for making a dish-drainer, a thing he had never heard of. He brought it to us the next day, and we found it a source of solid comfort; but alas! I lost my standing with the Hoosier.

That evening when he went home to "bacon and greens" for the third time that day, he told his wife, who, with kind consideration, managed to send it along to me, that

"Them Yankee girls was powerful cute, but he didn't think he should want one for a wife. He'd rather have one of 'ornary' kind. For a woman to be telling a man how to make things, somehow seemed to him agin natur."

And yet this man had never heard of Bushell's Reform Against Nature, and didn't even know there was such a question as women's rights.

One more experiment, and that is all. The rest were like unto them. Good coffee is a drink fit for the gods, I believe it is the original nectar; but poor coffee, alas! if the deities, in that other place, have anything to assuage their thirst, it must be that, it is such a punishment to drink it!

"Now, Belle," said I one morning, "coffee." Belle looked subdued at once, as if she expected a little more chemistry, but I spared her. "Given, good coffee, properly roasted and ground, plus boiling water, and a subtle something which Sambo called 'de know how,' and the result must be, nectar."

So this week we will have coffee for our "text," and the result was, as it must be, nectar. So it went on, and before the expiration of six months, I formally abdicated, and Belle took the reins again, because she knew just how to manage them.

And did things go on in this smooth way, and bread, and coffee and all the necessities of family comforts come without any slips or mishaps?

My dear friend, I will be confidential. There are "spots on the sun," there are erratic wanderings among the stars, there are clouds as well as sunshine, and this little household was human.

There were days when things were very wrong indeed. When the children were cross, and Belle was tired, and I—well I had "nerves," I believe that is a nice way of saying it.

There were days when letters came from my party of friends, enjoying the summer trip, which filled me with hateful discontent. Hot days when the waters of the St. Lawrence sparkled before my eyes; Thousand Isles arose out of the mist of my vision like the Isles of the Blest; days when the velvet lawns, the exquisite flowers, the spreading beach, and the festive throngs of Newport, mocked me in the distance, and above all the sunny summits of the White Mountains lifted themselves like a dazzling mirage.

But those days were few. There is nothing like a sense of duty to curb the wandering fancy.

Belle, like many another troubled housekeeper needed only a little instruction and writes me that she has now a happy, well ordered home.

As for me, it is certainly a very deplorable and mournful thing for a woman to be called "cute"—but then if one has managed to help another by it, the odium is more supportable.

I have had my gay summer since, but this I still call.—My Well Spent Summer.—*Kate Payton, N. H. Statesman.*

FAME.—Much do men love fame. Much do they seek after it. But is this an object truly worthy to man? No. He who lives for fame alone is as likely so be a demon as a man. He is a beggar, asking that which others may give without asking, if they give at all. He lives for the shadow, and not the reality. Fame that is lived for is a bubble, hollow and thin, which bursts in attempting to secure. To live for fame, is to miss it. To make this the object of life is to fail. Real fame is that which follows, not that which is run after; that which comes, not that which is sought. He who lives nobly because he loves what is true and good, secures fame as the free gift of those who know him. Honest speech, brave deeds, heroic sacrifices, saintly lives, bring true fame. Nothing else can.—*The Nation.*

A Remarkable Operation.

Benj. Franklin made his name famous when he flew his kite and brought down lightning from the clouds, which had been flying around without paying their way. Now we not only flash through on wires, but science has crippled electricity and used it to perform miracles. The *Times*' readers will remember when General Kilpatrick returned from Chili, three years since, of his having a remarkable operation performed on him by a physician in New York, who removed a large fleshy formation from the General's neck by filling it full of needles and then attaching a galvanic battery to it. Ten minutes after the current of electricity was let on the bunch had entirely disappeared. A remarkable operation was performed by a Whitehall physician a few days ago. A gentleman who had been suffering from a superabundance of adipose tissue consulted a physician, asking for relief from its burden. The doctor told him he could relieve him if he would consent to a painful operation. The gentleman consented, and when the medical practitioner entered the telegraph office at this place, the fat man was requested to remove his coat and vest, after which the physician surrounded him with wires, attaching the ends to a powerful battery. At a signal from the doctor, manager W. B. Eddy let on the current. The patient writhed and twisted when he felt the current passing around him, still he stood it like a martyr. Presently he began to shrink; he grew smaller and smaller, his clothing hung in bags about his diminishing form; the doctor felt much pleased at the result of his experiment, while the formerly fat man's joy was very great, although he seemed to be suffering acute pain. All of a sudden there was a loud clicking at an instrument, as if Pandemonium's great hall had been let loose. The operator spring quickly to answer the call. He ascertained it was from the New York office. He quickly asked, "What's up?" An answer came back as if some infuriated demon was at the other end of the wire, "What in thunder are you about? Cut off your wires quick—you are filling the New York office with soap grease.—*Whitehall Times.*

Inexpensive Happiness.

The most perfect home I ever saw, was a little house into the sweet incense of whose fires went no costly things. A thousand dollars served for a year's living of father, mother and three children. But the mother was the creator of a home; her relations with her children were the most beautiful I have ever seen; even the and enabled to do good work for souls dull and commonplace man was lifted up by the atmosphere which this woman created; every inmate of her house involuntarily looked into her face for the key note of the day; and it always rang clear. From the rose-bud or clover-leaf, which, in spite of her hard house-work, she always found time to put by our plates at breakfast, down to the story she had on hand to be read in the evening, there was no intermission of her influence. She has always been and always will be my ideal of a mother, wife, home-maker. If to her quick brain, loving heart and exquisite face had been added the appliances of wealth and the enlargements of wider culture, hers would have been absolutely the ideal home. As it was, it was the best I have ever seen.—*Helen Hunt.*

THE COMPLAINT OF THE PEOPLE.—"When the people complain," said a wise man, "the people are always right." The long-suffering of the poor under the inequalities of fortune is a phenomenon which, as long as it lasts, shows that the spring of all the virtues which have at any time done honor to humanity is still flowing among us. Cold, hunger, nakedness,—they bear them all with prternatural patience. Even injustice they endure till it becomes insolent. So long as masters condescend to be courteous, the drudges of society accept their inferiority, and honor and respect those whom Providence seems to have set over them. Only when the human relations are at an end, when they find themselves treated as if they were made of other clay, as if they were machines to extract wealth from the soil, and were rewarded sufficiently in being permitted to exist,—only they begin to ask the meaning of the word gentleman, and for what purpose the lord and lady are robed in silks, and housed in palaces, while the peasant does the work, shivers in soiled fustian, and is worse lodged than his employer's cattle.—*Annals of an English Abbey, in Scribner's.*

Common Sense.

There is a chilly, disagreeable article, called common sense, which is, of all things most repulsive and antipathetical to all petted creatures whose life has consisted in flattery. It is the kind of talk which sisters are very apt to hear from brothers, and daughters from fathers and mothers who do their duty, which sets the world before them as it is, and not as it is painted by flatterers. Those women who prefer the society of gentlemen, and who have the faculty of bewitching their senses, never are in the way of hearing from this cold matter-of-fact region; for them it really does not exist. Every phrase that meets their ears is polished and softened, guarded and delicately turned, till there is not a particle of homely truth left in it. They pass their time in a world of illusions; they demand their illusions of all who approach them, as the condition of peace and favor. All persons, as by a sort of instinct, recognize the woman who lives by flattery, and give her the portion of meat to which she is entitled in due season; and thus some poor women are hopelessly buried, as suicides used to be in Scotland, under a mountain of rubbish, to which each passer-by adds a stone. It is only by extraordinary power of circumstances that a man can be found to invade the sovereignty of a pretty woman with any disagreeable tidings, or as Junius says, "to instruct the throne in the language of truth."—*Mrs. H. B. Stowe.*

ILL-TEMPER.—A single person of sour, sullen temper—what a dreadful thing it is to have such a one in a house! There is not myrrh and aloes and chloride of lime enough in the world to disinfect a single home of such a nuisance as that; no riches, no elegance of mein, no beauty of face, can ever screen such persons from utter vulgarity. There is one thing which rising persons hate the reputation of more than all other, and that is vulgarity; but trust me, ill-temper is the vilest thing that the lowest born and most ill bred can ever bring to his home. It is one of the worst forms of impiety. Peevishness in a home is not only a sin against the Holy Ghost and a sin against the Holy Ghost in the temple of Love.—*Theodore Parker.*

FIRM AS A ROCK.—Let the winds and waves of adversity blow and dash around you, if they will; but keep on the path of rectitude, and you will be as firm as a rock. Plant yourself upon principle, and bid defiance to misfortune. If gossip, with her poisoned tongue, meddles with your good name, her not. Carry yourself erect; let your course be straightforward and by the serenity of your countenance and purity of your life, give the lie to all who would underrate and belittle you.

TUITION FOR DAUGHTERS.—The *Journal of Health* asserts that no thoughtful mother should rest until she has taught her daughters to do well the following things: To make a cup of coffee; to draw a dish of tea; to bake a loaf of bread; to cook a potato; to broil a steak or chicken; to cut, fit and make a dress, and to set a tidy table. From which we conclude there is no immediate rest for a large number of mothers.

We were standing a day or two since at the Providence depot, when a very rosy-cheeked lady, fresh from the Emerald Isle, came up to the conductor, and said: "Mister, how long before the railroad will be here?" When he quaintly replied, "Madam, there is one end of it here now."

Upon the "outer wall" of a neighboring female college the other morning, was discovered, conspicuously displayed, the sign "Domestic Sewing Machines." Some of those specimens of total depravity known as college students did it.

COURAGE, when genuine, is never cruel. It is not fierce. It forsoes evil. Its trepidations come either before or after danger. In the midst of peril it is calm and cool. It is generous, especially to the fallen. It is seldom attained.

The great blessings of mankind are within us, and within our reach, but we shut our eyes, and like people in the dark, we fall foul upon the very thing we search for, without finding it.—*Seneca.*

In the long run, a tried character for truth, honor and honesty is the best capital, and gives the largest interest.

Young Folks' Column.

Strange and Curious Reptiles and Fishes.

Nothing is more wonderful than the endless variety of forms observed in fishes and reptiles, and of these two classes of animated nature, we here present the Torpedo and the Iguana, which are amongst the most strange and curious. In



THE TORPEDO

We find a living electrical apparatus which might have led men to the discovery of that wonderful agent and to the method of producing it, even had the celebrated savans who have investigated its properties, never had an existence. And indeed, it may with some be a matter of doubt whether the discovery was not thus made. Our illustration represents the *Naracion Californica*, which has a flat, cartilaginous body, which is very smooth, and which presents nearly a circular disc. The anterior border is formed by two prolongations of the snout which go on each side to join the pectoral fins, leaving between these organs and the head and gills, an oval space in which is placed the electrical apparatus. This is composed of a number of membranous vertical tubes pressed against one another like the cells of bees, and subdivided by horizontal partitions into small cells, filled with mucous matter. The apparatus is supplied with veins by several very large branches from the pneumo-gastric center. The powerful nature of the electricity generated in the apparatus may be better understood when it is known that a single medium discharged from the *gymnotus* is equal to the maximum one from a battery of 3,500 square inches. The *gymnotus*, or electric eel, is a different species which is found in the rivers of South America, and is the most powerful of the genus. It is from five to six feet long and can kill a horse by repeated discharges. In South America, when the Indians want to catch these fish, they drive a number of horses and cattle into the water. This rouses the eels, which, gliding in among the animals give such shocks as speedily to expend their force and render them capable of being easily captured. The torpedo proper is found in the largest numbers in the seas of Europe.



THE IGUANA,

One of the most formidable looking, though in reality, one of the most harmless of reptiles. Their distinguishing peculiarities are the long flap or fold of skin under the throat, similar to the dewlap of oxen; two series of small palatal teeth, the long compressed tail, and the serrated rest that runs along the back. Its very formidable appearance seems to protect it from animals that would otherwise prey upon it. It is very nimble, being able to run along the ground or climb trees with surprising dexterity. It lives in warm climates, being chiefly found in South America, the West Indies, and Australia. Some iguanas live on animal, some on vegetable food. They are arboreal in their habits, generally living in trees. Their flesh is very delicate, said to resemble chicken, and is much sought after as an article of food by the natives of the countries in which they are found. They are principally hunted in spring. The species found in Australia differs from the American in having neither dewlap nor scales, in being much longer (some being twelve feet long), and is said to be poisonous.

Specimens of the above may be found at Woodward's gardens, to the courtesy of whose manager, Mr. Henry Andrews, we are indebted for the illustrations.

An uneasy boy, whose mother tried to to quiet him on the Des Moines Valley train the other day, by telling him that the conductor sometimes swallowed naughty boys, astonished her a few moments after, as the portly form of the conductor appeared at the door, by creeping behind her and exclaiming in a whisper: "Ma, I guess that conductor has swallowed one already!"

Good Health.

Law of Transmission.

The *Herald of Health*, in answer to a correspondent, republishes Dr. Hough's observations, with comments, as follows:

1. In general, children of both sexes resemble their mother more than their father in physiognomy, habits, constitution and temperament.

2. Usually boys resemble their mother more than their father, in physiognomy, habits, constitution and temperament. In the same relationship girls resemble their father more than their mother.

3. As to whether there is any constant relationship between the physiognomical resemblance and a predisposition to the diseases of the person resembled, it is very difficult to decide from the data at hand; but it would appear from the few facts in which any observations were made in this direction, that there was a large percentage of cases in which inherited diseases were exhibited where there was such physiognomical similitude. In other words, children have resembled one parent in general physiognomy, while they have inherited the constitutional peculiarities and diseases of the other more frequently than where they have derived both these conditions from (one) the same parent.

In general, then, hereditary and acquired diseases and defects are more likely to be transmitted to offspring of the sex in which they originated, and thereafter to be subject to the principle of sexual limitation, either directly from the parent to child, or by interrupted or atavistic descent, from grandparent to grandchild.

Though sons are usually best able to follow the advocacy of their fathers, it is undoubtedly true that men inherit the genius, talent and intellectual excellence and morality of their mother or mother's father, while daughters inherit the same quality from their father or paternal grandmother.

Females more frequently transmit hereditary diseases and defects than males, though they less frequently exhibit them. Males less frequently transmit, and more frequently exhibit, inherited diseases and defects.

The reason that females do not exhibit hereditary disease as frequently as males is because of a higher degree of vitality in them which gives them greater power to restrain the appearance of the predisposition, and an inferior degree of development evolution, retaining in their constitution as germs what in men become fully developed diseases and defects.

POISONOUS COLORS.—In opposition to our expressed opinion that all anilin colors are not necessarily poisonous, some of our contemporaries think that it is better to err, if at all, on the safe side, and to avoid the use of anilin dyes for culinary purposes altogether. We do not object to this advice, and surely those anilin dyes in which arsenic enters as a component part are certainly poisonous. A warning has even been raised against fabrics dyed with anilin colors as injurious to the wearer. This has been contradicted by German chemists, who think to prove that it cannot be so. But then it is asserted that people have been poisoned and no sufficient cause could be found than the wearing of anilin dyed clothes. A writer in California goes even so far as to assert that carmine is a fully poisonous, and hangs up an alarming tableau of the consequences—loosening of the teeth, falling out of the hair, scrofulous eruptions, dyspepsia, insanity and idiocy. It is curious that carmine has from time immemorial been considered utterly harmless, and used by druggists to color tinctures, etc. It is also stated that experiments were made in France, and that a baby died under terrible convulsions after eating four ordinary plates of ice-cream, colored with carmine. Our esteemed contemporary, the *Boston Journal of Chemistry*, remarks justly in this regard, that four ordinary plates of ice-cream are very likely to disagree awfully with a baby, whether it (the cream, not the baby) were colored with carmine or not.—*Manufacturer and Builder.*

PHYSIOLOGY.—Prof. Garrod has set up a hypothesis that nerve force is generated by thermo electricity, generated by the difference in temperature of the inside and outside of the body. The experiments of men exposed for a long time to a temperature equaling the blood heat appear not to favor this hypothesis, because notwithstanding it must be acknowledged that such a temperature is not promotive of health or comfort, the simple fact that man can live in an atmosphere of which the temperature equals that of the interior of the body, is a proof that nerve force does not depend on this. It depends of course on the consumption of food, absorption of oxygen by the act of respiration, and the continual repairs of all the tissues, nervous and muscular, by the materials contained in the blood.

POISONING BY PLANTS AND INSECTS.—A standing antidote for poison by oak, ivy, etc., is to take a handful of quick-lime, dissolve it in water, let it stand half an hour, then paint the poisoned parts with it. Three or four applications will never fail to cure the most aggravated case. Poison from bees, hornets, spider-bites, etc., is instantly arrested by the application of equal parts of common salt and bicarbonate of soda, well rubbed in on the place bitten or stung.—*Boston Journal of Chemistry.*

Topical Application of Heat.

A correspondent of the *Boston Journal of Chemistry* recommends the topical application of dry heat instead of cloths moistened with hot water, fusions of hops or other plants, in cases where these remedies are usually employed. He considers this application much better than moist applications, as the latter, when they become cold, often chill the parts, and require to be frequently renewed and reapplied. In making the application of dry heat he has sought for the best medium, and instead of sand and other substances, of which the weight is objectionable, he proposes to substitute ordinary Indian meal, which is of very light weight and not unpleasant in odor, and holds heat for a very long time. In regard to the heat-holding qualities of the meal he speaks as follows:

"This latter fact I noticed when a mere boy, finding that corn meal would, after grinding, bear several miles' transportation, and, after delivery and deposition in the bins of the granary, would for hours still be warm from the friction of grinding. When, therefore, it is desired to apply dry heat to any person, it is only required to place a quantity of the Indian meal in a baking pan on a heated stove, and stir constantly till thoroughly warmed. It should not be burnt. It can now be put into woolen sacks and tied up and applied as a bottle usually is, or into large flannel bags, if for the abdomen. In a case of successful resuscitation of a new-born child, the heated meal was poured into an oblong chopping tray, a flannel cloth laid over it, and the infant in it. The cloth yielded, and the child was partly buried in the warm meal. It is found that the meal retains its heat long, and when it cools it does not chill, which is a very important consideration. Two sets of bags or wrappers may be provided, so that while on its being applied the other may be heated. The meal is not weighty. The aroma of it when heated is rather agreeable than otherwise."

Diseases of Artisans and Mechanics.

A careful investigation has been made of the special diseases incident to the occupation of artisans and mechanics, and the following are some of the most interesting among the mass of facts and data brought to light:

It appears that gliders are subject to mercurial affections. They suffer from giddiness, asthma, and very frequently from partial paralysis, which often induces a peculiar kind of stammering; they also frequently suffer from unpleasant ulcers in the mouth.

Miners in the quicksilver mines suffer from vertigo, palsy and convulsions, and the occupation cannot be pursued a long time.

Pottery glazers, who use lead largely, get into a condition very similar to that described above, with the addition of dropsy, loss of teeth, and enlarged spleen. Palsy of the limbs, especially of the arms, is a common disease among them, as also is consumption.

Glass-blowers are the victims of those affections produced by sudden vicissitudes of temperature—rheumatism and various inflammations. They are apt to become thin and delicate, and their eyes get weak.

Stone-cutters inhale the sharp particles, which tend to produce disease of the lungs, while plasterers suffer from the gases disengaged and from excessive moisture—they are also troubled with labored breathing, and they digest badly.

A CASE OF OPIUM CURE.—The *Druggist*, of London, says that a young lady who had been long accustomed to the use of opium applied to an eminent physician to make hypodermic injections of morphia. He commenced by making the injections as desired, of morphia and water; by degrees the quantity of morphia was lessened without her knowledge, until within a few days nothing but pure water was injected; after each injection she would lapse into a quiet sleep, in the same manner as she had been accustomed to do under the actual use of morphia. This treatment was continued for several months, during which time tonics had been used, to strengthen the system and bring about a healthy condition after being so long a time under the influence of opium. When he considered it safe to do so, he told her plainly that she had not taken a particle of morphia for several months, and was entirely free from its influence; this statement of course was received with intense surprise, as well as unbounded joy. The lady is to day entirely free from any desire for opium.

DURING the reheating of the furnaces in an iron establishment in England, says the *British Journal of Science*, the men worked when the thermometer, placed so as not to be influenced by the radiation of heat from the open doors, marked 120°. In the Bessemer pits the men continue a kind of labor requiring great muscular effort at 140°. In some of the operations of glass making the ordinary working temperature is considerably over 100°, and the radiant heat to which the workmen are subjected far exceeds 212°. In a Turkish bath the shampooers continue four or five hours at a time in a moist atmosphere at temperatures ranging from 105° to 110°. In enamel works men labor daily in a heat of over 300°. On the Red Sea steamers the temperature in the stoke hole is 145°. And yet in none of these cases does any special form or type of disease develop itself.



PUBLISHED BY
DEWEY & CO.
A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.
PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line..... .25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:
Saturday, Feb. 21, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Fish Culture; Who are Your Nurserymen? Twenty-five Per Cent. Lost, 113. Legislative; The San Jose Farmers' Club, Etc.; Hurry up the Grafting; Epizootic Junior; Our Native Blackberry, 120. Drowning out Squirrels on Sloping Ground; The Winter's Overflow; The Victoria Spring Bed; Extravagance and Economy, 121. Patents and Inventions, 124. **ILLUSTRATIONS.**—Improved Double Rifle Hatching Box, 113. The Torpedo; The Iguana, 119. Victoria Spring Bed, 121. **CORRESPONDENCE.**—Jute Manufacturing Again; Free Trade; Cross-Cut Saws; Letter from Los Angeles; Santa Rosa Creek Country, 114. **HORTICULTURE.**—Rice Culture on Upland; Cultivation of Pumpkins; Wild Morning Glory, 114. **THE VINEYARD.**—Value of the Scuppernong; Hybrid Grapes, 115. **SERICULTURE.**—Sericulture, Etc.; Growing Importance of the Silk Industry, 115. **PATRONS OF HUSBANDRY.**—Progress of the Patrons in California; New Granges; Meetings; Etc., 116-117. **HOME CIRCLE.**—My Well Spent Summer; Fame; A Remarkable Operation; Inexpensive Happiness; Common Sense; Ill-temper; Firm as a Rock; Tuition for Daughters, 118-119. **YOUNG FOLKS' COLUMN.**—Strange and Curious Reptiles and Fishes, 119. **GOOD HEALTH.**—Law of Transmission; Poisonous Colors; Physiology; Poisoning by Plants and Insects; Topical Application of Heat; Diseases of Artisans and Mechanics; A Case of Opium Cure, 119. **POPULAR LECTURES.**—Professor Neri's Lectures—No. 3, 121. **USEFUL INFORMATION.**—Water-Color Decorations on Wood; A New Material for Ink; How to Sharpen a Screwdriver; Bronzing Articles Made of Iron Wire; Fastening Iron in Stone; An Arrangement for Getting Rid of Deleterious Gases in the Laboratory; Swedish Filter Paper; Little Engines; Can Electricity be Profitably Employed as a Source of Power? Iron in Plants; The Detection of Death, 122. **THE DAIRY.**—The Grange Dairy Agency; Salt for Butter; Care of Cows; Notice to Consignors, 123. **AGRICULTURAL NOTES** from various counties in California and Oregon, 124. **MISCELLANEOUS.**—Cotton Seed Planter; Explosion of Chlorine and Hydrogen, 114. Another Type-Writing Machine; English Lead and Silver; Removing Snow from Roadways; The Philosophy of the Sand Blast; How Mark Twain Got "Beat"; Improved Wood Fence; Live Stock Transportation, 115. Safety Hoisting Apparatus, 123.

Hurry up the Grafting.

The prolongation of incessant rains is crowding the winter's work into the "lap of spring." Indeed the young lady's lap is already running over with things to be done, and some of them will have to be done in a hurry or they will not be done at all. Though a great deal of land is too wet to plow, and will be for several days, yet our fruit trees are growing, the buds are swelling, and it is high time that grafting all large trees was in progress.

Early set grafts always do the best; we call those early which are set as soon as the buds of the tree to be grafted begin sensibly to swell, and should always be done before the tree is in blossom. Dry or wet, if the season is not backward from unusual coldness, trees will start and be in condition for grafting, though the soil be too wet to be stirred beneath them. Grafts can be cut even now with good chance of success, by taking that portion of the last year's scion, midway between the terminal buds—which always start first—and the two year old wood, this portion of the scion or twig being always the latest to expand its buds. It would have been better, however, had they been cut before the last expansion. On large trees ordinary cleft grafting, in which the stock is split and the graft inserted wedge-shaped, is in ordinary practice the most reliable and satisfactory, and any sensible boy 14 years old can learn all the art and mystery there is about it of any willing, communicative nurseryman in fifteen minutes practice and looking on.

THE YOUTH OF CALIFORNIA is the title of a new amateur paper, published by J. F. Davis and C. H. Wolf, S. F.

Epizootic Junior.

Some three weeks ago a strange distemper was first noticed in the stables of this city. The symptoms are not the same as in the general epidemic which passed over the whole country a year or so ago; in this case the animals affected show signs of stupor and become very weak, but under proper care and medical treatment, recover in a few days.

As yet this new disease is confined, so far as we have heard, to the stables of the horse-car and stage companies. Some of these lines are seriously inconvenienced by the unexpected misfortune, and are unable to make regular trips. It is noticeable that, in all great horse epidemics, the disease invariably shows itself first and worst in the stables of companies employing large numbers of horses, and where the animals are confined in, usually, too limited a space. Horses kept in private stables do not suffer as severely, if they are attacked, which frequently does not happen at all.

There appears to be no reason for anticipating a visit of the dreaded epizootic, though those who have affected animals betray some anxiety, and manifest much reticence. But it is evident that much remains to be learned in regard to these horse diseases. Experience has shown many good ways of fighting them, when once they have set in, but we are still in the dark as to modes of prevention. Certain it is, however, that the practice of keeping large numbers of animals, whether they be horses or not, in crowded, dark, unhealthy enclosures, is as impolitic as it is reprehensible from a moral point of view.

Our Native Blackberry.

In our indigenous blackberry we have a variety that should claim the attention of our small-fruit growers to a greater degree than it seems to have done. All know that the first fruits of the season bring the highest prices. All know that the common wild blackberry is fully ripe and on the market weeks before the Lawton, Highbush, or any of the cultivated of improved varieties. Now it is this earliness of the native berry that should give it value, and not its size, for in this it does not equal the improved sorts. But who is ready to say, what judicious selection and careful culture may yet do towards its improvement?

The blackberry, to be palatable or even fit for cooking, must be ripe or nearly so; and to obtain them thus, even if of small size, so that they were in advance of the other varieties in ripening, would secure for them certain sale at the highest prices. Last year they were on the market the 15th of May, a few lots fully ripe, others with some red or partially ripe berries intermixed.

Though growing in great abundance in many localities, and easily procured on going for them, they command, on first appearance, fifty cents a pound, and for many days thereafter twenty-five cents; and yet their cultivation and improvement have never to our knowledge been attempted scientifically; their early maturity, however alone, ought to secure it.

PLANT A VARIETY.—Now that more or less grain has rotted in the ground in different counties of the State, we suggest that the ground be replanted to different crops. Barley is transported to Chicago at a profit, one firm having forwarded over 100 car loads. It will be likely to maintain a fair price another season, when wheat rates may be down for lack of good prices abroad, or by reason of high rates of shipping. Where barley is not practicable in some places, corn may be raised, especially Canadian or other early corn. Flax should also be cultivated more extensively. Seed culture should receive greater attention than it does in California. We should not import such quantities of Eastern and foreign seeds as heretofore. Raise more beans. Broom corn has brought good prices for several years in this market, and is easily raised in certain localities. Since writing the above, we see that a correspondent from Suisun this week suggests planting sugar beets, also. Liberal experiments should be made at least in this direction. If the plan of drying beets before manufacturing is adopted here as in Europe, it will make beet culture profitable in many new localities.

PROTECTION DEMANDED.—Our indefatigable legislative prescriber, Sargent, has received a petition from twenty-one citizens of Fresno county, reciting that they are settled with their families, on agricultural lands near King river, but are threatened with ejection by claiming agricultural lands under a swamp land location. They therefore pray for the passage of a bill to protect them. The petitioners are endorsed by 75 other citizens of Fresno and Tulare counties, who certify to the agricultural character of the lands. We fear that poor Mr. Sargent will have about as delicate an undertaking on hand, in attempting to adjust matters between the rightful settlers and the land-grabbers, as in the recent case of the mining law entanglement, in which he came in for blame, not only on account of his own measures, but those of another senator, with whom the telegraph or the types confounded him.

SHASTA and Tehama counties have organized an Agricultural Society; Colonel E. J. Lewis is President.

State Legislature.

One of the best evidences of the sincerity and success of the efforts of the present Legislature to economize is the fact that it has begun at home, and made an important reduction in its own expenses. Up to Saturday last—76 days—the outlay on the contingent fund of the Senate had been \$7,227—for the same time at the last session it was \$15,200.

The present contingent fund of the Assembly on Saturday showed an outlay of \$9,800—for the same time of last session, the outlay was \$18,394—showing a saving by this session in this one item alone of \$16,566 for the first 76 days of the session.

LEGISLATIVE HOLIDAYS.—The Assembly set a good example this year in refusing to adjourn over St. Valentine's Day, and kept on with its work, as honest men should. The Senate, however, which has not yet realized the full meaning of the recent movement of the people in favor of economy, conformed to the venerated customs of olden times and refused to be seen in their accustomed seats. The people have made a note of it.

RAILROAD TICKETS.—Assemblyman Roush has introduced a bill which provides that railroad tickets shall be good for two years from date of purchase, and that holders may stop off and retain tickets by notifying conductors, who are to write upon or punch them, to show to what extent they have been used. Tickets are not to be collected until just before reaching stations specified on them. The bill was referred to the Committee on Corporations and reported back with the recommendation that the time be fixed at one year instead of two. Some provision of this kind for the protection of passengers should become a law.

EXEMPTING THE PRESS.—The thanks of the press are due to Mr. Duffy, of the Senate, for introducing a bill exempting editors, reporters and printers actually engaged in newspaper work from jury duty. Many reasons for the propriety of such a law might be given, aside from any desire on the part of such favored individuals shirking a public duty.

ANOTHER NEW COUNTY.—A bill has been introduced to divide Solano county and create Vallejo county, making that enterprising town the county seat thereof.

ALASKA AS A PENAL COLONY.—The resolution relative to the establishment of Alaska as a penal colony, has been indefinitely postponed. It was feared that California would, in such a case, be overrun with escaped and discharged convicts.

AGRICULTURAL STATISTICS.—A bill has been introduced in the Senate for the collection of agricultural statistics—such as amount of grain threshed, to be reported for every machine, and recorded by the County Clerk for public reference, etc.

CENTRAL RAILROAD INVESTIGATION.—Both branches of the Legislature yesterday passed a concurrent resolution urging Congress to appoint a committee to investigate the transactions of the Central Pacific and other railroad companies with the Contract and Finance Company, whereby large sums have been fraudulently perverted to the use of a few stockholders. Senator Edgerton stated that he had authentic—almost authoritative—information that Congress would appoint such a committee, if the California Legislature took decided action. We may now hope for a thorough overhauling of all the affairs of that institution.

THE APPORTIONMENT QUESTION is still in abeyance. There was quite a battle upon the question in the Assembly on the 13th instant. A resolution was introduced into the House on Monday, which was evidently intended to strangle it. Every possible subterfuge will be employed by the railroad interest to deprive the agricultural counties and this city of its due representation, despite the plainest requirements of the Constitution. Another refusal to re-apportion would be most emphatically revolutionary in its character. Is the opposition in the Legislature prepared to take such a responsibility?

CAUTION TO FARMERS.—Stock men are circulating petitions for an amendment to the herd law, giving them this season's crops; but they can carry this measure further than the Senate. Should it reach the Governor it would never secure his signature. The fact has gone forth and the law, as it stands, must be final, unless it is made still more favorable for the farmer. The stock men had better succumb quietly to a just provision.

LEGISLATION FOR SAN FRANCISCO.—Members of the Legislature should look carefully ere they legislate for any further large expenditures for this city. San Francisco is already overburdened with taxes, and our authorities ought not to be empowered to further increase them. Everything which tends in that direction will be charged to the Independent party, and by implication to the Patrons of Husbandry by their enemies, albeit they themselves might be at the bottom of the matter.

ALFALFA FAILS SOMETIMES.—Discretion must be used in sowing alfalfa. Some 200 acres of alfalfa, sowed several years ago at Patterson's ranch, Alameda county, gradually died out. The soil was fine and dry—the bsy. In places the gophers annihilate it.

GRAPE CUTTINGS.—N. Wyckoff, of Yolo Grange, Woodland, offers to furnish grape cuttings during the pruning season now at hand, at very low rates by the 1,000. He has Zinfandel and various kinds of desirable grapes for raisins.

Farmers' Club.

Ssn José Mercury, Feb. 15: The Farmers' Club met at the usual hour on Saturday, and was called to order by President Casey.

The committee appointed to prepare a petition to be presented to the Legislature in regard to the sale of spirituous liquors, made the following report:

To the Hon. members of the Senate and Assembly of the State of California: We the undersigned, citizens of Santa Clara county, having learned with much satisfaction that a law has been passed by your Hon. body, prohibiting the sale of spirituous liquors within one mile of the following named State institutions, to wit: The State University, and the State Branch Lunatic Asylum; respectfully petition your Hon. body to extend the beneficial operation of said law to all our State institutions, and in particular to the State Normal School, at San José, in said county of Santa Clara, State of California. And your petitioners, etc.

On motion, the report was adopted.

The committee on a Referee law, reported as follows:

WHEREAS, The collection of debts and the settlement of difficulties between man and man should be made as easy and as cheap as possible, and believing that our present system does not fulfil those conditions, but on the contrary entails much trouble, cost and delay on both parties; therefore,

Resolved, That we, the members of the Farmers' Club of San José and citizens of Santa Clara county, respectfully request the members of the State Legislature from said county to cause a bill to be prepared making a law to enable every defendant to a suit for debt or trespass to compel the plaintiff to submit the matter to the judgment of one or more referees as may be agreed upon, and whose judgment shall be binding on the parties litigant.

Report received.

One of the members read an interesting article on the preservation of forests.

On motion, the prohibitory liquor law was taken up and discussed.

One of the members thought the Legislature had the power to make such a law for the Normal School. It is for the benefit of the pupils who are studying to become teachers. We want every moral influence thrown around them. We all know the law is just, and so no argument is needed.

One of the visitors made a few remarks. He held that it was a question whether the law could be enforced in cities. The Branch Insane Asylum and the State University are outside the corporate limits of cities, and the law which might answer in their cases would not in the case of the Normal School.

Member No. 2 thought the State had the right to make the proposed law. At all events there could be no harm in petitioning for the law. It could be referred to the Judiciary Committee, where its legality could be determined.

The visitor above referred to desired to be understood as favoring the passage of such a prohibitory law, if it was practicable. In the cases of the Branch Insane Asylum and the State University, liquor saloons had been opened after the erection of said buildings, for the purpose of obtaining the patronage of the students, and the Legislature had passed the bills for the purpose of shutting them out.

On motion, a committee, consisting of Hobson, Erkson and Holloway, was appointed to circulate the petition, and after obtaining the requisite number of signatures to forward the same to the Legislature.

The regular question, relating to the "Teachers' Ring" and the salaries of teachers, was then discussed.

OUR CORRESPONDENCE still presses upon our columns and the only regret is that we have not more space to devote to it. As it is, we are obliged to curtail, in part, and sometimes reject, in order to give variety to our columns, when we should be more pleased to give the whole entire. We have now before us the following, not heretofore noticed: An interesting letter for the "Home Circle," from C. I. Nichols, of Potter's Valley; J. B. Hoffman, Amelius Kamp, and "A Farm Laborer," send us each a letter on "The Proper Sphere of the Farm Laborers; Thos. Smith and J. S. Ward, discourses on sheep and goats; Wm. M. Haynie furnishes new and interesting facts about the Cottonwood Tree; "A. R. W." gives his experience with Alfalfa; "A Subscriber" from Livermore writes on spling bluestone to wheat; D. G. Ingraham asks some questions about potatoes; "F. G." and "E. M. D." furnish suggestions and queries about the "Foot-hills;" "A. Kemp," suggestions on the Wild Morning Glory; "P. W." sends us a poetical effusion on Kern Lake. In addition to the above we have also numerous queries, etc., on various other subjects.

W. N. FURLONG has purchased twenty acres of land near San Felipe, which he intends to set out with rsmie plants this spring, and enter into their cultivation in earnest. Several others are also going into ramic culture near Gilroy.

THE VINEYARD.—Pentland Bros., of Knights' Ferry, Stanislaus Co., give us further items about raisin grapes. They will furnish cuttings at \$5 per 1,000.

POPULAR LECTURES.

Professor Neri's Lectures—No. 3.

[Especially Reported for the Press.]

Professor Neri delivered the third lecture of his series on Thursday evening of last week. The special branch of the subject treated on was

Galvanism.

The first and second lectures having been devoted respectively to frictional electricity and magnetism. This form of electricity, which affords the means of producing a steady force, by means of chemical action, was entirely unknown to the ancients. Its discovery only dates from 1790, and owes its origin to the accidental placing of a frog between the opposite poles of an electrical machine, when a series of startling convulsions was observed which excited the curiosity of Galvani, and induced a series of investigations, and finally led to the full development of the galvanic principle.

Galvani inferred the existence of electricity in the bodies of the frogs, and that it was decomposed at the junction of the nerves and muscles—thus developing the phenomena observed. Some even thought that the philosophy of life had been discovered. But Volta did not coincide with this theory, holding that the electricity was contained in the two metals which were brought in contact.

A Famous Controversy

Grew up between the experimenters and the two schools which arose in connection with this controversy. Neither, however, have been entirely correct. The phenomena were due neither to the nerves and muscles of themselves, nor the contact of the two metals alone, but to the aggregate of the whole. They were due to the chemical action induced in the liquids of the body of the frog or the animal by the contact of the two metals. Le Brun was the first to make this discovery and announce it to the world. Following out this idea, many new and ingenious experiments were resorted to, which finally led to another important discovery—that of

The Voltaic Pile.

Which was first announced to the world in March, 1800. One of these devices was shown to the audience, but somewhat more elegant and elaborate than that first devised by Volta, whose first effort consisted merely in placing together a series of silver and copper coins, each couple separated from its neighbor by a piece of cloth, moistened with acidulated water. He found that when he brought the two termini together, by means of two pieces of wire, that a sensible shock could be felt, which might be repeated as often as contact was broken or closed. This discovery created much sensation all over Europe, and was soon improved by Volta, himself, in the substitution of cups for plates of silver and copper, or zinc and copper. By multiplying these plates or cups the power may be increased to any desirable extent, and will continue until the acid in the battery becomes saturated with the zinc, which it decomposes. Of course the power disappears gradually, unless the strength of the acid is kept up by frequent renewals.

Various improvements on the galvanic or voltaic battery have made from time to time, the first of which was that of Daniells. Smee's battery is remarkable for its simplicity; but the most powerful and convenient battery is that devised by Grove, which is simply an improved modification of Daniell's. A modification of Groves' battery has been introduced by Bunsen, which is very popular in Europe. The galvanic current, even with a very feeble battery, is capable of supplying a very strong light. This fact was demonstrated by a large number of

Very Brilliant Experiments.

Which included also a demonstration of the comparative conductivity of the various metals. To show the latter, the current was caused to pass over a chain composed of alternate links of silver and platinum. While the latter glowed with heat, the former were not seen at all, owing to the facility with which the current passed over them. So intense was the heat produced that small pieces of wire were readily fused. While the current passed unobserved over a large wire, its passage over a small wire caused the iron to glow with heat. So intense is the electric heat that it is capable, not only of fusing, but also of volatilizing the most obdurate metals or even precious stones. Carbon in a peculiar condition of semifusion is the only substance capable of resisting its action.

Effects on the Animal System.

When passed through the human or any other living animal body, the galvanic current produces great activity of the nerves, and is hence often beneficially applied as a remedial agent to the human system, but requires to be applied with great caution. Applied to a dead body it is capable of reproducing all the vital

actions, even to respiration. Allusions were also made to the appalling effects of experiments often made on the bodies of executed criminals, where the lifeless remains are made to develop all the activities of actual life—writhing in contortions, rolling the eyes in horrible glare, moving of limbs, hands, etc. Some very beautiful experiments were given of

The Electric Light.

Showing the manner in which it is produced, etc. This light is produced by employing small pointed pencils of carbon, as the terminal poles. When these two points or poles are made to approach each other,—point to point,—and the current is turned on from the battery, the passage of the same from the positive to the negative carbon point is attended with a much greater light than it is possible to produce with any other substance yet experimented with. So powerful and penetrating is this light that, when sufficiently elevated, it may be distinctly seen 200 miles. This light does not depend upon the presence of oxygen, as it may be produced as readily in vacuo as in the open air. Hence the facility with which it may be employed under water, requiring no air to sustain it. It may be so employed either in a water-tight glass globe or entirely exposed to contact with the water. In the latter case, however, the brilliancy is greatly reduced. This light may be usefully applied in many ways, as for light-houses, underground workings, photographic purposes, etc. The intensity of brilliancy is

The Winter's Overflow.

The present wide and deep overflow of the great middle section of the Sacramento valley, though somewhat damaging to the immediate agricultural prospect of our vast tule country, now more or less in condition of attempted reclamation, may yet prove a lesson of great profit to those more immediately interested. Our motive in writing is not to dampen the ardor of any who may see in these reclaimed tule lands, future mines of agricultural wealth, for we believe they possess them eminently. Nor is it to discourage those who have met with partial disaster in their attempts to reclaim the lands by systems of levees; for, whatever mistakes may have been heretofore made in their location and construction, all can be remedied if we but heed the lessons taught us.

But our object is partly to make a record of the existing condition of land and water, as likely to occur at any future time as now, and yet not probable for many years, for who has ever seen two years in California alike, or even nearly so? The usual concurrent causes of a flood and overflow of the tule country, have usually been found in early and heavy snows upon the Sierras to be brought down upon us

larger, to carry the same quantity of water within their banks.

Instead of shutting up the sloughs, they should be opened and their banks leveled; instead of trying to keep the water out of the great centers of the tules, new channels should be opened through them and the resulting earth should be the levees of their sides; and finally, instead of trying to set the Sacramento river up on edge between two levees as near the bank as they can be built, ample room should be allowed for its spread; then and not till then will the tule lands of the Sacramento valley be securely reclaimed.

The Victoria Spring Bed.

The accompanying cut shows an improved spring bed, manufactured by W. H. Smith, 151 New Montgomery Street, in this city. Its prominent features are its cheapness, lightness and elasticity. The bed is composed of 192 steel springs, yielding and pliable like watch springs, the helices united by metal clamps, and the whole so arranged that pressure, applied upon any one portion of the surface of the bed, is equally distributed and sustained by all of the springs. This imparts to the bed an even elasticity and general softness, which is a peculiar characteristic, preventing that sinking down of the bed in one spot, and that down-hill feeling of the surface, or sloping towards the place where the greatest weight rests—defects that are common to the ordinary spring beds.

Another striking advantage of this bed is its remarkable flexibility. As shown in our engraving, it may be rolled up like a blanket, forming a convenient package for transportation, and it may be carried about the household with the utmost facility.

Its extreme lightness is a distinctive and important quality, the total weight of a first-class double bed being only 35 lbs. A child may carry it; any woman may lift it with ease. Housekeepers will appreciate this quality, for they can remove and place the bed whenever they require, as easily as if it were a bolster.

Another excellent feature is its security against corrosion, the springs being inlaid with a water-proof fire-enamel, which renders the bed serviceable in any climate, hot or cold, dry or damp.

Both sides of the bed are alike; it can be used either side up; has no attached frame of wood or slats, but is soft, flexible and yielding in every part. In summer time it forms a cool and luxurious couch.

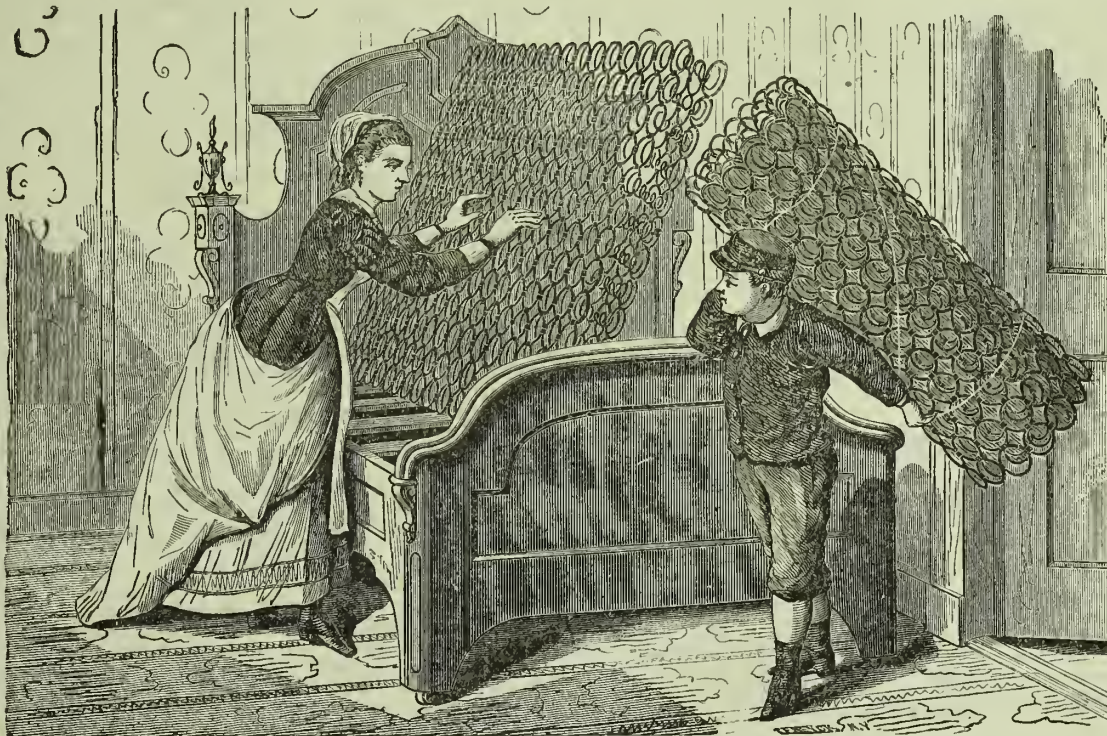
This bed is noiseless and durable. Rolled up for transport, as shown in our engraving, it forms a light, compact bundle of steel springs, which may be sent to any part of the world without risk of damage. At each place where the springs are joined together a piece of leather is inserted inside of the band so as to prevent any noise or scraping. Different sizes of beds are made to suit different bedsteads.

Extravagance and Economy.

The cost of running the National Government for the ensuing year is estimated at \$394,000,000. This amount represents the savings of at least two millions of men—or is as much money as that number of laborers can earn in a year, exclusive of food and clothing. It is about six times as much as it cost to run the government under, the old economical administrations of 20 or 25 years ago.

How long are the people to stand such extravagance? Much money that is honestly expended might be saved without any detriment to the country; but if we could only save the stealings and moneys that are recklessly squandered, it would reduce the sum total by an amount that would yearly or quite pay the interest on the entire national debt. It would be an interesting and most important move in the direction of government economy if Congress would appoint an honest committee of inquiry—say as honest as could be found in that body—to go through every department of government and enquire carefully as to what amount could be saved by removing dishonest persons, and practicing a rigid economy everywhere. It would be both interesting and astonishing to mark the sum total that might thus be presented. The task would be a great one; but numbers, energy and perseverance would eventually accomplish it. Congressmen may as well prepare for such a move, for it will soon be made, in some form, and the disagreeable truth brought out and laid before the people. If the members are not now there that will undertake it, there is a movement on foot that will soon place them there.

JOSEPH H. TAYLOR, a farmer near Livermore, will plant this spring one thousand pounds of cotton seed as an experiment.



VICTORIA SPRING BED.

equal to about one-third that of a similar ray of light direct from the sun. The fourth lecture of the course was given on Thursday evening last,—the day on which we go to press,—and, of course, too late for a report to be given in this week's issue.

Drowning out Squirrels on Sloping Ground.

The war against the ground squirrels is such a serious affair, in some parts of our State, that we are very glad to spread such information as may be of use to thrifty farmers in their attacks on the vermin.

We hear of a Mr. Smith, living near the San Pablo road, near the northern line of Alameda county, who routed the enemy in the following ingenious manner: The field to be cleared had a gentle slope in one direction. Beginning on the upper side of the field, two light furrows were run with a plow, leading from the corners and meeting at a point higher than the burrows of the squirrels. By this hit of engineering, a considerable stream of water was secured during our late heavy rains, and with little trouble led into the burrows. One after another, the unwelcome squatters were forced to come out of their strongholds, and settle accounts with those that they had before robbed with impunity. With but little help, and working on wet days, when there was little else to do, Mr. Smith cleared his land of squirrels. Reader! Go thou, and do likewise! Save your crops, and your reputation as a thorough farmer and good neighbor. Every squirrel that is allowed to remain on your farm from this time till autumn, will cost more than the raising of a fat fowl.

A proposition to form cheese factories near Bloomfield, Sonoma county, is under consideration. It is thought that milk at ten cents a gallon can be made into cheese with profit. There are 950 cows milked within three miles of Bloomfield.

THE BANNER OF CITY REFORM is a new Temperance monthly, by J. Rawson Johnson, S. F.

by a copious rainfall of several days' duration. It has not been so this year, and yet our great valley is to a considerable extent submerged.

There was no piling up of autumn snows upon the mountains; the rains in the valleys, which are snows in the mountains, were late in coming, and when we did get them, were so gradual in their fall that nearly every drop was absorbed by the earth, with a corresponding light fall of snow on the mountains. But as the season advanced the rains and snows have increased, till now we have more of rain than the earth can absorb and an immense accumulation of snow to be added to the rainfall as soon as the season will admit of its melting.

Here then we have the material for very late as well as present high water, simply from the action of the sun upon the snow alone; but suppose we get a copious warm rain in March or April that shall reach to the mountains, where will be the levees that have scarcely stood up against a slow accumulation of waters from moderately descending rains? It is evident to us, that we have not yet adopted the best system of reclamation for our tule lands. The moment we throw up a levee on one bank of the river, and the other bank is without one—it being sufficiently high for farming purposes without it—we send a plow of set back waters over all these high grounds, such as was never seen before, and greatly to their damage.

This necessarily calls for an opposite level to the one causing the drainage, in order to keep the river within bounds; it is built, and now it is found that both are so near the banks that the river cannot carry the water in the space allowed it, hence a break, with resulting damage and overflow to one side or both. The owners of the tule lands do not seem to consider that their broad area of acres is just as much a part of the great water-shed of the Sierra and Coast range, as are the mountains and foothills themselves, and must therefore have, to carry their waters, as many water channels as the mountains and foothills have, or if fewer in number, must be immensely

USEFUL INFORMATION.

Water-Color Decorations on Wood.

Our fathers appear to have had a horror of all plain woods, and quickly covered them up with cloth and woolen velvet and tapestry, or disguised them with painting, while our mothers were not less industrious in hiding such woods from sight by coverings of chintz, lace, and muslin. Nowadays we are beginning to perceive that these sober, quiet woods have a beauty of their own, and that they lend themselves with ready adaptability to the purposes of the furniture-maker, decorator, and designer. On the Continent even the plainest and least attractive of woods are used for furniture and decoration. Where, from a want of color or grain, the surfaces are not sufficiently varied or pleasing, they call in the aid of water-colors, and plant thereon pigments of considerable variety, beauty, and elegance, before these surfaces are submitted to the hands of the polisher.

The application of this mode of decorating is almost universal. It may be applied to pen-holders and work-boxes, to tables and cabinets, and it is our intention to advocate its more extended adoption by giving, from time to time, designs specially prepared for this kind of cheap artistic decoration.

The wood on which the design is to be made should be of as hard a quality, and with as little grain as possible. On the Continent the woods most used for this purpose are the plain white maple, linden, and box; but there are many suitable woods, some of which are of the cheapest kind. The chief point is to select a surface sufficiently close to prevent the colors from spreading, as they will do when the wood is too absorbent, or the colors used are too wet, and one which has no dark markings or grain to interfere with the design. Having chosen your wood, and had it duly prepared in the form of a panel or table-top, or any other part of whatever article you have to decorate, the design is first drawn in outline with a pencil lightly, in order that the surface may not be impressed. The white parts are painted on with Chinese white, the dark parts with Indian ink, and the shaded lines with sepia. The remaining portions are left untouched, unless the color of the wood is objectionable, in which case a warm grey would be a suitable tint for them. If the black portions are not uniformly and deeply black, go over them again. When the pigments are dry and hard, the pencil-lines of the design are retraced with Indian ink, and a fine mathematical pen.

The design being thus completed, and again hard and dry, it is ready for the polisher, who should do his work so thoroughly that the polish will resist effectually the action of moisture; which, penetrating to the water-color design, would soon damage, and eventually destroy it. The polished surface should be cleaned with a damp cloth, and well dried, to avoid this risk. —London Furniture Gazette.

ALL housekeepers have some time realized the difficulty of lighting a fire in a still, damp morning, when the chimney will not draw, and vigorous blowing proves ineffectual. Science explains the trouble as "caused by the difficulty encountered in overcoming the inertia of the long column of air in the pipe or chimney, by the small column of air that can be forced up through the interstices of wood and coal, at the bottom of which the fire is kindled." This may be remedied by first lighting a few bits of shavings or paper placed upon the top; thus, by the heated air forcing itself into the chimney and establishing there an upward current, the room is kept free from the gas or smoke which is so apt to fill the room; and the fire can then be lighted from below, with good success.

Young engineers will find the following recipe a good one for polishing the brass-work of their engines: Rub the surface of the metal with rottenstone and sweet-oil, then rub off with a piece of cotton flannel and polish with soft leather. A solution of oxalic acid rubbed over tarnished brass soon removes the tarnish, rendering the metal bright. The acid must be washed off with water, and the brass rubbed with whiting and soft leather. A mixture of muriatic acid and alum dissolved in water imparts a golden color to brass articles that are steeped in it for a few seconds.

A NEW MATERIAL FOR INK.—Moigno states that the juice of the *coriari thymifolia*, or ink-plant of New Granada, resists most chemical agents better than ordinary ink. When used fresh, the writing is reddish, but it becomes black in a few hours. It does not corrode steel-pens, and cannot be removed from paper by sea-water, on which account it was used for all public documents when New Granada was under Spanish dominion, under the name of *chanchi*.

M. GAUDIN has been making experiments to supersede borax, which is generally employed in soldering, and the result is that he finds that an excellent flux for soldering iron, and brazing copper and aluminum bronze, is obtained by a mixture of equal parts of cryolite and chloride of barium. Cryolite is a product and export of Greenland, and consists of a double fluoride of aluminum and sodium.

How to Sharpen a Screwdriver.

The screwdriver is found not only in the tool-chest of every mechanic, but in most houses, and in not a few offices. It ranks with the hammer, the saw and the axe, in general utility, and yet very few persons know anything about how it should be sharpened so as to do its work most efficiently; that is, with the least expenditure of power, and the least injury to the heads of the screws.

In driving a screw into wood, the force used to press the screwdriver against the head of the screw tends to aid the latter in penetrating the wood, but when we attempt to extract a screw, every pound of pressure that we apply tends to render it more difficult to get the screw out. It therefore becomes very important that the screwdriver should be so formed that it may be kept in the nick of the screw by the exertion of the very least degree of force; for if it has any tendency to slip out, we can keep it in place only by applying pressure, in which case we run great risk of injuring the nick and rendering it impossible to draw the screw.

If we examine a screwdriver in the condition in which it is ordinarily found, we shall find that it presents a section in which the sides of the wedge, in which all screwdrivers terminate, are curves with the convex sides outwards. Now, the effect of thus curving the sides of this wedge, is to render it greatly more obtuse. Moreover, when we turn the screwdriver, the tendency to slip out of the nick is just in proportion to the obtuseness or bluntness of the wedge, and therefore this form is the very worst that can be chosen. In the hands of most good workmen, therefore, we find that the screwdriver ends in a wedge of which the sides are perfectly straight. This is a very good form, but is not equal to a form in which the sides of the wedge are curves, but with the concave sides turned outwards. In this way we lessen the obtuseness of the wedge at the extreme point, and produce a turnscrew which may be kept in the nick by the least possible pressure endwise. To grind a screwdriver into this form, it is necessary to use a very small grindstone, and many of the artificial stones found in market answer admirably. Many mechanics would find it to their advantage to keep one of these small grindstones for the purpose, as it could be run in the lathe with very little trouble. —Technologist.

BRONZING ARTICLES MADE OF IRON WIRE.

The following process is commended as the best and cheapest process: Clean the wire perfectly, and then immerse it in a solution of sulphate of copper (blue vitriol) until covered with a coating of metallic copper. Then wash and immerse the articles in the following solution: Verdigris, 2 ounces; sal ammoniac, 1 ounce; vinegar, 1 pint, diluted with water until it tastes only slightly metallic, then boiled for a few minutes and filtered. The articles are steeped in this liquor at the boiling point, until the desired effect is produced; but do not keep them in too long. When taken out, wash carefully in hot water and dry.

FASTENING IRON IN STONE.—A writer strongly recommends the use of zinc instead of lead for fastening iron railings into stone. It is well known that iron cemented with lead is consumed by rust very rapidly and destroyed. The zinc, however, established a galvanic circuit with the iron, and being positive to the iron, sustains all the chemical action and becomes oxidized, while no rust forms upon the iron. While with lead the opposite takes place, it makes also with iron a galvanic combination; but the iron being positive compared with the lead, it undergoes the chemical action, is oxidized, and protects the lead at its own expense.

A NEW material for use in circulating tubes for warming purposes has been suggested. It consists simply of glycerine in which calcium chloride or some other hygroscopic salt has been dissolved, so as to bring the specific gravity up to 1.40 or 1.45. Such a mixture boils at 300° to 320°, and may be used without loss of material in many kinds of apparatus for heating where steam, etc., is employed.

AN ARRANGEMENT FOR GETTING RID OF DELETERIOUS GASES IN THE LABORATORY.—Mohr suggests that such gases be either conducted through a rubber tube into the outside air, or into a Woulff's bottle containing milk of lime and in the second neck of which a funnel is placed containing small bits of charcoal.

SWEDISH FILTER PAPER.—Dr. F. Mohr discourages the use of this article. The author asserts that there are numerous brands of German filter-paper that are far superior, both as regards strength of tissue and small amount of ash, in addition to being very much cheaper.

ACCORDING to a French journal, horses and other animals may be protected from the persecutions of flies by painting with a pencil the inside of the ears, or other parts liable to be bitten, with a few drops of empyrumatic juniper oil.

AS A MEANS of avoiding explosions in the use of hydrogen apparatus, Fresenius says the gas may be passed through a tube containing a number of small discs of fine wire placed between cotton.

Little Engines.

There is no difficulty in making a small steam engine. Such a device has commonly been the first *chef d'oeuvre* of the ambitious machinist's apprentice, and a California mechanic at a recent fair in San Francisco, mounted upon the top of a post a motor with a three-quarter inch cylinder, made from the first silver smelted in Nevada. We speak now of bona fide engines, those with slide valves and other essentials, not of the small toys that of late have been sold for \$1, and proved how interesting for amusement a scientific and useful fact may be. But there is no good reason why a little engine of some kind should not be found a paying article in every household. In cities it should drive sewing-machines, and in rural regions operate the churn and the wood-saw.

There is, indeed, much more attention now given to this matter than was the case a few years since. Not long ago the French technical journals described a petroleum furnace with a self-adjusting wick, giving a uniform heat to a small tubular boiler which fed steam to a small steam-engine. One of the exhibitors at the American Institute Fair has introduced a machine on a somewhat similar plan for sewing-machines. In this, petroleum burners heat a vertical boiler, and an oscillating cylinder connects its piston-rod direct to a crank on the shaft of a machine. Doubtless many modifications of the principle may be made, and the present low price of petroleum would seem to encourage the use of this fuel for small motive power. But the objections to steam are manifest, and although not insuperable, are of sufficient weight to render it well worth while to consider whether some other means cannot be used in its stead for giving the moderate power now a decided desideratum for many purposes.

In this the employment of illuminating gas, mingled with atmospheric air, has attracted attention for the third of a century past. For several reasons, perhaps among others the accumulation of sooty deposits from imperfect combustion, this has not met with much favor. Possibly the cheapness with which, it is alleged, hydrogen gas may be manufactured by novel processes, may supply a superior substitute for carburetted hydrogen, and Brown's gas engine of forty years ago (dependent for its operation upon the explosion of mixed hydrogen and air, and proved a failure on a grand scale in pumping and boat propulsion) be revived again with more of practical utility, but less of sanguine notoriety than of old.

It has been claimed by manufacturers of hot-air engines that a calorific motor of small size would "fill the bill" in the matter under consideration. But if we may judge of the inordinate size in proportion to the work done, of those used in coffee and spice warehouses for grinding in sight of the public, the assertion referred to may well be doubted. The safety of this motor is a strong recommendation for it, and it is to be regretted that no one has yet seen fit to test the capabilities of a hot-air engine occupying a space of, say one cubic foot, and heated by a petroleum flame.

There remains, in addition to the methods mentioned above, the use of electricity as a motive power; a matter debated with much ridicule on the part of those adverse to its use and with much earnestness on that of those who believe in its final success. On the one hand the cost of running an electric motor and the failure of many an apparently promising project are urged as unanswerable arguments against the feasibility of electricity for any such function; on the other, it may be pointed out that long ago, Prof. Page ran a heavy locomotive at nine miles an hour with mechanism imperfectly put together, and that there is no limit to the possibilities of applied science and practical mechanics. Between the two the impartial observer may be justified in saying, "wait and see;" but none can deny that a light motor is one of the needs of the times, and that, consequently, it is the duty of some one to produce it. —Newark Manufacturer.

A MINING engineer, P. De Peyster Ricketts, of New York, has introduced improved processes and apparatus for effecting the separation of tin from tinnings' waste. The scrap tin or tinnings' clippings are first to be treated in hydrochloric acid of the strength of 20 deg. Beaumé, until the bath becomes exhausted; and then the gradual addition is made, to the bath, of nitric acid, of the strength of 40 deg. Beaumé, in conjunction with chlorate of potash, either pulverised or in the condition of a concentrated solution. Or the tinnings' waste is to be treated with hydrochloric acid until about two-thirds of the tin is dissolved therefrom, when they are to be introduced into a bath of mingled hydrochloric and nitric acids and chlorate of potash, until the remainder of the tin is eliminated in solution.

GARDENERS have long affirmed that the moon's rays give great activity to the growth of mushrooms. M. Charbonnier, of Paris, states that he has observed in his aquaria a very remarkable growth of cryptogamous vegetation under the influence of the light of the full moon.

THE cultivation of science spreads steadily. A scientific society has recently been established at Buenos Ayres, Mr. A. Luis Hnengo for its first president. According to their programme, the members have arranged for carrying out several branches of original research.

Can Electricity be Profitably Employed as a Source of Power?

The Technologist thinks not, and offers an entirely new line of argument to support its belief. If our esteemed cotemporary will satisfy us that frictional electricity is more cheaply produced than that resulting from chemical decomposition, we will accept the inference. But we think that is, to say the least, not proved. The Technologist says:

There was recently on exhibition in one of our industrial expositions a series of pumps, worked by exhaust steam, over which was placed the startling announcement, that, by means of them, water might be raised to a given height in quantity sufficient to drive a water-wheel which would give out more power than the steam-engine itself! The placard was well calculated to attract attention, but then nobody believed the statement printed on it, for the simple reason that no engine, far less the exhaust steam from one, could ever pump up water enough to drive a wheel which would give out half the amount of power of the original motor. The waste in pumping and the loss caused by want of efficiency in the water-wheel would be sure to consume the other half. Now it happens curiously enough that there are in common use two methods for producing dynamic electricity—one being the voltaic battery and the other any form of mechanical power. In regard to the latter, it is evident that the same principle holds true in regard to it that is at the same time true in regard to the water-wheel and steam-engine above mentioned. If electricity, which has been produced by the agency of mechanical power, be applied to the driving of an electro-motor, the latter can never be made to give out as much power as has been exerted by the engine employed to produce that electricity. In other words, no one could be found so foolish as to employ a steam-engine to produce electricity for the purpose of operating an electro-motor intended to drive machinery. It would evidently be vastly more economical to drive the machinery by means of the engine itself, without the intervention of any complicated apparatus.

This proposition is so self-evident that it requires no elaborate demonstration; but from it follows the very obvious conclusion—that, if by means of the steam-engine we can produce electricity more cheaply than we can by the voltaic battery, then it is evident that the battery can not compete with the engine, as a source of power, no matter how perfect may be the electro-motor through which the energy derived from the battery is applied. Hitherto, it has been claimed that the only difficulty in the way of applying electricity as a motive power, consists in the absence of a properly constructed electro-motor; but if it can be proved that electricity can be produced more cheaply by means of steam than by the consumption of zinc, then it is clear that even a perfect motor—that is to say, one that utilizes all the electrical energy, and converts it into mechanical power—can not enable the battery to compete with steam.

Here, then, is a crucial test which is easily applied. And we believe that the results already attained do not leave the question in any doubt. In the case of the electro-deposition of metals, as well as the production of the electric light—two instances in which the comparison between the engine and the battery may be made with great accuracy—it has been found that the engine is the most economical. *A fortiori*, it should be far more economical as a source of mechanical power.

IRON IN PLANTS.—So far as investigations have shown, iron forms no essential part of the plant or animal, yet without it all growth and assimilation cease. If seeds are placed on a little cotton-wool in a solution containing all that is essential to plant growth, with the exception of iron, they will sprout and grow until the iron contained in the seed itself is exhausted, the plant then quickly bleaches and ceases to grow. If a little phosphate of iron, which is almost totally insoluble, is added to the solution, and occasionally stirred up so that it may be kept in suspension and thus come in contact with the root, the plant quickly revives and continues its growth. Iron is an essential constituent of chlorophyll, the green coloring matter of leaves. Although found in all plants, and constituting an essential part of their food, it has never been thought necessary to supply it to them artificially, all soils being supposed to contain sufficient for their wants. But no one can have failed to observe the greater luxuriance of vegetation on the strong iron soils derived from the old red sandstone than on those granite soils which are comparatively free from it. —Journal of Chemistry.

THE DETECTION OF DEATH.—The late Marquis d'Ourche, one of whose friends was buried alive, left a sum of 20,000 francs to the French Academy of Medicine, to be given to the inventor of a simple process of ascertaining when death has really occurred, and a further sum of 5,000 francs to be awarded to the discoverer of a scientific method of verifying death. Altogether 102 essays were sent in for adjudication. Most of the papers contained such absurd suggestions that the list was practically limited to 32 competitors. The large prize was not awarded, but the 5,000 francs were divided between four competitors. No new facts, likely to enlarge the domain of forensic medicine, have been elucidated by these investigations. —Sc. Am.

Safety Hoisting Apparatus.

English patentees claim certain improvements in apparatus to be used with cages for mines and shafts, for the prevention of accidents through overwinding or breakage of the winding rope. These consist in attaching two ordinary diagonal suspension chains to the winding rope or chain, and from these suspending the cage. The supporting catches to which the diagonal chains are attached are not permanently secured to the cage, but are held vertically in position at each side of the cage by means of latches turning upon horizontal pins, each latch having a handle or tail end projecting horizontally when in ordinary use. The guides between which the cage travels terminate at a suitable height above the mouth of the pit, and are furnished with strong bolts, which project in such manner as to catch and depress the tail ends or handles of the latches, should the cage be overwound or raised too high. The catches are thereby set free from the cage, and pass away with the winding rope. In departing, each catch lifts into a horizontal position an arm, which is hinged at its upper end to the cage, and which, when it is in its ordinary vertical position, transmits the weight of the cage to the supporting catch. Each hinged arm has a stop to prevent it from rising above the horizontal line. Upon the said cage attempting to fall after the release of the supporting catches, the horizontal hinged arms catch upon the top of the vertical guides and support the cage in safety. Each of the aforesaid supporting catches is made in two pieces, the upper piece being hinged to the lower piece. The upper piece has an external hook or catch at its upper end, which, when the rope breaks, is forced by a spring into gear with ratchet shaped teeth formed upon the inner face of each guide bar, but as long as the rope or chain is unbroken, and the cage hangs therefrom, the tension of the diagonal suspension chains counteracts the force of the spring, and holds the upper catches out of action.

THE DAIRY.

Conducted by J. H. Hegler, Manager of the Dairy Department of California Granges.

Reports of Experiments, Communications, Hints, Suggestions and All Facts that will be of interest to Dairy-men are particularly solicited for this Department.

The Grange Dairy Agency.

The Dairy Produce Department of the California Granges is now a fixed fact, and a permanent institution. Every day the list of consignors is increasing. We now have more butter shipped to us than any house in this city, excepting perhaps one or two, and before this reaches the readers of the PRESS there is every evidence and reason to believe that we will lead the butter market. For this reason we will discontinue to solicit any produce other than dairy produce of all kinds, eggs, poultry, dried fruits, lard, hams, bacon and potatoes.

It is highly gratifying to us to know that we are enabled to go into the market and compete successfully with those long in the business. Many who were weak-kneed doubted our ability and capacity to do this. Having driven away all doubt in our own minds we only point to our rapidly increasing business and our sales-book to convince the public on this matter.

That we labor under disadvantages is true; but that we have a decided and important advantage over our competitors is as well true. We are daily receiving letters from those for whom we do business; and it is a source of great gratification to us to know that in every instance our work is lauded and all are pleased with our mode of doing business. We have retained every one of our consignors thus far; and, though we sink in the attempt, we will strive to satisfy those who are rational beings, who will give us their business.

SALT FOR BUTTER.—Never use any but the very best salt in your butter, and be careful that you leave no lumps or foreign matter in it. Sift it carefully through a fine sieve. You will be surprised at the amount of dirt and foreign substance you will find in salt that will appear on opening the bag, perfectly pure and clean. In the country, when weather is cold, use a trifle less than one ounce of salt to the pound of butter; in the spring, when butter is harder, if it is to be sold and used immediately this proportion will do, but if your butter is not to be used at once, put in one ounce of salt to one pound of butter, this being the proper proportion for a general average. If your butter is to keep longer than the usual time; that is, if it should require to be packed solid or to be pickled in rolls, it wants about one pound of salt to fourteen pounds of butter.

Care of Cows.

A correspondent of the *Journal of the Farm* writes: Over-exertion from too rapid driving, frightening and beating, has often resulted in cases of abortion, independent of the effects of impure inhalations. Over-feeding and foundering, or surfeiting the animal, is another fertile cause; and still another equally common occurs from neglecting to water the cow regularly and at proper intervals, then allowing her to drink excessively of ice-cold water, producing a chill of the entire system, which, of course, is followed by a febrile condition and a weakness that would predispose to the attacks of a variety of maladies, but more especially to attacks resulting in premature parturition, which, in an abnormal condition of the dam, are often so easily provoked.

In this connection I desire to express an opinion and conviction which, if dairymen will heed, they will find it safe. I am satisfied that no pregnant brute animals should have their food salted, but should be allowed access to salt at all times, that they may obey their instincts.

When persons, void of both judgment and interest in animals they are to feed, are permitted to supply salt in the feed (of cows particularly), they are liable to force the animals to eat it with their food in such excessive quantities that undue thirst is produced, the over-drinking occasioning severe chills, purging, and numerous concomitant effects, that often result in great injury to the animal.

NOTICE TO CONSIGNORS.—In sending us butter give plainly and in full your name and P. O. address. This will enable us, immediately on receipt of box, to know whose it is. This you can do by putting a slip of paper in the box, so that on opening we find whose it is. Any further directions may come in the same way. Do not trust to letter simply, as sometimes they are lost or mislaid. The notice of name and P. O. address on shipping card may become obliterated, or the card may come off, so that this is not very safe.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31 tf

McLAREN, BRYDGES & CO.,

DEALERS, MANUFACTURERS AND INTRODUCERS OF NEW INVENTIONS FOR THE PACIFIC COAST.

Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.

—ALSO—

Real Estate and General Business Agency. NO. 605 CLAY STREET, SAN FRANCISCO, CAL. ja10-hp-3m

AGENTS WANTED FOR MONOPOLIES AND THE PEOPLE.

Being a full and authentic account of the struggles of the American Farmers against the extortions of the Railroad Companies, with a history of the rise and progress of the Order of Patrons of Husbandry; its objects and prospects. It sells at sight. Send for specimen pages and terms to Agents, and see why it sells faster than any other book. Address, A. L. BANCROFT & CO., 721 Market St., S. F. jan31-1m

OUR SPECIALTY: "BEYOND THE MISSISSIPPI."
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required: Nerve and Honest Industry.
THE FAR WEST.
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in CROFT'S WESTERN WORLD, for \$1.50 a year. With \$10 Premium Chromo, "AMERICAN PROGRESS," free to each subscriber.
Two sample WORKS sent for 10 cents. Agents wanted.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street, (Russ House Block.) San Francisco. Wholesale and retail dealer in Mens', Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods; also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission St., S. F. O. H. Gruenhagen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; J. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, at \$5.00 per dozen; White Leghorns, Game Bantams, Creve Coeurs, Roman and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Pencilled Hamburgs, (first premium at Buffalo, 1873), Silver Spangled Bantams, Golden Bearded Poland, Black Poland, White Cresta, Poland, Black Poland, White Cresta, and Silver Sultans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1873). Also,

Game Imported Direct from Belfast, Ireland, At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 41 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C. O. D. 671-tf

WHITE LEGHORN CHICKENS

—AND—

EGGS.

CHOICE FOWLS AND FRESH EGGS AT REASONABLE RATES.

ALSO A FEW GOOD

DARK BRAHMAS AND BLACK SPANISH.

F. N. WOODS & CO.,

feh7-3t

67 California Market.

SAN JOSE INSTITUTE

—AND—

Business College.

A Day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department

Is under the supervision of James Vinsonholler, who for many years was at the head of Business Colleges of San Francisco.

The Twenty-fourth Session commences January 19th, 1874.

For circulars address

3v7-2m

JAMES VINSONHOLLER.

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linsed and Castor Oils,

OIL Cakes and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.

Office, 3 and 5 Front street.

Works, King street, bet. Second and Third. feb5-cow

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to

22v6-1v

ELWOOD COOPER

President Board of Directors.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F. de27-tf

LANDS & HOMES FOR SALE

RANCHOS FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee.

542 MARKET STREET,

N. E. corner of Montgomery.

VALUABLE FARM FOR SALE.

The well known farm of Tower & Bisbee, Salt Spring Valley, Calaveras County, is offered for sale. The farm drew the premium as second best grain farm at the San Joaquin Valley Fair, and the premium as the best improved farm. The diplomas they now have. The farm contains 800 acres of land, with perfect title, and four hundred with title secured. Mr. Bisbee, one of the proprietors, wishes to go East to live with his aged parents, and rather than sell an undivided half, they offer the whole ranch for sale at a bargain, including team, wagons and farming tools, of which there is a large supply and of the most improved kinds. Also fifty head of cattle, besides other stock necessary on a farm. The farm is eight miles from Milton on the stage road to Murphy's and Big Trees, and is a desirable location to keep public house, and now has a good custom. Last year, as dry as the season was, there were over 300 tons of hay raised on the farm, with good market at the door for everything raised on the farm. The land is all enclosed with good and substantial fences and suitably divided. Four large and substantial barns, that will hold 600 tons of hay, large store-house for tools, house for hired men, granary and blacksmith shop. Also large two-story house, hard finished throughout and built in the most substantial manner, with a good garden attached and a never-failing stream of water running in the house and yard. The farm contains about 400 acres of land suitable for alfalfa or any other kind of deep-rooted grass. The farm to be appreciated must be seen, and will be sold at a good bargain to any one wishing to purchase a valuable and perfect home, where the climate is as good as in any other part of the State. Any one wishing to purchase the property can correspond with the proprietors by directing to "Milton, Calaveras County, California, to TOWER & BISBEE." feb14-3t

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

FOR SALE OR TRADE,

680 acres fine farming or grazing land, with frontage of three-quarters of a mile, on a fine stream of water. Located in Shasta valley, Siskiyou county, within three miles of a large town. Commanding a back range of from 50,000 to 60,000 acres, well adapted to sheep or cattle. Will sell for cash, or trade for city property, or a small improved farm in any of the bay counties. Apply to McLAREN, JONES & CO., 605 Clay Street, Room 10, S. F. jan31-1m

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

A RANCH OF 160 ACRES,

With Barn and House, thirty or forty tons of hay, and with all the necessary farming implements, to be let for a term of years, either by the acre or on shares; situated between Midway Station and Moore's Landing, 2½ miles from either place. For particulars, enquire of CHAS. ALPERS, 223 Bush street, at 1 P. M. 1v7-2m

Encaustic & Geometrical Tiles.

BEAUTIFUL DESIGNS.

Reproduction of Ancient Work.

IMPERISHABLE PAVEMENTS

—FOR—

CHURCHES, INSTITUTIONS, HALLS, SCHOOLS, CONSERVATORIES, CORRIDORS, CLUBS, VESTIBULES, DAIRIES, ETC.

Suitable for All Climates.

Manufactured of the celebrated Jackfield and Broseloy Clays, and arranged in the most beautiful patterns.

GLAZED HEARTH TILES. WALL AND BATH TILES.

Designs and Estimates on application to

CRAVEN, DUNNILL & CO., (Limited,)

JACKFIELD WORKS, NEAR IRONBRIDGE, SHROPSHIRE, ENGLAND. ja17-6t

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and

Kearny, SAN FRANCISCO.

21v2-1v

AVERILL'S

CHEMICAL PAINT

Of any desired Shade or Color,

Mixed ready for application, and sold by the gallon

It is Cheaper, Handsomer, more Durable and Elastic than the best of any other Paint.

Office, corner Fourth and Townsend streets, San Francisco. Send for sample card and price list. 15v23-3m-cowb

HEALY & JEWELL, Agents.

AGRICULTURAL NOTES.

CALIFORNIA.

CALAVERAS.

STORMY.—*Chronicle*, Feb. 14th: The week just closing is entitled to the questionable honor of being the most disagreeable of an unusually unpleasant season. We have been visited by a kaleidoscopic variety of weather that taken together has made existence a burden. Tuesday the wind blew a gale and the rain came down in blinding sheets that threatened a second deluge. Wednesday, by way of a change, we had a severe hail-storm, followed by quite a fall of damp, pasty-like snow that just filled up the measure of our wretchedness. The snow mixing with the mud gave rise to a penetrating, villainous sort of compound that would wet through a pair of cowhide boots in two seconds, and gave the entire surface of the country the appearance of one vast mortar-bed. Fangh! We submit that such weather is alib upon the climatic reputation of California and a travesty upon the songs that are sung in its praise.

THE CROPS.—*Citizen*, Feb. 14. Reports from all parts of the county speak favorably of the crops; although the weather is hardly pleasant enough to suit stock men, yet little grumbling is heard on account of the season.

COLUSA.

DROWNED OUT.—*Sun*, Feb. 14: We are informed by friends from different parts of the county, that there is a good deal of grain on low spots that will be drowned out. We are further informed that on the low land that has been drowned out, many farmers are sowing grain without again plowing the land. This is very bad farming, and cannot be attended with any good results. Ground upon which water has stood for several weeks is so packed that it will not successfully produce grain.

CROPS UP THE RIVER.—L. H. and J. T. McIntosh, who reside at the extreme upper end of Colusa county, say the sown grain is doing nicely, while, with clear weather now, they will have ample time to put in all the acreage they want.

GOOD FOR FEBRUARY.—Mr. J. G. Thompson brought to our office this week, some heads of barley and oats he found in the China garden, just above town. These heads are fully out, the grains well filled and would with ten days of warm weather, be ripe. They are also of good size. These, however, are single volunteer stocks, and by no means represent the state of the crops of the county, which are rather backward than otherwise.

EL DORADO.

Republican, Feb. 12: Beautiful rain—we have plenty of it and to spare, and the supply is still accumulating.

HUMBOLDT.

THE LATE STORM.—*Daily Times*, Feb. 3: The late storm has not had as much effect on the stock on the Bear River Ridge as has been reported, and but few deaths have occurred. Owing to the severe frosts and winds the grass is very short, and the stock will suffer more from that than any other cause. The dairy-men are beginning to dairy pretty generally in that locality, and a large quantity of butter is being made.

CHEERING NEWS FROM THE MOUNTAINS.—Colonel Henley, who has a large sheep ranch in the Bald Hill country, came in day before yesterday. He reports the late storm as having been intensely severe, but that the stock has stood it remarkably well. He has lost but very few sheep, and he thinks that generally the loss is very light among those in his vicinity. It is to be hoped that all our stock raisers have fared equally well.

INYO.

RAIN.—*Independent*: We were favored with quite an extensive shower Monday night. Since then the weather has been of a mixed quality as it has been the entire winter. The unusual moisture this winter could easily be accounted for if the Colorado had been, ere this, turned into that big lake, but it hasn't, and the weather wise can't account for the way things have been running at all.

LAKE.

CROP PROSPECTS.—*Bee*, Feb. 12: Farmers inform us that the early sown grain is making a satisfactory growth and judging from present prospects will yield bountiful returns next harvest. As much, if not more than the usual amount, had been sown before this ever-memorable winter put in an appearance.

MARIPOSA.

THE PICKLE WEATHER.—*Gazette*, Feb. 13: Tuesday last was cloudy, followed by a shower of rain during the night. Wednesday opened with a clear, warm morning, and till late in the afternoon the day was lovely. About four o'clock a cloud crept along, from a westerly direction, through the gap at the foot of Mt. Bullion, and before the situation could be realized, the entire sky was overcast and a violent hail storm set in. The surrounding mountain tops were covered with snow at sunset. Squalls and occasional showers later in the evening. Thursday morning revealed a fall of snow of about three inches in depth, and more coming. At noon the sun was again out, with the chances favorable for a thaw.

MERCED.

WEATHER.—*San Joaquin Valley Argus*, Feb. 14: The weather continues invariably warm sunny days alternating with high winds and heavy showers of rain. On yesterday a strong

breeze from the southeast prevailed from early in the morning to the hour of going to press with our paper, betokening a continuance of wet weather.

NAPA.

LATE BLOSSOMING.—*Reporter*, Feb. 14: Fruit trees in this section are backward in putting forth their blooms this season. The frequency and unusual severity of some of the frosts and the very heavy rains drenching the soil almost beyond precedent, have undoubtedly been the retarding causes. However, there is less probability of severe late frosts to destroy the prospect of an abundant fruit harvest this year.

SAN JOAQUIN.

UNCOMFORTABLE WEATHER.—*Stockton Independent*, Feb. 13: Wet weather is becoming an affliction; farmers say they have had quite enough of it. The season has been cold as well as wet, and the young crops in some localities have remained at a stand-still, while fields not sown early in the season, before the soil became too wet for the harrow, will probably be permitted to remain unplanted this year. Several talk of sowing wheat on the first opportunity offered, but it is questionable whether or not the venture would be profitable. The present winter has been one of the worst ever known for planting grain. The amount of rain has fallen considerable short of the quantity of many former seasons, but the continuation of damp weather has been prolonged without drying intervals. On the black land the young wheat crops are not making much progress, and in some localities fears of rotting are entertained. On lighter and more porous soils the prospect is more encouraging. A few weeks of warm weather would accomplish wonders on the wheat fields.

SANTA CRUZ.

PROSPECTS.—*Enterprise*, Feb. 13: The protracted season of fine showers brought itself to a close on Thursday evening last, after a moderate day's rainfall. The rain has come in good abundance, and all that is required is a few weeks cessation, that the farmers may conclude their plowing and sowing. February is generally a good farming month, and is not apt to be very wet if the two months previous were moderately so, as they have proved this season. The month opened hopefully. Sunday, the 1st, was a congenial day—the thermometer hanging in the open air, exposed alike to sun and breeze, rose to eighty degrees at 1 o'clock P. M. Three days of such weather will again set the plows in motion, and February, if fair throughout, will find more land cultivated in Santa Cruz county, by several thousand acres, than were ever farmed before. In the great Salinas valley, between forty and fifty thousand more acres will be sown to small grain than any former year.

SISKIYOU.

THE WEATHER.—*Union*, Feb. 7: On Sunday evening a good rain storm set in, and continued all day Monday. Tuesday it cleared up and the sun shone out brightly, drying up the sidewalks and roads, and making everything around look bright and cheerful. Wednesday and Thursday were also beautiful days. On Friday morning rain began to fall once more, and continued falling at intervals during the day. As we go to press, the appearance of the clouds would seem to indicate that the storm is not over yet. The nights during the week have been quite cold.

STANISLAUS.

CROPS.—*News*, Feb. 13: The past week of warm weather has acted like a charm on the growing crops. The soil has been warmed to such an extent, that the grain already up, is shooting forward very rapidly. In some localities a crust had been formed by the heavy rains of last month, and many were fearful that late sown grain would not be enabled to force its way through, but farmers inform us that the drenching rain Wednesday night last, has so softened the soil that was crusted, that all danger from that source will now be removed, and that the whole outlook at present is indeed most flattering.

TUOLUMNE.

WEATHER.—*Union Democrat*, Feb. 14: The weather has been stormy the past week with a generous fall of rain. On Thursday morning the snow fell rapidly, imparting a winter aspect to the town and its surroundings. The rains have continued so long and the ground being full of water, both farmer and miner are becoming impatient for it to let up. The farmer has had no opportunity for late sowing and the miner can do nothing to advantage, in a continuous storm. Enough water has fallen for one time, with pleasant sunshiny days in a short time we will be in spring, when more rain will be wanted, but for the present the supply is ample.

VENTURA.

SEEDING.—*Signal*, Feb. 7:—The sowing of barley still continues in the Santa Clara valley. That valley will, if the season continues favorable, turn out more barley to the acre than any in the state.

YOLO.

THE WEATHER.—*Mail*, Feb. 12: Last week we were induced to say that the rain was over for twenty days—making the reserve that the clerk of the weather should not put in an appearance against us. Since that time we have had two small showers—amounting in all to 21-100 of an inch. There has not been enough to deter our farmers from plowing but sufficient to stop seeding. The ground was in most places in very good condition during the past six or eight days, and a very large amount of

wheat was sown. The weather this (Wednesday) morning looks settled, and if it should continue dry, as all desire, our farmers will yet have a chance to plow and sow more acres of grain than was ever put in the ground in Yolo county.

FLOODED OUT.—Mr. Samuel Briggs, of Cottonwood, informs us that considerable of the summer fallowed wheat has been flooded out by the incessant rains. We have heard from other sources that the wheat had received a very serious check by reason of the cold rains, but many of the farmers say that it will all be right when the ground receives a sun-warming.

OREGON.

FARMING ITEMS.—*Oregonian*, Feb. 7th: Oats are being shipped from Whidby's Island, via Olympia to Tacoma.

Reports from Hubbard say that the fall wheat sown on French Prairie is growing finely. No stock, we are informed, has suffered for food in Wasco county this winter. Hay is quite plenty there, but further east there is less hay and consequently some destitution among the large herds.

A gentleman who has a lot of cattle running between Dry creek and Touchet, Walla Walla, states that during the cold weather last month a number of his cattle had their feet frozen. Their hoofs are cracking around at the top, and they leave blood in their tracks. Some are so badly frozen that their hoofs will probably come off.

FLOWING.—*Walla Walla Union*, Jan. 31st: Within the last few days the farmers have again commenced their plowing, which was interrupted for a time by the last fall of snow. In most places the ground is in excellent condition now—it is wet enough everywhere, and in some places it is a little too wet. This will not hinder the plowmen long, as the land here generally dries out in a few days.

AT WORK.—*Jacksonville Times*, Jan. 29: The late rains left the ground in good condition for plowing, and the farmers are busy at work. Although there remains a large surplus from last year, there will undoubtedly be a great area again put in grain this year.

ONE SIDE ONLY.—Will our correspondents be so kind as to write upon only one side of their paper? All may not see a good reason for this, so we will explain. An excellent communication is received just before going to press; we want to get it in this number. To do this in time, we cut the sheet into five or six "takes," of a few lines each and give them out to as many different compositors to set. Now if written on both sides, just consider what a perfect jumble of words and sense will be made when he sets all that is given him on both sides. One other favor: Write with ink if possible.

CRANBERRIES.—We have a correspondent writing from Burnet, asking for information in relation to the growing of the cranberry in California, and whether the vines could not be better procured in Oregon than to send East for them. We know of no one attempting the growth of the cranberry in California. The plants can be procured in any quantity in Oregon, if required; but the Oregon cranberry is a small, inferior fruit compared with the Eastern, and would not be thought worth cultivating, where the Eastern berry could be procured.

A MEETING has been called at Coloma on the 14th of this month, for the purpose of taking steps to resuscitate the El Dorado Agricultural Society.

THE GONZALES Brothers, of Monterey, have sown this year ten thousand acres of wheat, and it is all up and looking finely.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Feb 17, 1874.

FOR WEEK ENDING Feb. 3, 1874.

ROTARY WINNOWER.—Thos. H. Drury, Wheatland, Oregon.

ART OF TUNNELING.—De Witt C. Haskin, Vallejo, Cal.

COMBINED WALL PROTECTOR AND TOILET RACK.—Herman Borchardt, S. F., Cal.

TRUCK.—Andrew V. Smith, S. F., Cal.

REVERBERATORY FURNACE FOR ROASTING ORES.—Ernst Heiligendorfer, Belmont, Nevada.

EYE GLASS.—Louis A. Bertling, S. F., Cal.

VALVE FOR PUMPS.—W. D. Hooker, S. F., Cal.

MEDICAL COMPOUND.—Emil C. Jurgensen, Portland, Oregon.

DENTAL APPARATUS FOR OBTAINING THE BITE.—Edgar O. Smith, Albany, Oregon.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

W. M. BRANDON.

JACOB W. ROGERS.

BRANDON & ROGERS, California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.

THE FINEST COLLECTION OF PINES, Cypress, Australian Eucalyptus, EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices. Send for priced Catalogue to 8v7-3m A. D. PRYAL, Oakland, Cal.

BEATRICE PEACH TREES, AT GLEN GARDENS.

To close out my stock of new Peaches, one year old from bud, such as Beatrice, Louise, Foster, Freemason, Glen Garden Seedling No. 1, Stanwix Early York, etc., I have reduced the price to 25 cents each, where 50 trees are ordered. Beatrice, in dormant bud, 15 cents each. E. F. AIKEN, Sacramento, Cal. P. O. Box 212. f21-1m

BEST SHADE IN USE. —THE— RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture IS FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE

Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the Bottom,

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are simple, work to perfection, and never get out of order.

Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.

8v7-16p-3m

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLO

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California.

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.

7v6-1f 16p2

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GESE,

58 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGHES, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best.

Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address: M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.

8v7-3m-16p-sp

FOR SALE!

Valuable Fruit Orchard and Garden

Of ninety-two acres choice land, one mile from Railroad Depot; 10,000 fruit trees, grafted, best sorts, in full bearing; five acres vineyard, half foreign table; two acres best blackberries.

Three Artesian Wells supply an abundance of water. Seven-room Dwelling, hard-finished; barns, sheds, vineyard house, fruit-drying house, steam engine, boiler, saw for box making, and every requisite for raising, curing and shipping fruit on an extensive scale.

This property will be sold as a whole, or in two subdivisions of forty-six acres each, on easy terms. Title perfect.

For particulars, apply to

YOUNG & PAXSON,

No. 424 Montgomery St.,

San Francisco, Cal.

21-4t

FOR SALE,

To Close out for the Season.

PAPER SHELL AND LANGUEDOC Almond Trees, Cherry and Peach Trees, Three-Year Old Asparagus Roots (Giant Variety). Samples of Almonds to be seen at store of Drake & Emerson, 523 Sansome street, San Francisco.

SIMPSON THOMPSON, Suscol, Napa Co., Cal.

Feb-21-2t

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, Feb. 18, 1874.

The strange, excited state of the Produce market, noticed in our last Report, continues. Many are the ups and down of the various articles, and the changes have been almost as unexpected as they were sudden. The return of spring weather naturally brings with it a depressing influence on such articles as are produced all the time, not only by the increased supplies furnished, but also by the better facilities of travel offered. The speculators in Produce are also in the habit of looking to the early spring indications as to the coming crops, from which to calculate the probabilities of changes in the market much later in the season. Thus the incoming crops have much the same influence, though of course in a less degree, as that of crops actually grown, harvested and in hand. It is to this reason that the fall in certain staples must be ascribed; the prospects for the future being so favorable, the present has to suffer.

Receipts

Of Bay Produce during the last week were as follows: Flour, 3,667 barrels; Wheat, 94,847 centals; Barley, 41,602 centals; Oats, 400 centals; Corn, 3,666 centals; Rye, 168 centals; Beans, 1,188 sacks; Castor Beans, 42 sacks; Mustard Seed, 22 sacks; Potatoes, 13,944 sacks; Sweet Potatoes, 59 sacks; Onions, 779 sacks; Hides, 2,212; Wool, 130 bales; Hay, 764 tons; Straw, 29 tons; Wine, 14,905 gallons; Brandy, 1,260 gallons; Peanuts, 122 sacks; Cotton, 62 bales; Oranges, 237,150; Lemons, 12,400. The large increase in shipments of Barley has been induced by the greatly improved state of the market here and elsewhere. Much, besides, has been shipped East by rail; of this we have no estimate. Sweet Potatoes are in such very limited supply that we do not deem it necessary to quote them, and, in fact, there are no regular quotations current, as a few sacks more or less make a vast difference. No hops were sent in last week.

Wheat

Is having a bad time of it just now, and when we think of the many confident predictions of \$2.50 and \$3.00 and \$3.50 as probable prices, made by many of our contemporaries, we are reminded most forcibly that "it's a hard world, and we're all poor critters." We have argued against the probability of the present dullness proving lasting, and we still think that a reaction will set in. The first fall came because holders had other way in which to cash the balance will again swing upward. There is still a large amount on hand in this State, and some 59,000,000 bushels, or about 4 per cent. of the entire crop, in the interior western country, according to the figures of the *National Crop Reporter*. It remains to be seen just how far this proportion will go to supply the mouths which must be fed, before the crop of 1874 is harvested and distributed.

The break in the local market has been caused by discouraging reports from the East and abroad. Last evening's telegrams to the Associated Press gave quotations as follows: Average, 12s 10d@13s; Club, 13s 4d@13s 7d; cental. This is a decline of 5d for Average, and 3d for Club, from last week's prices. The fall here has been even more pronounced. Holders this morning made a strike for \$2.02 but could not find buyers at that figure. Yesterday large sales of Choice were made to the millers at \$2.00; and up to the hour of going to press to-day no better terms are reported.

Oregon has made large shipments of both Flour and Wheat abroad, latterly more especially of Flour. The market, of course, follows ours in its downward turn. One of the advantages of California Wheat in Liverpool, in addition to its well known superior quality, over that shipped in bulk from New York, is that it is not injured by admixture with sweepings, etc., being almost invariably sent in bags. Much complaint is made of Eastern Wheat on that ground.

Flour

Has not suffered so severely as Wheat, there being a constant demand for shipping purposes, which renders it almost independent. It is usually supposed that the price of Flour is always that of Wheat plus the cost of grinding, millers' profits, etc. This is found to be anything but an exact rule in practice. Of late our export trade in Flour has grown to such importance that the millers have had conditions for successful business.

Barley

Is in request at present. The large receipts at this port show that farmers in the interior of the State are not willing to forego the advantageous terms now offered. Twenty-five car-loads were sent to St. Louis last week for brewing purposes. If this shipment meets with a favorable reception more will follow. Last month over 30,000 centals went East by rail. The New York market is very strong. In contrast to Barley,

Hops

Are reported very dull throughout the country. Here very little is being done, and our quotations are nominal. The last circular of Emmet Wells, a recognized authority in New York, has the following paragraph, which is of interest to some of our readers: One of the chief impediments to trade is the high price of Malt, the advance above the corresponding season of last year being 75c@81¢ bushel; a good article now commands \$2.50 @ bushel. Brewers, in consequence, have found it necessary to put up the price of their beer. Ale brewers, especially, have increased their price \$1 @ barrel. It is believed that the lager brewers who are getting \$9 @ barrel, will also advance their price to \$10. What effect this will have upon the retail trade remains to be seen. Foreign Hops continue to arrive here at the rate of 200 to 300 bales per week, which, considering the extra weight of the bales, adds largely to our stock. Most of the arrivals are Bavarian of 350 to 400 lbs to the bale. Importers express the opinion that we shall soon see heavier arrivals here from abroad, unless the foreign markets improve, especially if our own market keeps up.

Wool

Is very quiet here. Reports from the East are now encouraging. A New York dispatch reports the Wool market in that city as follows: There is an improved feeling in Wool, but more especially for California, at recently reduced figures for Fall—the latter being taken up in consequence of the short supply of other kinds. Still, dealers anticipate a further decline on that grade, owing to reports circulated concerning the large amount on the way here via the Cape. The small amount of Spring here is held firmly at 28@35c, free, and 26@30c for burly lots. Oregon has been quite active, but the stock is now greatly reduced. Nevada is but little sought. Sales comprise about 200 bales free Fall California at 22@28c; 50,000 lbs. slightly burly, do. 20@26c; 75 bales Spring do., 30@36c, and 50 Oregon, 40@42c.

Hides and Leather

Are quiet, with moderate transactions, as needed for manufacturing purposes. Shipments of large quantities of hides have been made to New York, where the market is reported dull. Leather is more active in that city, but here, as will be seen from another column, is not yet looking up.

Dairy Produce

Is slightly stronger than last week. Though prices are low, there is no dullness, but all shipped here is taken up as soon as received. There has been an advance in Butter of 2¢cts, and in Cheese of 1c.

Eggs

Do not hold out any indications of being higher, at least for the present; they will hardly get below 25cts. for fresh California, if that figure is touched. The present price is amply remunerative.

Poultry

As we hinted would be the case, is much lower this week. In the wholesale market, Turkeys have declined 2¢ @ lb; Hens, \$1.50 @ dozen; Roosters, \$1 @ dozen, and Ducks \$2 @ dozen.

Potatoes

Are advancing, and the market thus far is very firm. The rise in Humboldt's has been 20¢ @ 100 lbs., as compared with prices last week, and other varieties have appreciated an equivalent amount.

Feed

Is steady. Hay is slightly stronger, and cannot be bought for less than \$14, or \$1 in advance of last week. Feed Barley is higher, but other kinds are quiet.

DOMESTIC PRODUCE.

WEDNESDAY M., Feb. 18, 1874.

BEANS.
Beans, small white, 3/4 @ 33 1/2
do, butter, 1/2 @ 34 1/2
do, large, do, 1/2 @ 35 1/2
do, bayo, 2 1/2 @ 36 1/2
do, pink, 2 1/2 @ 37 1/2
do, pas, 2 1/2 @ 38 1/2
do, small, 2 1/2 @ 39 1/2
do, large, 2 1/2 @ 40 1/2

BROOM CORN.
Per ton, \$10 @ 10 1/2
Butter, Cal. choice, 35 @ 40
do, good, 30 @ 35
do, inferior, 20 @ 30
do, dark, 15 @ 20
do, pickled, 20 @ 30
do, Western, 20 @ 30
do, Cal. new, 15 @ 20
do, Eastern, 10 @ 15

EGGS.
Eggs, Cal. fresh, 27 1/2 @ 30
do, Oregon, 25 @ 28
do, Eastern, 20 @ 25

FLOUR.
Bran, per ton, 12 @ 20
Middlings, 27 1/2 @ 30
Hay, 14 @ 15
Straw, 9 @ 10
Oil cake meal, 32 @ 35
Corn Meal, 12 @ 15

WHEAT.
Alvies Mills, bbl. 5 25 @ 6 75
California, 5 25 @ 6 75
City, 5 25 @ 6 75
Comm. Mills, 5 25 @ 6 75
Golden Gate, 5 25 @ 6 75
Golden Age, 5 25 @ 6 75
National Mills, 5 25 @ 6 75
Santa Clara Mills, 5 25 @ 6 75
Genesee Mills, 5 25 @ 6 75
Oregon, 5 25 @ 6 75
Valley Star, 5 25 @ 6 75
Vanns, Oakland, 5 25 @ 6 75
Stockton City, 5 25 @ 6 75
Lambert, 5 25 @ 6 75

WHEAT.
Baker, fr quality, 8 @ 10
do, second do, 7 @ 8
do, third do, 6 @ 7
Veal, 8 1/2 @ 10
Lamb, 7 1/2 @ 8
Pork, unadressed, 7 @ 8
do, dressed, 7 @ 8

GRAIN.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @ 1 30
do, c. 1867, 55 @ 1 25
do, c. 1866, 50 @ 1 20
do, c. 1865, 45 @ 1 15
do, c. 1864, 40 @ 1 10
do, c. 1863, 35 @ 1 05
do, c. 1862, 30 @ 1 00
do, c. 1861, 25 @ 95
do, c. 1860, 20 @ 90
do, c. 1859, 15 @ 85
do, c. 1858, 10 @ 80
do, c. 1857, 5 @ 75
do, c. 1856, 0 @ 70
do, c. 1855, 0 @ 65
do, c. 1854, 0 @ 60
do, c. 1853, 0 @ 55
do, c. 1852, 0 @ 50
do, c. 1851, 0 @ 45
do, c. 1850, 0 @ 40
do, c. 1849, 0 @ 35
do, c. 1848, 0 @ 30
do, c. 1847, 0 @ 25
do, c. 1846, 0 @ 20
do, c. 1845, 0 @ 15
do, c. 1844, 0 @ 10
do, c. 1843, 0 @ 5
do, c. 1842, 0 @ 0

WHEAT.
Whit. Cal. c. 1873, 85 @ 1 55
do, c. 1872, 80 @ 1 50
do, c. 1871, 75 @ 1 45
do, c. 1870, 70 @ 1 40
do, c. 1869, 65 @ 1 35
do, c. 1868, 60 @

AGRICULTURAL ARTICLES.

MATTESON & WILLIAMSON'S



AMERICAN CHIEF
GANG PLOW.
Took the Premium over all at the great Plowing Match in Stockton, in 1870.
This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to
14v2-3m MATTESON & WILLIAMSON, Stockton, Cal.

O. CREGO. S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkeys, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:
Charles S. Coffrey, Camden, New Jersey;
Heffield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.
Also, a large assortment of single and double Harness, of the most celebrated makers:
C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.
Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,
24v5-3m San Francisco.

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS,
PIECE MILK-PANS,
STRAINER PAILS,

CREAM PAILS,
MILK PAILS,
ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m SAN FRANCISCO.

CALVERT'S



CARBOLIC

SHEEP WASH.

Sole Agency on the Pacific Coast at

T. W. JACKSON'S,

416 Sacramento Street, San Francisco.



The New Wilson SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market

G. A. NORTON, Gen. Ag't for the Pacific Coast.
337 Kearny St., S. F.
2v2c-w-hp-ly

PRICE, \$50.

PURCHASERS please say a dvertiser in Rural Press.



The attention of Wool Growers is continually invited to the
Thoroughbred Stock Bred and Kept upon the
MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the

THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

9v6-3m

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

Stock Notices.

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull,

"DANDY JIM."

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured.

4v7-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere
GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

11v6-cow

N. GILMORE,
El Dorado, El Dorado county,
California.

Fine Grade

SPANISH MERINO SHEEP.



25,000 head are now owned by this association, and we are in constant communication with parties all over this State, who buy and sell SHEEP and SHEEP RANGES. Parties wishing to purchase or sell are invited to call at the office of the San Joaquin Valley Wool Growers' Association, 15 Stevenson's building, 331 Montgomery street, San Francisco. ja10-1m

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk of Oak Home. Number of Bull in herd—hook, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,

Oak Home Ranch, Waterloo Road, three miles from Stockton.

3v7-3m

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, imported last year, and bought of Hammond.

J. H. DODGE.

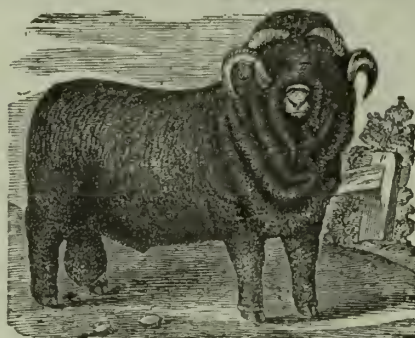
Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal.

ja24-tf

IMPORTANT!

I have for sale an Imported Kentucky-English Berkshire Boar; is now two years old, weighs some 350 pounds, lean; is strong and vigorous. Has proved himself a super-excellent stock getter. Is to be sold for want of use. Will be sold for \$300; is richly worth \$100, and would cost that, or more, in Kentucky. PETER SAGE.

N. B.—Was sired by "Old Bob Lee," who cost \$100 in England (a pig), and is the Prize Boar of Kentucky. Full written guaranteed pedigree. His dam was imported also. P. S.—At Cosmopolitan Hotel. ja31-tf



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centreville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.

12v5-3m

CYRUS JONES. GEN. GILES A. SMITH. 'L. H. HICKS

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Duchesses, Rose of Sharrons, Booths, Miss Wilkes, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara avenue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO.,

San Jose, Cal.

2v7-3m

U. S. CATTLE MARKET,

Cor. 5th & Bryant sts., S. F.

Cattle Sold on Commission or bought on farm for Cash. Wanted, 18 Milch Cows and 170 Bees.

Address:

DAWSON & BANCROFT,

fe7-tf

No. 512 Fourth st., S. F.

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,

San Francisco.

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.

8v7-3m

WILLIAMS & MOORE, Prop'rs.

Stockton, Cal.

NURSERY NOTICES.

ESTABLISHED 1853.

Stock for Nurserymen and Florists.

TERMS CASH.

Cherry Seedlings—Mazzard.....\$12 per 1000
—Mahaleb.....20 per 1000
Apple Seedlings.....12 per 1000
Pear Seedlings.....15 per 1000
Walnuts, English, 4 to 6 ft.....15 per 100
California hick, 4 to 6 ft.....15 per 100
Spanish Chestnuts, 5 to 12 in.....15 per 100
Cork Elm, 4 to 6 ft.....15 per 100
" 6 to 8 ft.....20 per 100
Blue Gums, or Encalyptus, in variety.....\$3 to 10 per 100
Magnolia, Grandiflora, 3 to 5 in.....3 per doz.
" 6 to 12 in.....6 per doz.
" 12 to 18 in.....12 per doz.
Golden Arborvita.....8 to 12 in.....6 per doz.
" 12 to 18 in.....6 per doz.
Heath-leaved Arborvita, 12 to 18 in.....6 per doz.
Crataegus Arbutifolia, 12 to 18 in.....2.50 per doz.
" 2 to 4 ft.....6.00 per doz.
Anonymous Reptans, Variegata.....2.50 per doz.
" Pulchella.....2.50 per doz.
" Argentea Marginata.....3.00 per doz.
" Japonica.....3.00 per doz.
" Aurea.....3.00 per doz.
Swedish Juniper, 12 to 18 in.....3.00 per doz.
Heath, Mediterranean " Hardy".....2.50 per doz.

Will only sell in quantity specified at these prices. If less, 10 per cent. added; if more, 10 per cent. discount.

BERNARD S. FOX,

San Jose, Cal.

Fruit Trees! Fruit Trees!

AND WHERE TO PURCHASE THEM.

The Santa Clara Valley Agricultural Society has awarded:

Largest collection of Pears, first premium...B. S. Fox.
Best twelve varieties of Pears.....B. S. Fox.
Largest collection of Apples.....B. S. Fox.
Best twelve varieties of Apples.....B. S. Fox.
Best collection of Plums.....B. S. Fox.
Largest collection of Nuts.....B. S. Fox.
Best soft-shelled Almonds (Languedoc).....B. S. Fox.

Forest Trees, Shade Trees, large and small, in quantity.

BERNARD S. FOX, San Jose, Cal.

Agent, Mr. THOS. MEHERIN, Battery street, San Francisco. oc18

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale.

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.

Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address THOMAS MEHERIN,

516 Battery Street,

SAN FRANCISCO.

P. O. Box 722.

24v6-3m

NEW PEACHES, ETC.

Having a large stock on hand of Rivers' and new Southern Peaches, which I think will be great acquisitions to California, I have concluded, in order to introduce them, to reduce the prices as follows: Beatrice, St. Johns, Plowden, 1 yr old, 50c ea; in buds, 25c ea. Freeman, Van Buren, Golden Dwarf, Italian Dwarf, 1 yr, 40c ea; buds, 25c ea; 2 yr old bearing trees, \$1 ea. Utah Hybrid Cherry, Wild Goose and Miner Plums, 1 yr, 50c ea; 2 yr, \$1 ea; buds 25c ea. Louise, Albert, Early Rivers, Lord and Lady Palmerston, and others from Rivers, and Picquet's Late, Blood Leaved, Lady Parham, Pace, Amelia, Julia, Darby and other choice Southern Peaches, all in dormant bud, 25c ea; also Salway, Smock, Hale's Early and other well-known leading kinds, at low prices; 1 yr old and in bud. Beatrice has been well tested in the East and proved to be the very best and earliest variety. St. Johns, in the South, is their best early kind and beats all others. Freeman, Picquet's Late and Lady Palmerston are noted as the best of their season, and all will no doubt prove superior for orchard culture to the more common fruit heretofore grown in California. My trees I warrant always to be true to label. Also, a general assortment of fruit trees including Cherries, Plums, for drying, and Almonds, all for sale at reduced prices, with a liberal discount by the quantity. Terms cash with the order, and all orders promptly filled.

6v7-tf

D. E. HOUGH, Vacaville, Cal.

SUPERIOR

FRUIT TREES,

TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSERYMAN.

T. CORLEY,

No. 315 Washington st., S. F.

MULBERRY TREES,

(JAPONICA AND GRAFTED ROSE-LEAVED.)

For Sale at Felix Gillet's, Nevada City, Cal.

Japonica, 2 and 3 year old trees at \$10, \$20 and \$40 per hundred; cuttings at \$2 per hundred; grafted rose-leaved, standard trees, with heads at six feet from the ground, \$1.50 per tree; \$10 per ton; scions, for budding and grafting, \$2 per dozen. Small packages of Japonica (3d-class trees) and cuttings, and rose-leaved scions, may be sent by mail in four pound packages, or by express, larger in voices with common freight. Send for more particulars. Also Blona and Brianza Silkworm Eggs.

tv7-6t

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of
NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A
CHOICE COLLECTION OFFLOWERING BULBS AND SEEDS,
(Native and foreign.)Our catalogue is now ready, and is the most extensive
ever published on this Coast; we will forward it free to
all applicants.Nurseries on Lombard and Chestnut streets, near
Larkin street, at the terminus of the new Clay street
railroad. Floral and seed depot, No. 27 Post street, San
Francisco.

Letters by Mail or express will reach us.

ja10 MILLER & SIEVERS.

TREES, TREES, TREES

—AND—

PLANTS.

In any quantity from one tree to 100,000, both whole-
sale and retail, at lowest market rates. Fruits guaran-
teed true to name. I have many new varieties of fruit
in my collection which are far superior to the old stand-
ard varieties. Among them is the celebrated Beatrice
Peach, guaranteed true; this Peach is 20 days earlier
than the Hale's Early, and in every respect a fine peach.
My stock of Shade Trees and Grape Vines is the
largest in the State, and a fine assortment. Have also
small fruits, hedge plants and hop roots.Send stamp for printed Catalogue, Price List and
directions for planting and training, or come and see
the stock, at the CAPITAL NURSERIES. Office and
tree depot U street, between 15th and 16th streets, Sacra-
mento, Cal.

ROBT. WILLIAMSON, Prop'r.

Special rates to Patrons of Husbandry. 24v6-3m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway,
Oakland, Cal.

GREEN HOUSE PLANTS,

EVERGREEN TREES,

SHRUBS, ROSES, ETC.

100,000 MONTEREY

CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM
TREES, including:—EUCALYPTUS GLOBULUS (Blue
Gum)—extra fine street and shade trees. EUCALYPTUS
VIMINALIS—both sorts very popular. ACACIAS in
variety. Monterey Pines, Lawson's Cypress, etc., etc.
Orders attended to. Address:

M. KING, Nurseryman,

23v6-3m OAKLAND, CAL.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of
trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for
beauty, and very prolific. The Chestnuts are delicate
in flavor and very large, and an almost endless variety
of rare, useful and ornamental trees.
Send for priced Catalogue. 24v6-6m

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph
Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental
Trees, Shrubs, Roses, GREEN HOUSE
PLANTS, ETC.We are constantly adding to our varied stock the NEW-
EST AND RAREST PLANTS on this Coast, and invite
all who are laying out grounds and planting to give us
a call.

LANDSCAPE GARDENING attended to. ja24tf

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Finley Peach,
Georgia Freestone Seedling, the first offered in the State,
its flavor being richer and superior to the finest of the old
varieties; it is the best for canning and shipping, and brings
double the price of any other Peach in market. Orders
promptly filled fresh from the Nursery.

BRYAN & DOMINGOS,

P. O. Box 157, Sacramento, Cal.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and
Plants, and permanently located our Greenhouses and
Tree Depot corner Washington and Liberty streets, we
are prepared to furnish Fruit and Shade Trees, Small
Fruits, Evergreen Trees and Shrubs, Flowering Shrubs,
Greenhouse and Bedding Plants, etc. Send for De-
scriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER,

Petaluma, Sonoma Co., Cal.

Brooklyn Nursery,

13th AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cy-
press, (\$3 to \$15 per hundred), 10,000 Australian Blue Gum,
and about 3,000 assorted Roses. Also a choice selection of
the various kinds of ornamental shrubbery, etc. Special
attention given to the laying out of Landscape Gardens.
Orders received at the Nursery, or at the office of J. P.
SWENY & CO., Seedsmen, Nos. 409 and 411 Davis St., S. F.

24v6-3m JOHN CAREY, Proprietor.

BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESALERS AND RETAIL,
an immense stock of Evergreen Trees, Ornamental
Shrubs and Flowering Plants, suitable for the conserva-
tory, parlor window, flower garden, lawn, vases, rock-
eries, hanging baskets, ferneries, etc. Comprising in
part, Camellias, Magnolias, Daphnes, Araucarias, Yuccas,
Variegated Agaves, Roses, Fuchsias, Carnations, Eucal-
yptus Aescias, Peppers, Cypress, Pines, Junipers,
Cedar of Lebanon, etc. New and rare plants a special-
ty. Dealers and nurserymen supplied at low rates.
Hyacinths, Tube Roses, Tulips and other Bulbs. Choice
Flower Seed, Geranium and Lawn Seed, fresh and genuine.
2v7-3m

FRUIT AND ORNAMENTAL TREES.

GLEN GARDENS,

ONE MILE EAST FROM SACRAMENTO.

My stock embraces all the most desirable varieties
known, including several new Peaches, among which
are the Beatrice, Louise, Early Rivers, Rivers' Early
York, Stanwix Early York, Victoria, Prince of Wales,
and several others, (all hybridized by S. Rivers of Eng-
land) and fruited on my grounds this year for the
first time in California.The Louise and Beatrice are 15 and 20 days
Earlier than the Hale's Early.Being the first to import these new fruits, including
many sorts not mentioned, purchasers may rely upon
getting trees true to name. Also, the FREEMASON and
SALWAY, the most valuable late peaches in culti-
vation.Blackberry, Raspberry and Strawberry Plants; fresh
Locust Seed—CHEAP FOR CASH.

E. F. AIKEN,

de27-1m Proprietor.

ALMOND TREES.

40,000 Brier's Lanquedoc Almond Trees,

One year old from the bud—CHEAP FOR CASH.

Liberal deductions to the trade and to those planting
large numbers. The tree grows rapidly, bears young
and constantly, blooms late, is hardy. The almond is
large and sweet, with a soft shell.Send your orders for these and all kinds of fruit and
nut trees, to

W. W. BRIER,

feb14-3t Alvarado, Alameda Co., Cal.

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN
Trees, Shrubs and Plants, with all other general pro-
ductions of the Nursery and Garden. First-class two
year old Apple Trees at \$20 per 100, and all other Trees
and Plants at corresponding low rates. Fine Evergreens
grown in boxes and pots, warranted in any locality.
All Trees and Plants warranted true to name. Cash or
good reference must accompany all orders. Lombardy
Poplars, 1½ to 2 inch trees, 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists,
K street, between 8th and 9th, SACRAMENTO, CAL.
4v7-3m

RAMIE PLANTS AND HOP ROOTS.

100,000 Cuttings (Roots and Layers),

For sale in quantities to suit, at prices that will justifi-
fy parties in planting them out. Send for Circular and
Price List. Apply, or send orders to,

P. H. BOGGS, Emmatton, Sacramento Co.

Or to R. WILLIAMSON, Capital Nursery, Sacramento,
Cal. feb14-1m

GRAIN & STOCK FARM FOR SALE.

A FINE FARM OF 140 ACRES;
Good Grain Land; all plowed and ready for seeding and
promising fine crops, and 300 acres of good tule land ad-
joining; excellent pasturage; situated in Suisun valley,
within a mile and a half of landing at Suisun City and one
mile of a railroad station. Has a good house, barn, cor-
rals and fences; also, work-horses and a full assortment of
agricultural implements, seed, feed, etc. Price moderate
and terms easy. Apply to BERRY & CAPPE, 418 Mont-
gomery street, Real Estate Agents. feb14-1w

THOS. A. GAREY'S

Semi-Tropical Nurseries,

San Pedro street, two miles below the Court House,
LOS ANGELES, CAL.The Largest Stock of Semi-Tropical and Northern Fruit
Trees in Southern California,

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

AUSTRALIAN

GUM TREES.

250,000 on hand for this season, at rates to encourage
forest culture. Also, 50,000 Cypress, in shipping order.
Nursery on 12th street, one block north of Tubbs'
Hotel, East Oakland, Cal. Or address, Box 80, Oak-
land.

BAILEY & CO., Proprietors.

Beautiful fresh Cypress Seed, \$3 per pound, sent by
mail, warranted pure and of the finest quality.
25v6-3m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy
BLACKBERRY SETS, for sale at LOWEST RATES.
Orders may be addressed through DEWEY & Co., of the
Rural Press, San Francisco; ROBT. WILLIAMSON, Capital
Nurseries, Sacramento; or to me,

CALVERT T. BIRD,

25v6-3m San Jose, Cal.

TREES FOR SALE.

The undersigned offer for sale at their
Nurseries,Near Niles Station, Central Pacific Railroad, Alameda
county, Cal., a fine stock of STANDARD FRUIT
Trees of the orchard varieties, best adapted for Cali-
fornia. Our Trees are one and two years old, and all
well grown and well rooted, and true to the label.We invite Planters and Dealers to examine our stock be-
fore purchasing. Send for a Descriptive Catalogue and
Price List. Trees can be sent by regular freight routes or
by Express, as directed. Careful attention given to pack-
ing for shipment. Local Agents wanted, to whom a liberal
commission will be paid. Address the undersigned, either
at Centerville, Alameda Co., Cal., or at 418 California St.
San Francisco, Cal.
18v6-4m

SHINN & CO., Proprietors.

Ornamental and Evergreen Trees for Sale
at the Old Maple Leaf Nursery.I have now on hand the largest and best varieties of or-
namental Evergreen Trees, Fruit Trees of all kinds, also a
large lot of the Blue Gum, from six inches to 12 feet high,
at from \$4 to \$100 per hundred. A large lot of Cypressess,
Vines and Junipers of every kind. Green House Plants
and a large quantity of Roses. Maple and Laburnum
Trees for street planting. I would call the attention of
the trade to a large quantity of Australian and African
Timber Seeds, and especially Cedrus Deodare, or Dea-
vine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubbs' Hotel.
Send for Catalogue. ja10

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT
TREES for sale, from three to five years old. The
five-year-old Orange Trees are the largest ever offered for
sale in this county. For Price, address,

MILTON THOMAS,

P. O. Box 304, Los Angeles, Cal.
6v7-2m

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF
EVERY VARIETY,And raised by the most experienced and reliable grow-
ers of Europe, Eastern States and California.My stock is complete; quality unsurpassed; prices as
low as from the best Eastern houses; embracing Vegeta-
ble, Flower and Agricultural, Fruit, Shade, Ornamental
and Fruit Tree

SEEDS—

BULBS, Flower and Bulb CHROMOS from Vick,
(Rochester) and Monuice & Co., (France.)NOW READY FOR THE TRADE, 100,000 POUNDS
EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,

Red Clover, White Clover,

Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,

Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the
Pacific States and the interior.All the better grades forwarded by mail (post-paid),
at catalogue rates. Money forwarded in postal orders,
registered letters or express, at my risk.My Agricultural Almanac and Price Catalogue is
ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who
raiseVegetable, Flower and Tree Seeds of
all kinds.Long experience, extensive practice, and the abun-
dant production of this year's seed crop, enables us to
offer a selection of Superior Seeds for California and
Foreign Soils, and also places us in a position to main-
tain the lead in the market for Pure Seeds, and much
cheaper than those sold by other seedsmen.A large assortment of Imported DUTCH BULBS and
GLASSES just arrived.ALFALFA, CLOVER, TIMOTHY, KENTUCKY BLUE GRASS,
ORCHARD GRASS, and all other varieties.FRUIT TREES, SHADE TREES, HARDY SHRUBS, and a
general assortment of all kinds of VEGETABLE PLANTS.NOTICE.—We will send, free of postage, on receipt of
order, 25 varieties of garden seeds in small packages
price, \$1.25; or the larger size packages—price, \$2.50.

Send for Catalogue and Price List.

SEVIN VINCENT & CO.,

18v6-4m 607 Sansome St., San Francisco.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street..... San Francisco.
18v6-1f

SEED WAREHOUSE.

(Established in 1850.)

ALFALFA—Pure California, Cheap, in lots
to suit.Timothy, Blue Grass, Red Top, Rye Grass, Red
and White Clover, Mangel and Sugar Beet, and all other
varieties for Field and Garden Culture.S. W. MOORE & CO., Seedsmen,
js24-1m 420 Sansome St., near Clay.

PURCHASERS please say advertised in Pacific Rural Press.

WAKELEE'S

SQUIRREL EXTERMINATOR.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be com-
pelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels
should be destroyed, or they will be the destroyers.
This new compound has all the merits claimed for it.
Is convenient and cheap. There is no danger from
fire in using it. It will kill every time. The squirrels
die in their holes from its effects.Put up in packages of one or five pounds, convenient
for sending by express. Cost, \$1 per pound, ready for
use. Very economical. Is scented so that the squirrels
like it. Testimonials from reliable parties who have
tried it, will soon be published. Reasonable discount
for large orders. Directions for use on packages.Owing to the chemical composition of the Extermi-
nator it can be used without the slightest danger of fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the
establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed.

3v7-3m

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a
rates that, with proper cultivation on suitable land,
will make them among the most profitable crops grown.
For further particulars address

PACIFIC OIL AND LEAD WORKS,

12v6-3m 3 and 5 Front street, San Francisco.
P. O. Box 1443.

AXLE GREASE.

To Farmers, Teamsters and Others.

Your attention is called to the very superior AXLE
GREASE manufactured by us for over 18 years.
Recent improvements in the chemical arrangement
of the lubricants used in its manufacture render its use
as serviceable on the lightest buggy as on the heaviest
team.The extensive demand for the H. & L. Axle
Grease has enabled the proprietors to reduce its price
to as low a rate as any of the inferior compounds,
which are continually being forced upon the market.See that the trade-mark (H. & L.) is on the red
cover of the package, and take no other.

HUCKS & LAMBERT,

Manufacturers & Sole Proprietors,

SAN FRANCISCO.

Factory..... 145 Natoma Street.

Depot..... 312 Jackson Street.

10v5-lamp-ly

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily
operated Sewing Machine in the market.

Always in order and ready for work.

In the past ten years ELEVEN THOUSAND Florence
Machines have been sold by us on this Coast, and no
purchaser has paid me anything for repairs. If there
is a Florence Machine within one thousand miles of
San Francisco not working well I will fix it without
any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m

Grand Hotel Building, S. F.

H. K. CUMMINGS.
1868.H. H. BALSTON.
1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission
House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washing-
ton, San Francisco.Our business being exclusively Commission, we have
no interests that will conflict with those of the producer.
4v23-1f

"We Gather Them In, One by One."

WHAT LIFE INSURANCE

IS DOING FOR THE
Widows and Orphans
ON THIS COAST.

THE TOTAL AMOUNT OF DEATH LOSSES PAID
ON THIS COAST DURING THE YEAR 1873,
AMOUNTS TO NEARLY

ONE MILLION DOLLARS!

Of which the following named Companies—

Ætna Life of Hartford.
Brooklyn Life of New York.
Connecticut Mutual of Hartford.
Charter Oak of Hartford.
Continental of New York.
Equitable of New York.
Germania Life of New York.
Globe Mutual Life of New York.
Mutual Life of New York.
Mutual Benefit, Newark, N. J.
North America of New York.
New England Mutual, Boston.
Pacific Mutual, Sacramento, Cal.
Phoenix Mutual of Hartford.
Republic Life of Chicago.
Union Mutual of Boston.

HAVE PAID AS FOLLOWS:

Austen,	Dallas, Ore.	5,000 00
Bond, John	San Andreas	1,000 00
Burrough, C.	San Francisco	16,000 00
Bates, A. B.	San Francisco	10,000 00
Bidenman, S. C.	San Francisco	5,000 00
Biederman, Chas.	San Francisco	2,500 00
Blair, T.	San Francisco	2,500 00
Blackard, Alex.	San Francisco	4,250 00
Boke, N.	Dutch Flat	2,500 00
Bond, Charles R.	San Francisco	5,019 00
Bond, Joseph L.	Petaluma	2,000 00
Boyer, W. G.	Halsea, Oregon	2,000 00
Bond, J. L.	Petaluma	2,000 00
Brown, E. W.	Smartville	3,000 00
Barclay, F.	Portland	3,000 00
Burgess, W. G.	San Francisco	5,700 00
Bussac, Virginia	San Francisco	5,083 70
Blacklock, Wm.	Placerville	1,000 00
Brancham, J.	Unionville, Nev.	5,000 00
Bitter, J.	San Francisco	1,000 00
Breeze, L. A.	San Francisco	10,000 00
Briggs, R. C.	Woodland	5,000 00
Brown, E. W.	Rough and Ready	2,000 00
Bangle, Amos H.	Oakland	2,500 00
Burns, Wm.	San Francisco	1,000 00
Burrough, C.	San Francisco	16,000 00
Capprie, Jos.	San Francisco	3,200 00
Cairns, Robert.	San Francisco	5,000 00
Calden, M. E.	Colusa	600 00
Carr, Jane.	Mayaville	2,000 00
Cazneau, Thos. N.	San Francisco	10,000 00
Clark, Joseph	San Francisco	5,000 00
Clark, John W.	Salt Lake	1,000 00
Clark, J.	Bonita	5,000 00
Claus, D.	San Francisco	4,000 00
Cleveland, Seth F.	San Francisco	2,000 00
Caldwell, Cal.	San Francisco	2,000 00
Chase, Henry A.	Sacramento	3,000 00
Colvert, A. M.	San Rafael	5,000 00
Cohen, Wm. E.	San Francisco	3,000 00
Cohen, Wm. E.	San Francisco	3,000 00
Collins, John.	Sutter Creek	2,000 00
Cone, J. B.	San Francisco	5,000 00
Crenshaw, Geo. H.	Guaymas, Mexico	5,000 00
Cree, Wm.	Portland, O.	1,000 00
Crittenden, Howard.	San Francisco	5,000 00
Crittenden, Howard.	San Francisco	5,000 00
Crittenden, Howard.	San Francisco	834 00
Carter, John W.	San Francisco	3,000 00
Cullens, John.	Sutter Creek	2,000 00
DeRo, Chas.	San Francisco	11,431 00
Deal, M. S.	Nevada City	3,004 50
Dan, Henry	San Francisco	1,000 00
Dell, L. B.	Peters, Cal.	2,164 00
Dinzmore, A. J.	Santa Barbara	5,001 21
Donahue, Edward.	Pioche, Nev.	2,065 00
Dorn, Richard.	San Francisco	5,000 00
Dressel, B. K.	San Francisco	2,800 05
Durney, A. F.	San Francisco	5,035 00
Eaton, C. P.	San Jose, Cal.	258 88
Ehmann, G. E.	San Francisco	5,200 00
Eichel, Christian.	San Francisco	2,000 00
Eisen, Aug. F.	San Francisco	5,000 00
Kieser, Daniel.	Oakland	10,224 08
Ehrhorn, A.	San Francisco	12,672 27
Emory, Miles.	Amador City	1,000 75
Evans, A. H.	San Francisco	1,500 00
Frisby, W. D.	San Francisco	1,000 00
Frost, Frank F.	Sacramento	1,111 00
Fogarty, C.	San Francisco	3,400 22
Ford, George W.	Sacramento	1,000 00
Ford, James D.	Davisville	1,000 00
Fox, George.	Stockton	818 00
Gates, Freeman.	San Jose	3,000 35
Glyuas, W. Reese.	San Francisco	5,000 00
Glyuas, R. W.	San Francisco	100 00
Goldthorn,	American Township	2,000 00
Gray, J. D.	Virginia, Nev.	5,000 00
Gray, J. D.	Virginia City, Nev.	5,000 00
Graff, Daniel.	Lincoln	2,000 00
Griffith, Wm. P.	Visalia	5,021 00
Grant, C. B.	San Francisco	3,200 00
Grant, C. B.	San Francisco	3,200 00
Greenough, J. R.	San Francisco	2,000 00
Gruft, W. P.	Visalia	5,021 00
Glyuas, W. R.	San Francisco	5,000 00
Haefer, Chas.	San Francisco	5,000 00
Haight, M. H.	Bloomfield	2,000 00
Haller, Henry.	Ione City	10,000 00
Hastings, Noah M.	Washoe, Nev.	200 00
Haywood, Jas. A.	San Francisco	15,784 51
Henzmann, F. W.	Stockton	1,000 00
Heyer, Henry.	San Francisco	1,385 00
Hill, Fred K.	San Francisco	5,000 69
Hitchcock, Virginia.	Latrobe, Cal.	1,000 00
Hohbs, Geo. B.	Dutch Flat	1,000 00
Horan, Tim.	Silver City (I. T.)	947 00
Holmes, P.	San Francisco	1,000 00
Hinkle, O. E.	San Francisco	5,000 00
Hinchey, Chas.	San Francisco	4,345 00
House, John W.	Santa Cruz	1,007 58
Howard, H. L.	Cherokee Flat	5,000 00
Howell, Thos. E.	Copeland	1,500 00
Hinman Marquis D.	El Dorado	5,000 00
Huseman, J. F. O.	Chico	2,000 00
Hamilton, A.	Eureka, Nev.	3,000 00
Husky, John.	San Francisco	1,000 00
Jones, W. D.	Santa Rosa	1,000 00
Jones, Gustavus A.	San Francisco	2,648 00
Jones, G. A.	San Francisco	5,000 05
Jordan, Albert H.	San Francisco	10,000 00
Jordan, A. H.	Portland, Oregon	5,000 00
Knapp, J. L.	Chico	3,000 00
Knapp, C. H.	San Francisco	5,000 59
Koopman, John.	Alameda Valley	10,000 00
La Cour Louis, L. S.	San Francisco	12,180 00
Libby, E. G.	San Francisco	5,000 10
Lisenden, Jno W.	San Francisco	5,000 00
Lipman, C. F.	San Francisco	5,000 00
Lipman, C. F.	San Francisco	10,000 00
Lyons, J.	San Francisco	10,000 36
Lyons, John.	San Francisco	5,000 00
Lyons, John.	San Francisco	5,556 86
Mallory, H. O.	Stockton	5,000 86
Mallory, Henry O.	Stockton	5,000 00
Martin, Richard D.	Santa Rosa	1,000 00
Martin, Richard D.	Santa Rosa	1,000 00
Michener, Wm P.	Sacramento City	5,000 00
Moore, H.	San Francisco	5,000 00
Mathewson M. J.	San Francisco	10,000 00
Mathews, Jas. R.	Stockton	2,000 00
McClellan, Mary C.	Brooklyn	5,000 00
McCollough, John.	Yuba City	3,500 00
McKinn, Thomas J.	Sacramento	707 00
McMillin, Thos.	U. S. Army	5,000 26
McQuaid, O. J.	Oroville	3,200 00
Meister, M.	Green Valley	10,000 00

Mendelson, Morris.	San Francisco	5,000 00
Michener, Wm P.	Sacramento	4,211 00
Miller, J. W.	Gila ville	3,000 00
Minturn, Chas.	San Francisco	10,000 00
Minturn, Chas.	San Francisco	5,000 00
Moore, H.	San Francisco	5,000 56
Moore, Geo. W.	Sacramento	15,677 00
Mow, Geo. W.	Sacramento	20,000 15
Mantford, H.	Sacramento	5,000 00
Melone, H. C.	Sacramento	5,000 00
Myers, George.	Mayaville	4,921 00
Myers, George.	Mayaville	4,910 00
Murray, Mary A.	Mercado Falls	5,000 10
Nelson, C. E.	Vallejo	2,000 00
Nelson, J. C. A.	San Francisco	5,711 32
O is, Isaac B.	Smartville, Cal.	1,000 00
Oudry, E.	San Francisco	1,500 00
Patten, E.	Gold Hill	14,300 00
Pellier, Louis.	San Jose	1,042 00
Pettiboa, Geo. F.	San Francisco	5,000 00
Plummer, R. F.	Camp Seco	3,000 00
Plummer, Zenos F.	San Francisco	2,300 00
Prussing, C.	Tehama	5,000 00
Rhodes, H. A.	San Francisco	12,000 00
Riley, P.	Hickville, Cal.	2,000 00
Robinson, David N.	San Francisco	1,000 00
Rose, Chas.	Wilmington	637 00
Ross, C.	Los Angeles	2,000 00
Savery, A. W.	Virginia City	5,000 00
Saben, A. B.	Empire City, Nev.	5,253 23
Shields, John.	San Joaquin Co.	2,160 02
Saner, Geo. F.	San Francisco	1,000 00
Saner, Geo. F.	San Luis Obispo	1,000 00
Schlenk, Hugo O. L.	San Francisco	5,000 00
Schmid, J.	Woodland, Cal.	1,000 00
Simpson, Jas.	Rio Vista	1,985 00
Schuman, John H.	San Francisco	1,029 00
Sleeper, F.	San Francisco	6,500 00
Stender, Herman.	Yankee Jim	250 00
Stooble, Charles S.	Michigan Bluffs, Cal.	3,000 00
Strobel, C. S.	Michigan Bluffs	3,000 00
Stoddard, S. B.	Sandwich Islands	3,000 00
Streeter, Robt.	Yankee Jim's	1,000 00
Struver, Justus.	San Francisco	10,000 00
Scott, James.	San Francisco	5,000 00
Scott, Jas.	San Francisco	18,000 00
Sulzberger, M.	Yuba City	10,000 00
Sutton, J.	Portland	5,000 00
Smith, Thos. G.	Oroville	2,000 00
Smith, Sam'l E.	San Francisco	1,500 00
Smith, W. B.	San Francisco	2,000 00
Smith, W. B.	San Francisco	1,000 00
Spooner, O. P.	N. San Juan	25,000 00
Snagnoli, Maria A.	Clint	2,000 00
Stempel, Frederic.	Oregon	2,000 00
Stevens, Emeline.	Sanville, Cal.	3,003 00
Sydon, John H.	San Francisco	833 50
Taylor, A. J.	Alameda	10,000 00
Thayer A. J.	Corvallis, Or.	5,000 00
Thomas E. Rev.	San Francisco	5,000 00
Thomas, Mary.	San Francisco	563 00
Thompson W. L.	San Francisco	2,196 18
Tompkins, E.	Oakland	12,400 00
Taft, Dexter.	San Francisco	10,000 00
Taylor, J.	Dublin, Cal.	10,000 00
Taylor, C. J.	Marville	2,000 00
Walker, J. A.	Portland, Or.	10,000 00
Wallace, Warren L.	Yuba City, Cal.	1,000 00
Walton, Henry G.	San Francisco	2,190 55
Warner, C. C.	Oakland	5,000 00
Watson, R. D.	Marville	2,248 53
Watson, Jas. M.	Vallejo	5,201 70
Wertheimer, Philip.	San Francisco	10,000 00
Wessels Sam'l C.	Timbuctoo	2,000 00
Wieder, Edward O.	Sacramento	5,069 87
William,	San Francisco	5,000 00
Wilson, Enoch H.	Helenia, M. T.	10,339 53
Wist, J. G.	Pt Washington, W. T.	5,000 00
Wood, Robt.	Virginia City	3,000 00
Zimmerman, J. P.	Sacramento City	401 00

\$908,048.40

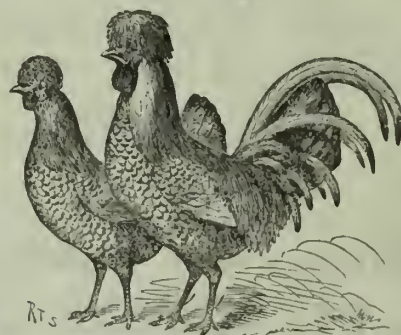
Add to the above sum the amounts paid out by the several Companies represented on this Coast, and who have not furnished a list of the losses paid, then the sum would exceed,

ONE MILLION DOLLARS.

READER.—One word with you. Make a note of the above, and when your Life Insurance Premiums fall due, pay them PROMPTLY, then there will be no trouble about your heirs collecting the amount of policy in case of your death. For proof, we respectfully refer you to the above list. feb14-1t

Improve Your Poultry.

It Costs No More to Keep Good Fowls than Poor Ones!



GOLDEN SPANGLED POLISH!

A new importation of Henry Belden's celebrated strain just received. Send orders for Eggs early. Don't wait till the day you want them. For further information

SEND STAMP FOR ILLUSTRATED CIRCULAR

Containing a full description of all the best known and most profitable Fowls in the country to

GEORGE B. BAYLEY,

Importer and Breeder of Blooded Fowls, and agent for the POULTRY WORLD, a monthly magazine devoted entirely to Poultry—tells how to keep Fowls for pleasure and PROFIT. Subscription only \$1.25 per year. Send 10 cts for a sample number, it will repay perusal.

Address **GEORGE B. BAYLEY,**

Ja24-tf Box 659, San Francisco.

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

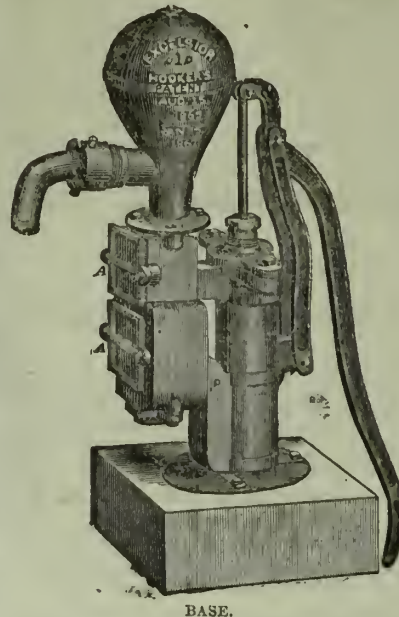
425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 216-tf

More than double the number of Farmers and their families read the PACIFIC RURAL PRESS than any other journal on this Coast.

THE "EXCELSIOR" FARMERS' PUMP.

After Seven Years use proving itself the Best Pump on this Coast, and consequently the CHEAPEST.



BASE.

We can advise all parties to buy the Pump to be worked by hand, wind-mill or horse power. All sizes for sale.

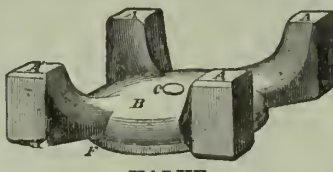
REMEMBER,

Every Pump is tested to 125 lbs. hydraulic pressure per square inch.

Will pump water 250 feet high.

So simple every Farmer can keep it in order.

EVERY PUMP WARRANTED.



VALVE.

MOUNTED.

BRITTAN, HOLBROOK & CO.,

111 and 113 California street, San Francisco, (and also Sacramento,) General Agents. 6v7-eow-3m

[ESTABLISHED IN 1852.]
New York Seed Warehouse,
R. J. TRUMBULL,
427 Sansome street, - - - - - San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE and RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE. BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th. **R. J. TRUMBULL,** 15v6-6m-16p 427 Sansome st., San Francisco.

TO FARMERS.

WE ARE PREPARED TO CONTRACT FOR NEXT SEASON'S CROP OF

FLAX SEED at 31-4 Cent per Pound,

Delivered at our works in this City. Will also furnish Seed for sowing, to be paid for from the contracted crop. Will also advance

Money Necessary for Harvesting Crop.

If required. Farmers can ship direct to us, thereby saving all

EXPENSES OF COMMISSION.

Now is time to sow. For further information apply immediately to

THE PACIFIC OIL & LEAD WORKS,

3 and 5 Front Street, San Francisco.

LONDON ASSURANCE CORPORATION.



The Oldest and Wealthiest

Fire Insurance Company doing business in America.



Volume VII.]

SAN FRANCISCO, SATURDAY, FEBRUARY, 28, 1874.

[Number 9

J. M. Mayfield.

In our portrait gallery this week we present to our readers a California farmer from Yountville, Napa county, who has met with prosperity in his chosen land. Mr. J. M. Mayfield, the subject of this sketch, we find on first acquaintance a man of retiring disposition, but of pleasant and refined address. To improve the portrait made by our engraver we may say that Mr. Mayfield is of tall stature, with light hair and whiskers, better looking withal, than any counterfeit possible in the "black art" of engraver and printer.

Elected Master of the Yountville Grange during the early organization of the Order in this State, he was sought out and elected a member of the Executive Committee of the State Grange at its first session in Napa in last July. On that committee he locally represented the counties of Napa, Lake and Sonoma. His intelligence and good judgment represented ably and sincerely the interests of the Order at large, as is testified to us by his fellow committee-men. He is one of our best educated farmers and a good thinker and writer. With few words, whatever he undertakes to do he strives to do well. This sign of his character is worthy of wide imitation by the present hasty generation.

Mr. M. was born in Tuscaloosa county, Alabama, July 31, 1833. His father was a native of South Carolina, and his mother, of Georgia. Both emigrated to Alabama in 1818 while yet in their childhood. The manner in which his father received his education well illustrates the advantages of our school system, and shows the difference a few years have made in this respect. He grew up in a wilderness without any of the benefits of education, or ever going to school a day. Was married at the age of 28, and did not know a letter of the alphabet. His wife had, however, received a tolerable education for a country girl in a new country, and under her kind and loving instructions he acquired an amount of education that caused him to be considered one of the best readers and mathematicians in the county. He died at the age of 65, one of the best read men in Biblical literature in the county in which he lived. Mr. Mayfield was brought up on a farm with his father, and grew up to manhood without the advantage of much mental culture.

He earned his education in a noble manner; having been sent only a few days at a time to the low grade school in the neighborhood, when within six months of his majority, his father proposed to send him to any school he might select for one year. But, as his brother, next younger, had never enjoyed good health, he refused to accept the offer, preferring to have the money spent on the education of his brother. Nevertheless, being eager for an education, he determined to spend a year at his work, and with the proceeds of his earnings, go to school for a year. When this resolution became known, he received several offers to take charge of plantations, as overseer and general manager, owing to the popularity and position of his father in the county. His parents, however, objected; on the ground that constant association with, and management of the negroes, tended to degrade and demoralize. He submitted to the wishes of his parents, although there was quite a difference in working as a "hand" on a farm, at twelve dollars, and as overseer, at one hundred dollars per month. He went to work for a brother-in-law, in an adjoining county, and earned four hundred dollars. He entered Big Creek Academy, a high grade public school, which he attended five months; at which time the school was broken up. Mr. M. then taught school for over a year, and then returned to school himself, which he attended for six months, and then began teaching again. He taught and attended school alternately, for some little time, when the accounts of an acquaintance, who had been to California, caused him to make up his mind to come here. He landed on the 1st of April, 1859, and arrived in Napa city May 18th, 1859. He worked as a common laborer for five months, and then began farming. His first year's experience in farming was anything but satisfactory, as he did not realize a dollar's

profit for his year's hard work. His next year's work was a better one, and he met with fair success. Mr. Mayfield was married to Miss Rosalie Chapman in November, 1862, and bought a farm of 360 acres, in company with Mr. Lyman Chapman. He afterwards sold his interest to Mr. Chapman, and bought his present farm of 200 acres, for which he has paid \$20,000. Mr. Mayfield is an Odd Fellow, and has been re-elected Master of Yountville Grange.

State Legislature.

There must be hard work in both Houses of the Legislature, from this till March 31st, if that body succeeds in finishing up the business now on hand. Of course, a large number of bills must be killed, or die with the adjournment. On Thursday of last week there were eighty-one bills on the Assembly file and fifty-one on the Senate file. In addition to this, it is said there are about one hundred additional bills in the hands of the various committees. It is a noticeable fact that up to the time specified the Governor has approved of every bill that has passed the Legislature.

FARES AND FREIGHTS.—This bill is still in the hands of the Senate Committee, and so far as

ple. Mr. Fraeman has got upon the right track sure. It has passed the Assembly, where the reasonable wishes of the people are calmly and favorably considered, but is meeting with much opposition in the Senate, where every measure of reform will have to run the gauntlet, until the people have a choice to re-construct that body as they last fall did the Assembly.

THE APPORTIONMENT BILL still meets with unnecessary and suspicious delay. There is an evident intent among its enemies to get up a general scrimmage on this question, as well as on some other important measures, by which time will be consumed until it will be too late to get them through before the day of adjournment arrives.

MIGRATORY STOCK.—The Assembly bill to regulate the assessments of migratory bands of live stock, and to provide for an equitable distribution of the taxes derived therefrom, which has passed the popular house, got the go by on Tuesday, and was "laid over" for the present. The Senate appears to be true to its purpose of defeating, if possible, every measure of reform, or of special interest to the farming community. The people have got a good memory.

GRANGE MEMORIAL.—In the Senate on the



J. M. MAYFIELD.

we can learn very little progress is being made with it, notwithstanding the almost universal demand of the people and press for prompt action. Many in the Atlantic States are also watching with interest the progress of this bill. If it is killed, woe be to those through whose instrumentality such a result is brought about.

TO REGULATE FREIGHT BY THE CAR LOAD.—Paulsel introduced a bill into the Assembly on Tuesday, to regulate freights on railroads shipped by the car-load. The bill provides that railroads shall, on application, furnish freight-cars for the transportation of grain, flour, bran, lumber, coal, brick, or wood, place the same on sidetracks, load the same with due diligence, and transport the freight without unnecessary delay, and for each car-load companies may charge for eighty miles or over, 25 cents per mile; seventy to eighty miles, 28 cents, but not to exceed \$20 per car; sixty miles, 30 cents, and not to exceed \$19; fifty miles, 34 cents, and not to exceed \$18; forty miles, 40 cents, and not to exceed \$17; thirty miles, 50 cents, and not to exceed \$16; twenty miles, 65 cents, and not to exceed \$15; ten miles, 75 cents, and not to exceed \$13. Less than 10 miles, \$7 per car. Each car must be of a capacity to carry ten tons.

THE SALARY BILL for the fixing and general reduction of the salaries of State officers, is a measure imperiously demanded by the peo-

18th Mr. Bush presented a memorial from the Masters of Granges in Los Angeles and San Bernardino, asking for an appropriation to the Agricultural and Mechanical Exposition of Southern California, for the purpose of aiding it in fitting up its grounds and holding its first annual exposition in the fall of 1874. Referred to Committee on Agriculture.

DEATH ON THE SQUIRRELS.—We continue to hear favorable reports with regard to the success of Mr. J. T. Hoyt's "Poison" for destroying squirrels. Mr. H. thinks if it were generally introduced it would save to the State, ship-loads of grain, that now go to feed these varmints.

ONE half of the entire population of Sutter county are said to be Grangers.

LESS grain will be sowed in Santa Clara valley this year than usual. But the yield is expected to be above the average.

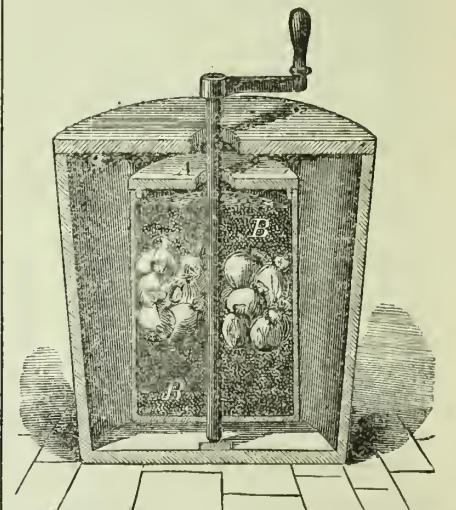
BERRIES and fruits are said to pay better than grain raising in Santa Clara valley.

PAJARO valley has had so much rain that half of the land has not yet been sown.

JAMES SIDLEY, of Visalia, has put in sixty acres of alfalfa.

The New Era in Farming.

The good old days, of which we hear so much, have passed away. It is questionable whether they are to be regretted; more than certain that they are not, so far as farming is concerned. The good old days of one-horse, happy-go-lucky agriculture are indeed over. There



BUTTER MAKING MACHINE.—See Page 138.

was a time when the motto would seem to be, to do as one's father had done, until by repeated experiment and multiplied failures one learned better; to receive on no account any information whatever, and to keep to oneself, as much as possible, any discovery made.

The tendency now is quite opposite, and as liberal and far-sighted in policy as the other was narrow-minded and retrogressive. It is the great object with farmers to facilitate intercommunication and exchange of useful knowledge, rather than to shut out the news and keep at home the improvements. No sensible farmer fears that by announcing to his neighbors methods of getting over certain difficulties or of accomplishing certain ends, he is thus encouraging a set of men, put upon his own plane, to compete with and injure him. He knows that for every single hint given out by him, in return he receives many; and that as he is benefited by others it is only fair to reciprocate so far as he is able. The truth is, that there is no class of men so cordially willing to impart information, so mutually helpful, so neighborly, as the farmers.

This state of feeling is in turn the cause and the result of the agricultural papers, the books, the Farmers' Clubs and the Granges. Without the generous instinct these instruments of progress could not exist, and it is itself fostered, finally, by its own off-spring.

THE OLIVE.—In the lower counties, and wherever the semi-tropical fruits flourish, the olive is a tree which should be thought of. Raising olives, as yet, is not carried on to any great extent in this State, although sufficient trial has been made to convince all of its practicability.

The manufacture of the olives into olive oil, the extraction of which is very simple, would appear to be the best way of disposing of them. A good article of oil can be made from olives which would not do at all for table use. And it is true that California olives, so far as we have had experience, do not equal those grown on the borders of the Mediterranean in delicacy and richness of flavor. But, with proper treatment, the small and inferior olives might all be utilized.

In the Southern States the cultivation of olives for the purpose of making oil is being extensively tried. According to the Savannah Advertiser, a plantation of olive trees in Georgia has been very successful and the yield of oil abundant and of good quality.

ALMOND orchards in Ventura county are now in full bloom.

CORRESPONDENCE.

Protection of our Raporial Birds.

EDITORS PRESS:—My text will, no doubt, sound strangely to those who have been taught that it was next to God's service to slay and destroy them; it will appear equally so to those who have never studied or observed this family of birds and their habits. My suggestions are offered in hopes that they may find the public willing to act upon them, and render their full and earnest support. We are living in an enlightened age—in one when the mind of the whole community appears alive and interested in whatever tends to its advantage and benefit. The people almost universally are rousing from their hitherto lethargic condition; are battling with prejudices of such long standing that they had become arbitrary laws; are uprooting and overturning fallacies that had become accepted as facts, and thus clogged the wheels of progress. The morning of a new and brighter day appears to have dawned upon the world. Mentality is in the ascendant. The shades of the coming night gather thick and fast around ignorance and superstition. The cause of all this is that knowledge is disseminated and intelligence scattered broadcast, bringing it before the masses. This has been accomplished through that greatest of educational mediums—the press—a teacher the most potent known. Through its influence men and women have been brought to the front from the ranks of those whose isolation prevented an acquaintance with each other, or the world at large, or of understanding their strength in unity. Representatives of this class are found to possess equal ability, to be of as sound judgment and keen perception, to have more practical knowledge, and last, though not least, to be as truly honest as those who have assumed to themselves the right of controlling in years past.

By education, the humble farmer and unpretending rancher have become sovereigns; their cosmopolitan brothers find in them their peers, and graciously extend to them the tips of their gloved digits, and patronizingly assure them of their countenance and support; has the question ever intruded itself upon their minds, as to the worthiness of the objects they really do not honor? Is not the modern social fabric reared upon a foundation laid by the hands of the agriculturist, the profits of whose labor retain mankind within the pale of civil law? It is this surplusage that calls forth the energies and enterprise of civilized man, whitens the ocean with his canvas-winged ships, plows the briny waters with leviathans that feast upon consuming fires, impregnates the quaking bogs, and brings into existence the eighth wonder of the world, (Chicago), has changed the barren sand hills of Yerba Buena into a metropolis famed throughout Christendom, as San Francisco, of the Golden Gate. This proposition is food for digestion by those accustomed to regard the tiller of the soil as created to administer to their wants and caprice. In stating my text, I proposed to divide it into heads only, but in no wise to fly off on the tangent I find my pen has taken. Nevertheless, Mr Editor, a *lapsus penne* is as apt to occur as a slip of the tongue; as I find nothing, however, that will prejudice the cause I advocate, I will, with your permission, suffer it to pass.

The proposition is, that we extend our protection to that family of birds, known individually, as hawks, falcons, owls, vultures, eagles and buzzards. How few there are who have any conception of the tax levied by the family of rodents, whose depredations aggregate annually amounts beyond belief. The most familiar and best known, beside a branch that possesses all the objectionable features, is the murine branch of this extensive family, the type of which is found in the genus *mus*, to which our common rats and mice belong. The influence they exert upon the labors of mankind are beyond calculation or estimate. The abode of man is nowhere free from their presence. They possess themselves of palace and cabin of mansion or hut—occupy our barns, bins, storehouses, ships, steamers, barges and boats—are tenants in common with us in our grain fields and gardens; in fine, are ubiquitous; wherever they can levy contributions or work injury. They have but the one redeeming quality urged in behalf of the Old Man with the forked tongue, viz.—untiring perseverance and wonderful activity. In addition to rats and mice in our habitations, the fields and pastures of California are overrun, of late years, by ground squirrels or maraots, (*Spermophile macrourus*), another branch of the rodent family, that have multiplied so prodigiously since the settlement of the country, and the destruction of their sworn enemies, the raporial birds, as to call for legislative action; these pests have, in favorable localities for them, taken entire possession, rendering the labors of the husbandman of no avail.

Instead of our Legislators passing laws taxing the people for bounties to be paid for their worthless scalps, let the laws be altered so that the protection given to the game birds and animals, be thrown around our friends the predaceous birds, that nature, by a wise provision, has placed here as guardians of our interests, by keeping in due bounds those birds and animals which would otherwise prove a curse instead of a blessing. It will be urged, no doubt, by those who have adopted the

theory of this order of birds being so destructive, and drawing largely upon the poultry yards—that to protect them would be jumping from the frying-pan into the fire. Let none deceive themselves on this score; no one of experience or observation will object to the proposition made. Facts are stubborn—figures equally reliable (when not used by fare and freight committees); offset the losses of one season from the family of rodents against all that have ever occurred by depredations from the brotherhood of hawks upon the "gallus domesticus"—and there would yet remain a wide margin in favor of the raptors. Let our laws protect them, let each farmer and farmer's son, every gunner and shootist, understand that they raise their hands against their best friend, in this land of rodents, when they destroy a falcon, vulture, hawk or owl.

Respy's yours, G. C. PEARSON.
South Vallejo, Feb. 20, 1874.

Raising and Slaughtering Beef Cattle.

EDITORS PRESS:—Permit the subscriber, through the columns of your respectable and influential journal, to say that his being a farmer—a California farmer, the son, the grandson, and the great grandson of farmers—he has naturally an interest in whatever contributes to further the farmer's interests.

Ours is an age remarkable for abuses and reformations. The propensity in humanity to secure cosy comforts and costly pleasures, for which it has a relish, but no right, at the expense of others, is one of the effects of the fall.

No class of citizens throughout this country has been subjected to so many unearned and undeserved oppressions as the class which devotes its whole energy and existence in the worthy work of producing the material that preserves in others that precious thing called life.

Although the Grange is merely in its infancy, and shedding forth only the first rays of its morning light, yet it has already done much good, and I hope that it will continue to build up the farmer's interests upon the best and surest foundation, and thus secure to him the portion of profit, remuneration and justice he so well deserves, as it can justly be afforded him without coming in collision with the righteous interests of others. Not having noticed in the *RURAL PRESS* anything particularly plausible relative to the

Economical Disposition of Cattle and Live Stock, I have thought it might not be deemed injudicious to furnish the farming fraternity with a few scraps of information on this subject which has a direct bearing on their interests, and with which many of your readers have but little knowledge.

There are slaughtered and consumed annually in the city of San Francisco alone, 72,000 head of cattle, which average, dressed, 530 lbs., or 38,160,000 lbs. per annum, for which the retail butcher subjects the consumer to an average tax of 10 1/2 cts. per lb., or \$56.97 1/2 per beef, or \$4,102,200 per annum, exclusive of the hides, which average \$6.10 per hide, or \$439,200 per annum. Total of hides and beef for one year, \$4,541,400 per annum, or \$63.07 per beef.

In this branch of business, as now conducted, there are only four parties interested, yet two too many. First, the producer; second, the consumer; third, the wholesale butcher; fourth, the retail butcher. The last two mentioned, though so few in number and so free from true usefulness, that they are hardly worthy of respectable recognition, either as producers or consumers, yet are as deserving of as much credit for their well directed and systematic zeal in freezing out consumers and fleecing producers as any other set of men in the community—the mining stock sharps and wheat ring worthies not excepted. As the result of the vigorous prosecution of their self-denying and disinterested efforts, they have become substantially and permanently powerful, and do not now belong to the *Lean Kine*.

Of the aforesaid average of \$63.07 for a beef the wholesale butcher, for slaughtering, selling and delivering, receives the fair figure of \$6.10 cash, or its equivalent, the hide and tallow, right there. His reward is sure and soon earned and accumulates ever. This done, his retail cousin comes along and takes the oversight of the matter and discharges his duty in the usual manner. For his timely and well intended services he receives a remuneration equal to 5 1/2 cts. per lb; or \$29.15 per beef, and with comparatively few exceptions gets paid every eighth day. The remainder, a sum equal to 5 1/4 cts. per lb; or \$27.82 1/2 per beef, is furnished to the farmer, not that he ought to have it, but because he has waited some two, three, four or more years in order to get it.

The combined compensations of the butcher cousins is \$35.25 per beef, or \$2,538,000 per annum, quite a handsome sum for so few men.

Yet all these indispensables do or ever have done is simply to slaughter, cut and convey the meat to consumers. Your correspondent and hundreds of others conversant with the business know that the same work could be done equally well as it now is, though not on the same principle, at a cost not exceeding 2 cts. per lb; or \$10.60 per beef, thereby securing in favor of the producer an additional net gain of \$24.65 per beef, or \$1,774,800 per annum.

If to this sum were added the proportionately large margins which could also be secured from mutton and pork, it would make in favor of the farmer and stock-raiser of California, a total annual gain of more than \$3,250,000 over and above what they now realize. These figures all savor of diminution and are free from exaggeration. Should any of your numerous and intelligent readers desire to impart or obtain any further information relative to this subject, let it be so signified through the pages of your prosperous and impartial journal.

Yours as usual, WALTER WELLINGTON.

The Use of Bluestone—Smut.

EDITORS PRESS:—In the *RURAL* of Feb. 14, I see your answer to an inquiry from Inyo Co. relative to applying bluestone to wheat. Let me give you my manner of applying it, and a few reasons for the same. I take a large cask, fill it two-thirds full of water, dissolve the bluestone and pour into the cask, until the water has a strange blue cast, calculating 4 oz. vitriol to 100 pounds of wheat; I then fill a barrel two-thirds full of wheat, (having perforated the barrel with small holes) and by means of a block and fall, drop the barrel into the cask, letting the liquor cover the wheat; let it stand from fifteen to twenty-five minutes, then raise by block and fall, and drain; when drained empty upon a floor, and repeat until you have prepared all that you wish. Allow the prepared grain to lay upon the floor from twelve to twenty-four hours, then put in sacks, and in twenty-four hours it is dry enough to sow with a power machine; and if sowed on dry land will not sprout until rain falls. Add water and bluestone to the first cask as the wheat absorbs it.

The Reason Why.

Soaking wheat too long will kill more or less of the seed, if the liquor is strong enough to do any good; again, when the wheat is soaked too long, the largest and very best of the seed will absorb moisture enough to start the germ to growing, and if dried after the germ is started it will never start again. You thereby lose a portion of the best seed, and the bluestone kills a portion of the smaller berries. The result is, when the farmer sows his wheat, he is surprised that he has so poor a stand on the ground, and he passes a vote of censure upon birds, worms or the machine which sowed the grain.

Something about Smut.

One other point on which I differ with you, I do not believe that bluestone ever killed smut. After thirty years of close observation, I should just as soon expect to hatch chickens from rotten eggs, as to grow smut from smut. Smut is a black blight, caused by a failure on the part of the roots of the plant to obtain those peculiar properties from the soil which are necessary to produce the perfect grain, and which can only be furnished by the deep penetrating roots. I do not believe that a man ever pulled a plant of wheat after it was far enough advanced to show the smut head, that he did not find strong roots penetrating quite deep into the soil, while a *smut* plant spreads its roots directly upon the surface, like a spider's web.

My reason for using bluestone is that it stimulates the young plant and produces strong roots. When the seed germinates, the young plant draws its substance from the substance of the kernel, until its roots gain sufficient strength to feed upon the soil, then (and in wheat I believe not before) the spear or leaf is thrown forward. The bluestone adheres to and is absorbed by the berry, and possessing those properties that particularly adapt it to the purpose, acts as a direct stimulant to the young plant, increasing the volume of food, and aiding in the formation of strong vigorous roots, which penetrate deep into the soil, and the result is wheat instead of smut.

Strong lye, from wood ashes, is a very good substitute for bluestone; but is not so sure. In some soils, lime spread on the wheat, after the wheat is made damp, is amply sufficient; but on other varieties it is of no benefit that is perceptible.

Livermore, Feb. 16, 1874.

Our Native Fish.

EDITORS PRESS:—I was reading, some time ago, about some of our enterprising citizens going to a great expense to stock some of our rivers with fish from the Eastern States, which I think is a very laudable undertaking—but why let a few people destroy the fish we have already here by building dams across the streams, and running sawdust into them, and covering up the spawn of the few fish that are left, so that it can not hatch, as is now being done in many localities. It looks like folly to me to go to the expense of importing fish or their spawn to this country, which are no better than the mountain trout and white fish. (White fish are called by some people silver trout.) I doubt very much if any of the imported fish are equal to our mountain trout and white fish. If such is the case, would it not be wise in our legislature to pass some law for their protection in the particulars alluded to? If an acre of water will produce more food than an acre of land, should not the product of that acre of water have some protection, particularly when the product of that acre of water requires no labor?

Placer county, Feb. 12.

HORTICULTURE.

Interesting Facts About Cottonwood Trees.

EDITORS PRESS:—The cottonwood tree is, I believe, considered by most agriculturists of this State, to be the most useless tree grown, and by residents of our towns and cities they are considered a nuisance; and certainly I agree with the latter because of the great amount of cotton-down produced by them, and adhering to the dresses of their citizens. But to the farmers of this State, especially those living in the interior valleys, which suffer most from the dry, hot summer months, would I desire to give the results of my observation on crops growing upon land surrounded by, or where the cottonwood grows in close proximity thereto. My attention was first attracted to the peculiar character of this tree about three years ago. I was passing, one hot, eslm summer day, beneath a row of large cottonwoods. I observed a fine mist floating in the atmosphere as I approached the trees, and I was astonished to find myself covered with a fine misty vapor. When I got under the trees, indeed, I at first thought that it was misting a fine rain. I took off my hat and saw it completely covered with sparkling specks like dew. I thought it a very strange phenomenon, and I walked some considerable distance from the trees before I could satisfy myself that it was not really a cloud mist. I then returned to the trees, and upon examination I found that the dewy vapor was emitted from the leaves of the trees. I then examined the leaves and found them to be very thick and sponge-like, full of water; I found also under the shade of these trees a much cooler temperature than any other. I subsequently determined to investigate this matter more fully, and ascertain if this emanation of moisture from these trees continues throughout the summer. Upon every calm, hot day, I found the same results; of course when the wind blew it would carry the mist off and become more humid and cool. These trees are noted for their bright, green, dense foliage, and my theory is that during the night, when the air is filled with moisture, after drinking sufficiently for their own requirements, secrete within their foliage a very large amount of water to be rained down upon suffering vegetation beneath, consequently I have called them the rain tree.

I have observed the past season that the hop yards that have been surrounded by these trees have yielded much heavier crops than those that have not had the cottonwood growing near them. Again, one of my neighbors planted a field to beets; in the middle of this field there were growing two large cotton trees. The beets under those trees and within a radius of six or eight rods, the crop was fine, while the balance of the field was a failure. Acting on these hints, I have procured 3,300 of these trees, one to three feet in height, dug up by the roots, and am now planting them on my farm, ten miles from Sacramento, on the Old Jackson Road, where I have a hop yard of 20 acres, and where I shall plant next season, if nothing prevents, largely of early fruit trees. The cottonwood is a rapid grower, deep rooted and very tenacious of life. If these hints are worth anything, publish them. It is not an advertisement, because any farmer can get all he wants of them for the digging.

Yours truly, WM. M. HAYNIE.
Sacramento, February 9, 1874.

The Wild Morning Glory.

(*Convolvulus Arvensis*.)

EDITORS PRESS:—This pernicious weed is a native of Europe and Asia. When it was first introduced into this State is not exactly known; I believe it first began to force itself upon the notice of the gardener about fifteen years ago, being confined at that time to but a few localities. From that time, however, its spread has been rapid, and few there are throughout the entire State, that cultivate land, but have had the misfortune of its acquaintance.

The root of this plant is perennial, and in climates where severe frosts do not prevail, its top also. Here, the green leaves disappear after the first heavy frosts and do not reappear until spring, when it takes possession of the ground, completely annihilating every other plant except large orchard trees, and many claim that it injures even them more or less. All attempts to destroy it have thus far proven futile, and to this end the ingenuity of our farmers has been exhausted. Destroying the top by surface culture is the quickest way to increase its strength and growth. It loves rough treatment and rapidly enlarges its area wherever the hoe, plow and spade are applied most diligently. The question now arises

What Shall we do With It?

Why, utilize it. It should be generally known that hogs will fatten rapidly on the morning glory; young cattle eat it with avidity, and young horses will "do well" on it. This is its only redeeming quality, and is a mite of consolation to those whose lands are infested with its useful presence. I close with the admonition to those who have not yet been cursed with its presence to use every precaution to avert such a calamity—for calamity it surely is.

All garden seeds should be carefully examined before being sown. The roots of fruit trees purchased from nurserymen should be inspected closely before transplanting. In fact nothing should be cast upon, or put beneath the surface of your soil without first fully assuring yourself that the *arvensis* is not stealing a march on you by lingering in good company.

Should you chance to discover a patch under headway on your premises, build a wall about it and dig a trench on every side of it, for if it ever gets the best of you, you may bring the combined forces of the "powers that be" to bear upon it, and all too late—your land is ruined.

A. KAMP.

Tree Ferns from Sandwich Islands.

EDITORS PRESS:—In reference to a notice published in the PACIFIC RURAL PRESS a short time since, on the tree ferns and other useful and ornamental trees and plants, imported by us from the Sandwich Islands in large numbers, it may interest the readers of the RURAL to learn some interesting particulars in regard to the various plants, indigenous to those islands and adapted to our own country.

The tree ferns, which are found on the islands, consist chiefly of three varieties of pulu-ferns, the botanical names of which are *Cibotium glaucum*, *C. Chamissoi* and *C. Menziesii*. In general appearance they are not unlike the popular *Dicksonia*, to which they are closely allied. The pulu-fern furnishes the commercial pulu, a substance consisting of silky, fibrous hairs, growing about the base of the frond (leaf) stalks of these ferns, and is used for stuffing mattresses. Several tons of this pulu are annually exported from the islands, at a fair remuneration. These ferns grow upon sidehills at an elevation of about one thousand feet above the level of the sea, and they are hardy in our California climate. For ornament, nothing could be introduced into our gardens with a more pleasing effect; and if planted in quantities, they would also become useful in furnishing the pulu. The (leaves) fronds measure from 10 to 12 feet in length, and form a most striking object of beauty and grace. The pulu-fern trees, which we have received, are in size from six inches to four feet high, and are now developing their new fronds rapidly. All are doing well.

Several other tree-fern varieties are found upon the islands, such as *Alsophila decurrens*, *Cyathea medullaris* and *Deparia prolifera*, all of which are most desirable decorative plants and well adapted to our climate.

Three varieties of Skrew palms (*pandanus*) are found on the islands, also wild ginger, *Tara* (*Colocasia esculenta*), the roots of which furnish an excellent food for the inhabitants, while the leaves are used as a vegetable; this *Tara* could be grown with good success in our low lands, particularly along our rivers, creeks and springs; the Mango, "Native Apple" (so called), the Solomon Vine, the Tree Violet, the Banana, all are found in great luxuriance and contribute largely to the comfort and to the wants of the inhabitants.

It is our intention to introduce all the more desirable plants, trees and shrubs of these islands, comparatively little known to us, into California, and we are thoroughly convinced that some permanent good will come from our various importations. More of this hereafter.

MILLER & SIEVERS, Nurserymen.

More Alfalfa Experience.

EDITORS PRESS:—Although but a recent subscriber to your valuable paper, on reading an article in your issue of February 7th, by "C. O. A.," I felt as though I would like to say a word to him and others on alfalfa. Some may think the question is being "run into the ground." I wish it were so in fact; for small farmers there is nothing like it, especially those that have means of irrigating.

My experience is as follows: On the 12th of March, 1872, I sowed one and a half acres on ground which for eighteen years had been seeded to wheat. The surface soil is light loam. Sub-soil adobe, surface water 20 to 25 feet. A good plant came, and not having it fenced, stock fed it to the ground, then horses "went" for the roots and pawed to a depth of four inches, which treatment killed about half the plants and left my patch looking like a young hog wallow. The following spring I went over it with a harrow to level the hillocks. I did not sow any seed, as I should have done, on the bare places. In the latter part of April, '73, I cut two tons of hay from the patch, notwithstanding the gophers harvested rather more than their share. During summer and fall, I kept two cows on it, but it seeded well this winter, and I find a good portion of the bare spots well planted. Some of the oldest roots, cut off by gophers, seem to have the vitality of the dock or horse radish. Though the gophers have been very bad, I expect to double the quantity of hay, and pasture a cow or two a month longer.

Many farmers in this valley object to alfalfa because it draws gophers and makes the land hard to plow. To the first I would say, use good cats and water. The second objection is idle, for after a field of alfalfa is well set, it would be so profitable that no farmer would have it plowed up, especially small farmers, who I consider should diversify their operations by being able to produce profitably a few cows, calves, sheep, hogs, poultry and hay,

which I believe can be done by having small fields of alfalfa.

"C. O. A." "wishes it were possible to get clean seed." There is plenty of it! I would refer him to D. Farnham, of Woodland, Yolo county, who will guaranty good and pure seed.

After reading "Hagar" on Chinese Labor, I would ask, why not have our Granges take up the question, and import house help from the Eastern and Southern States, where it is said there is plenty of it to be had, willing to work in California at from \$8 to \$15 per month? In that way it would improve their condition, help the Chinese question, and best of all, would save the health and life of many of the best women in California.

A. R. W.

Santa Clara, Feb. 9th, 1874.

Grapes—Best Varieties.

EDITORS PRESS:—In your last issue we noticed an article under head of "Grape Cuttings," asking information as to the best varieties of grapes for raisins, and the best early and late grapes for market. We prefer the White Muscat and Black Morocco. The Muscat is the very best for all purposes. Take cuttings 18 inches long, plant deep, just one eye above ground. When transplanted they should be irrigated. Plant five feet apart, each way, so that the fruit will be well covered, and encourage all orchard grass possible to prevent scorching. Trim to one stem from 14 to 18 inches high. A good and liberal supply of water is the only fertilizer necessary in any of our gravelly soils. Black Morocco should be planted eight feet each way. Keep them clean. Such is our experience, and we have been shipping good fruit to your market for the last ten years.

PENTLAND BRO.

THE SHEEP FOLD.

Angora Goats in Oregon—Information Wanted.

EDITORS PRESS:—As I suppose there are more of the Angora goats and their grades in California than any other State in the Union, I propose, through your paper, to ask the breeders what is the matter with my goats and what is the remedy.

In Sept., 1872, I purchased of Thomas Butterfield & Son, of California, thirty graded ewes and one thoroughbred buck. From twenty-nine ewes, last spring, I raised thirty-eight kids, saved ever kid that came, had no trouble with them at all, only to have the boys watch them one week to keep them from going off into the brush to brouse their kids there. Every goat owned her young and they all prospered finely, with the exception of two of the old ones, which the dogs killed soon after they had their kids. The kids began to come on the 9th of March last while grass was abundant.

This year they began to come on the 21st of January, and grass is tolerably short. Some of the kids have swellings on each side of the neck, of various sizes from that of a large bean to nearly the size of a goose egg. By holding the swelling portion between the thumb and finger, and cutting the skin with a knife, it will slip out. It hardly appears to be attached to the neck. Those that have the swelling from the size of a quail's egg up, die very soon after being dropped, and those in which the swellings are not so large, live.

From the reading of Randall's Practical Shepherd I take the complaint to be what he calls goitre in lambs; but he appears to think that the cause of goitre in lambs is owing to the close confinement of the ewes during pregnancy, and the exclusive use of dry food. But that cannot be the case with my goats as, they have had the range of over 3,000 acres, and have never been confined since their kids got large enough to run with them, last spring, until they commenced to have kids this winter. They have not even to be kept up over night. Again, some of the ewes drop their kids and pay no attention to them at all, while the same goats last year took great care of their young. The old ones rook off and leaving their kids may be for want of more grass to make them give milk, as I know that sheep will sometimes do, so under such circumstances. But that cannot be the cause of the swelling on the kids. The latter I intend to remedy by not having the kids come so early in the season. But I do not know what to do for the first.

If any of your correspondents can throw any light upon the subject it will be very thankfully received.

We have several Granges of the Patrons of Husbandry in this county. Umpqua Grange, located at Rosebury, of which I am a member, has about sixty members and is progressing finely.

THOS. SMITH.

Wilbur, Oregon, Feb. 12, 1874.

WALLA WALLA.—A correspondent wants us give him the prices of farm stock in California, as he proposes moving from Washington to this State and bringing stock, if it will pay. We have no means of getting at prices that would be at all satisfactory to our correspondent.

The purest waters act most powerfully on lead, forming carbonate of a peculiar and uniform composition. All salts impede this action.

The Poetic and Prosaic Sides of Sheep Husbandry.

EDITORS PRESS.—The wool growers of Los Angeles propose to deal directly with the wool manufacturer. Who that has read the *Bucholies* of Virgil, has not been charmed by the glimpses he gives us of a shepherd's life! The very first sentence presents a picture of Arcadian beauty and repose. Hear it—

"Tityrus, you, recumbent beneath the shade of a spreading beech, meditate your rustic muse on a slender pipe; we abandon the boundaries of our country, and pleasant fields; we fly our country; you, O Tityrus, at ease in the shade, teach the woods to resound fair Amariyllis." Then the poet after painting this pastoral scene, spreads before us the bill of fare, which is so unlike that of the California shepherd, that we must quote it.

"Here, nevertheless, you can rest this night with me upon the verdant leaves. These are to us mellow apples, soft chestnuts and plenty of pressed milk."

In only one line does the poet hint that the life of a shepherd is not one of rural quiet and dreamy repose. He does say that "sheep are always an unhappy flock."

How many persons have formed their ideals of the shepherd's life from the pastorals of Virgil! We remember years ago, to have sat beneath the tall poplars of our boyhood's home, with a copy of Virgil in hand, while in the distance lambs gambolled over the green, and all Nature, in her holiday attire, seemed to effervesce with poetry. We are not certain that in those dreamy days of our life, we did not at times, like Virgil's shepherd Corydon, throw away to the mountains and woods our love songs to some fair Alexis over the hills. This was the poetic side of sheep husbandry, and it is the only side ever seen by those who have not learned from actual experience that there is a dark, very dark background to this picture.

The life of a real shepherd is one of loneliness and toil. It is a mistaken idea that a lazy man can make a shepherd. To be a good shepherd he must be all activity and life; he must turn his back on society and live within himself; he must follow his flock amid the snows of winter or the burning heat of summer. When night comes, no voice of wife or prattling children greets his return from the fold. His horizon of thought is bounded by himself; his mind, removed from contact with the world, soon begins to prey upon itself, till, at last, in many instances, he has lost his reason, and finds a home in the insane asylum. He cannot recline under the "spreading beech." If he did, his flock would be scattered, or, perchance, be corralled by some small farmer, who thinks he can make more by capturing a herd of sheep than his crop is worth. He cannot, like the ordinary laborer, have an occasional holiday, nor can he quit his flock on the Sabbath, though he might be near enough to hear the village church bell calling him to the house of God. These are some of the troubles of the shepherd's life. Yet, with all these self-denials, there is a fleece more golden than that of Colchis to every one who brings to the business energy, prudence and judgment.

The wool growers of Los Angeles county met on the 15th, to organize a Wool Growers' Protective Association. A temporary organization was effected, and a committee was appointed to draft a constitution, preparatory to a permanent organization on the 29th inst. The convention was largely attended and much interest was manifested in the object and aims of the meeting.

One of the main objects of this association is to do away with so many middle men between the wool grower and the manufacturer. Under the present system, San Francisco gets the richest part of every fleece. The wool producer pays his merchant in San Francisco 2½ commission, and from 1¼ to 1½ per cent. per month for any advances made upon his wool. This heavy tax can be obviated, by shipping direct to New York or Boston, where the wool has eventually to go, and where less than two per cent. commissions are paid and only seven per cent. interest is charged on advances. This item alone, is worth annually many thousands of dollars to the wool producer. When this association is organized, every question which pertains to sheep husbandry will be discussed, a report of which will be submitted to your readers by your correspondent.

We are now having a fine rain, and the farming prospects were never more flattering in this county.

JOHN SHIRLEY WARD.

Los Angeles, Jan. 17th, 1874.

SHIPPING BARLEY EAST.—Over one hundred car-loads of barley have been shipped overland for the Milwaukee, Wis., Brewery. This purchase is an experiment, but it is believed that the barley can be transported to Milwaukee at less cost than it could be obtained there of the same quality. The people of this State are hopeful that the experiment will prove successful.

EUREKA BULLION.—During the month of January, 1,750,000 pounds of bullion were shipped from Eureka, Nevada, and 940,000 pounds remained on hand on the 1st instant. The *Sentinel* says the Richmond shipped 760,000 pounds of bullion, and have about 400,000 pounds on hand. The K. K. shipped 166,673 on hand, 200,000 pounds. Eureka Consolidated shipped 724,000 pounds; on hand, 220,000 pounds. Ruby Con. (17 days) shipped 100,000 pounds; on hand, 120,000 pounds.

The Corn Worm.

EDITORS PRESS:—Since reading the inquiry of T. Worth in your issue of January 31st, concerning the corn worm, I have had a talk with a neighbor on the subject, whose experience is about as follows:

Previous to the two last years his efforts at raising corn for table use, and more especially the sweet corn, were almost an entire failure. Being advised by a friend to soak his corn in water in which some saltpeter was dissolved, before planting, he tried the experiment and was agreeably surprised to find his crop comparatively free from the worms. The next year he met with nearly the same success. He uses the saltpeter in about the proportion of one half pound to a bushel of corn.

The experiment is so simple and cheap, that it is worthy of trial. Hoping to hear the experience of others on this subject,

I remain yours,
J. S. PHILLIPS.

Center Tp., Sac. county.

The Pacific Coast in 1873.

That we have a right to be proud of our coast, none can deny, when they examine our record for 1873. No portion of God's universe has developed greater results. As a city, we have grown in population from 180,000 to 200,000—an advance of eleven per cent. in one year. This advance represents an annual increase of \$15,000,000; and to accommodate this increase, fifteen hundred new houses have been built, which have cost nearly \$6,000,000, and there are all ready projected buildings which will cost \$7,000,000 for the current year. Financially, our city has been wonderfully successful. Money has been plentiful, and trade, commerce and all kinds of business have been profitable. The dividends disbursed by our local and mining corporations foot up, in round figures, about \$16,500,000, and by our Savings Banks, something over \$3,000,000, making an aggregate of about \$20,000,000, or a sum largely in excess of any other city in the United States of anything near our size.

As a State, we have increased in population about 40,000, including a surplus of arrivals over departures of 30,000, and of births over deaths of 10,000. Our specie exports have materially decreased, while our other exports have largely increased. Our exports seaward have increased about \$7,000,000 over 1872, and now aggregate about \$30,000,000; while our exports by rail for the past year foot up, in value, about \$25,000,000—a material increase over the previous year. To improve matters still more, our imports show a slight decrease. Our trade with Great Britain has nearly doubled during the past year, reaching now about \$20,000,000, largely made up in a direct trade in case goods, salmon, flour, wines, wood and many other articles of Pacific Coast production, other than wheat. This is truly encouraging to us as a State, and speaks in eloquent tones of material progress.

By taking in our entire coast, we have still greater reasons to feel proud. During the year 1873, our gold and silver mines have produced, as shown elsewhere in this issue, over \$72,000,000—an increase of over \$10,000,000 over the production of 1872; and \$14,000,000 over 1871. Our gold and silver production alone is equal to about \$100 for each inhabitant on our coast.

As the result of all these things, the taxable wealth of our coast has largely increased, and every branch of industry has been strengthened, and the field of operations materially enlarged. Millions of dollars have been added to our commercial, manufacturing and mining enterprises during the year, that will enlarge our future production and greatly enhance our future income. Confidence in our financial system has been strengthened, energy has been infused into our people, enterprise has been awakened, and all have become convinced of our future prosperity and our importance as a great producing country. Our coast is an empire within itself—wealthy, powerful and progressive. We stand almost without a parallel in the world; and still we are only the beginning now of what we will be a few years hence, when our vast plains of rich farming lands are settled up, and our vast mineral resources become more extensively developed—when our cities and towns fill up with large enterprises, as they must at no very distant day.

Then let our people feel encouraged that the old year brought us so much to be proud of, and strive to make the new year more prosperous than the old.—*Real Estate Reporter*.

MINES ON GOAT ISLAND.—A Washington special says: "A very singular petition has been presented in the Senate by M. C. Sprague, and referred. It was signed by E. C. Curtis, Mrs. Bebra, A. Lockwood, and Hattie J. French. They pray for permission to excavate to the depth of twenty feet, more or less, on Goat Island, in San Francisco bay, belonging to the Government, for the purpose of making mineralogical and geological investigations, and—to use the language of memorialists—to remove therefrom some minerals supposed to be there deposited, of which we possess a description, to do this without molestation or outside influence, on condition that the earth therefrom removed shall all be again replaced. The island will be left as found, and no damage be really committed. Mr. Lockwood is an attorney at law in this city, but the names of the other two petitioners do not appear in the Washington Directory."

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: L. G. BAXTER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

List of Organizing Deputies.

COUNTY.	DEPUTY.	POST OFFICE.
Alameda.	A. T. Dewey.	Oakland or San Fco.
Butte.	Wm. M. Thorp.	Chico.
Butte.	G. W. Colby.	Nord.
Colusa.	J. J. Illick.	Grand Island.
Contra Costa.	R. G. Dan.	Antioch.
Lake.	J. M. Hamilton.	Guisano.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Merced.	H. B. Jolly.	Merced City.
Monterey.	J. D. Fowler.	Hollister.
Napa.	W. H. Baxter, (Gen'l Dep.).	San Francisco.
Sacramento.	W. S. Manlove.	Sacramento.
San Francisco.	L. G. Gardner.	Sacramento.
San Francisco.	John Hegler.	General Deputy.
San Joaquin.	E. B. Stiles.	Ellis.
San Luis Obispo.	A. J. Mothershead.	Moro.
San Mateo.	E. V. Weeks.	Pescadero.
Santa Clara.	W. G. Henning.	San Jose.
Solano.	R. C. Haile.	Suisun.
Solano.	J. C. Merryfield.	Dixon.
Sonoma.	Geo. W. Davis.	Santa Rosa.
Sonoma.	A. W. Nally.	Santa Rosa.
Sta. Inaus.	J. M. Spencer.	Woodland.
Yolo.	Wm. M. Jackson.	Woodland.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Santa Barbara.	O. L. Abbott.	Santa Barbara.
Ventura.	Milton Watson.	San Buenaventura.

Farmers desiring to organize Granges can apply to J. M. Hamilton, (W. Master), Guenoc, Lake Co.; W. H. Baxter, (W. Sec'y), 320 California St., S. F.; J. W. A. Wright, (W. Lecturer), Borden, Fresno Co.; or to the nearest Deputy to their locality. Thos. H. Merry, (W. Ex-Lecturer) of Healdsburg, is also deputed to organize Granges.

Good and Seasonable Advice.

Grand Master Adams said many good things and gave much good advice to the Order in his late address, at the opening of the late National Grange. Among other things, he especially warned Patrons against the danger that, in the immense development and splendid success of the movement, its original aims might possibly be lost sight of, reminding them that the chief of aims as understood at the outset were mental improvement, interchange of ideas and information among agriculturists, and the improvement of social intercourse. Another peril with which the Grand Master thinks the organization is threatened, is the intrusion, as members, of persons having no legitimate claim to admission, not being, in any strict sense, "interested in agricultural pursuits," as the Constitution requires. Among the objectionable classes that have manifested an extreme anxiety to become Patrons, since the organization began to give promise of developing into a formidable political power, Mr. Adams enumerates "demagogues, small politicians, grain-buyers, cotton-factors and lawyers," and he recommends the adoption of stricter and more definitely expressed rules as to membership.

The latter portion of the advice is especially timely. The greatest peril which threatens the usefulness of the Order, at this time is, indeed, the intrigues of politicians and speculators both within and without our gates. Unfortunately some improper persons have already found their way into our symbolic farms, and the fear is that they and other honest, but unthinking ones, may open the gates for so many others of the same sort that the present harmony of our councils may be disturbed. Then we also have to contend with some who come in honestly and properly; but who, through the vicissitudes of life, have since been so obliged to change their business that they no longer have a paramount interest in agricultural pursuits.

The ways of politicians are devious and past finding out, and, as citizens, we must necessarily come much in contact with them; but let us as Patrons, be cautious how we originate or even recommend special measures of a political character. Let us rather enunciate general principles, and leave to politicians the task of working out the details; for such is their business—their profession. Then the failure, if such it be, will be theirs and not ours. Patrons, as we said last week, should avoid all political responsibility. If those whom, as citizens, are aid to elect, fail in comprehending their mission, we can supply their places at the next election with new men, such as we may believe to be honest and best qualified to meet the responsibilities incumbent upon them. When political parties find that Patrons of Husbandry act regardless of partisan feeling, and vote only for those they believe to be capable and honest, the occupation of the trading politician and demagogue will be gone.

A NEW FEATURE IN THE GRANGE.—An exchange says that a Kentucky Grange effected a piece of work not provided for in the regular "Order of Business." A young brother and sister, during the regular hours of session, walked up to the front of the Master and were united in the bonds of wedlock. The members present were taken quite by surprise, having had no intimation that any thing of the kind was in contemplation. Thus it is, that the good offices of the Grange are spreading far and wide, and embracing within their scope every good thing which pertains to the welfare of the community, and whatever duty they assume is quite sure to be well done. The Grange is certainly a very proper place for the faint hearted to enter in search of life-partners. Diffident bachelors will please make a note of this.

A HARVEST FEAST IN A FARMERS' CLUB.—The San José Farmers' Club, at its last session, resolved to have a "lunch" at their next meeting. The idea is a good one.

Further From the National Grange.

Bro. Daniel Clark, W. M. of the State Grange of Oregon, called on us this week, and left for home via overland on Tuesday. He intends visiting officially sections of Southern Oregon on his route to Salem. His report of the meeting and proceedings at St. Louis is highly satisfactory and encouraging for the future. The information imparted by him, when received by Patrons from him and the other representatives from this coast, will give them both pleasure and encouragement.

All the members of the National Grange were entertained at the Southern Hotel, which also afforded the hall of meeting. All Patrons of the fourth degree, who presented themselves, were admitted as spectators. Together almost constantly during the days and evenings of the session, they found themselves working closely together as one family for the great interest of the whole brotherhood. Three sessions per day were held. A good deal of important work was got through, although with slow and lawful consideration. A code of new by-laws was adopted which we may give next week. Some dozen or more important amendments will be submitted to all State Granges, and which must be ratified by at least three-fourths before being finally adopted. Our Pacific coast delegation were treated with marked consideration, and the organization and progress of the Order on this coast higher commended in comparison with other portions of the Union.

Bro. Hamilton, W. M., visits Washington and other eastern cities, and will not return for several months. Bro. Wright, W. P. M., may be expected back in a few weeks. Some additions to the secret work will be given out by them which will add to the excellency heretofore practiced. Bro. Clark intends to devote much of the current year in completing the work of organization in Oregon and Washington Territory—visiting various sections, imparting instructions and presenting the real advantages, and encouraging the highest principles of the Order. He is a specimen farmer, and a Patron whom all may be proud to welcome wherever he goes. We hope he will not be disappointed in his expectation of attending the meeting of the National Grange on this coast in the fall of 1875. We shall give further notes on the session hereafter.

WHY NOT.—Mechanics are not admitted to the Grange. Why? Because if the farmers and their wives all, or the larger portion of them join, their members will be ample to accomplish any end which may be desired. We know that all this vast body of men and women have interests identically the same, and that no material difference can arise among them. On the contrary, if we admit mechanics into the Order there is a possibility that differences may arise between us, which will cause serious trouble, notwithstanding our interests are so nearly identical. Hence we had better remain separate as now. To meet the desire of the mechanics, however, to secure the advantages of such an organization as the P. of H., the new Order of Sovereigns of Industry has been started, which will give the mechanics all the aid they need in this direction. The two Orders can thus work, each as a unit, and when necessary, if it ever becomes so, they can operate jointly, as several and separate bodies do, when they have a common object in view.

MECHANICS AND FARMERS.—There is not, never was, and we trust never will be, any real antagonism between mechanics and Patrons of Husbandry; but still we must insist that it is better they should each operate in their respective spheres, to meet the common end which each have in view. The farmers now and ever have regarded the mechanics as their most natural and strongest allies. This fact cannot be too often or too strongly brought to mind.

TEMPERANCE IN THE GRANGE.—It should be generally admitted as a fact, that the Patrons of Husbandry, as a body, are strong advocates of temperance, although members are not individually pledged in that direction. As an evidence we may call attention to the fact that the State Grange of Ohio, at its meeting at Xenia, the present week, has emphatically endorsed the Woman's Temperance Movement in a series of resolutions, pledging the moral influence of that body in its support.

OFFICERS OF NAPA DISTRICT COUNCIL.—At a meeting of the Napa District Council of Patrons of Husbandry, held at St. Helena, on Saturday, the 14th instant, the following officers were elected for the ensuing year: J. D. Blanchard, Master; John Lewelling, Overseer; R. S. Thompson, Steward; G. B. Crane, Secretary; H. A. Pellet, Treasurer. Trustees—D. Gridley, of Napa Grange; Francis Clark, of Yountville Grange; John Lewelling, of St. Helena Grange.

THE PATRONS AND THE CENTENNIAL.—The National Grange, during its recent session at St. Louis, recommended that each State should appoint a Grange delegate to attend the Centennial Exposition. The appointment, we suppose, would be an honorary one, and each delegate would have to pay his own expenses.

GRANGE CO-OPERATION IN LOS ANGELES.—The Los Angeles Herald says that about half the stock of the Grangers' Co-operative Association of that county has already been taken. This fact speaks well for the energy and enterprise of the banner county of the P. of H.

From the Granges.

POTTER VALLEY GRANGE, MENDOCINO COUNTY.—Thos. C. McCowen writes as follows: Although living at Ukiah almost ever since the organization of Potter Valley Grange, No. 115, I am still acting as Secretary of the same, notwithstanding our place of meeting is some 18 or 20 miles distant, and will attempt a slight sketch of our progress, if nothing more. This Grange was organized the 6th of Nov. last, by Brother Merry, with full charter membership, and eleven additional, making in all 41 members. During the month of December and January, while sending below from time to time for necessary implements for the work, we held meetings once every two weeks, adding a little practice on the unwritten portion of the work, and in the meantime initiated four new members; but being obliged to occupy a rather moderate sized hall—an upper room in a private dwelling, applications for membership came in so fast that we were obliged to move some two miles to another hall. By the time we were prepared to receive the new candidates there were forty-six balloted to membership and awaiting initiation. Our new hall being in readiness on Saturday last, the 7th inst., we initiated forty-three out of the forty-six, three being absent, making in all eighty-eight members in this little retired valley of Potter. This will give you some idea of the Grange progress in Potter, and "still they come," so that the thing is plain to be seen that we shall be obliged to build a hall of our own in order to have room to accommodate our members. The probability is that in June we shall number one hundred and twenty.

UKIAH GRANGE, our correspondent continues, has been very unfavorably situated during this rainy winter, a considerable number of the members being located on the opposite side of Russian river, have been prevented from attending on account of high water, consequently there has not been a very large attendance at the meetings, although several new members have been initiated. Some of the "plug-hat" gentry are beginning to venture predictions on the failure of the entire Grange movement, and when told that the principle is a good one, they reply, "O yes, the principle may be good enough, but (with a grin and toss of the head) it will not amount to anything," yet these same gentlemen, when it comes near voting time, can portray to us in glowing colors the herculean power of the people; the people then are "The Government," and O! how they sympathize with the working man; but so soon as the people undertake to do anything for themselves without calling on these "panper popin-jays" to take the lead, then the people, and especially the farmers, are a class of imbeciles—mere clod hoppers, have not the intelligence equal to any great undertaking. Even if this movement should fail to produce the direct pecuniary results anticipated, there is another very important feature, which, of itself, is worth to farmers all that they may expend in time and money for the furtherance of the organization and the enjoyment of social influence. [Our correspondent dwells at considerable length on this most interesting feature of the Order, but want of space compels us to cut his letter short.]

CAPAY VALLEY GRANGE, YOLO COUNTY.—Bro. J. M. Dutton, of Hungry Hollow Grange, writes as follows: I had the pleasure of meeting with Capay Valley Grange on the 14th inst. Grange met at 1 o'clock and went through with the ordinary business, after which they conferred the fourth degree upon eight brothers. This being done they adjourned and prepared the tables for a harvest feast, and a feast it was, truly, such a one as the ladies of Capay know so well how to get up. Not less than a hundred persons partook of the repast, and there was plenty for a great many more. This Grange is truly in fine working order. It has an efficient set of officers and a membership that will compare favorably in point of intelligence with any Grange with which it has been my privilege to meet. I can say to any brother or sister who wishes to meet with a real live Grange that if they will visit Capay they will not be disappointed. Their hall is not so conveniently situated as it might be, but it is the best they can do at present. They have to use a great deal of caution in conferring degrees, and in giving instruction in the work.

ORISTIMBA GRANGE, STANISLAUS CO., Thos. A. Chapman, Secretary, writes:—The work of seeding in this locality is virtually at an end, and farmers are now mostly engaged in fallowing their ground for next year's crop. The winter, so far, has been all that could have been desired, and never have I seen in this valley a more promising and cheering prospect for an abundant harvest. Our Grange is making rapid progress, both in point of numbers and proficiency in work and discipline. We have now a class of ten members in progress. A large number of our members accepted an invitation to the Cottonwood Grange, on the 14th inst., on the occasion of their harvest feast, and right royally and hospitably were we entertained. During the feast, social intercourse was indulged in to the fullest extent. How essential it is that unanimity of feeling and harmony should exist among neighboring Granges as well as among members individually.

THE PATRONS OF OREGON have appointed a resident agent at Portland, Oregon, to attend to their shipping and other business.

BRIGHTON GRANGE:—I write you for the reason that I have never seen any article in your paper written from this vicinity. Brighton is one of the flourishing townships of Sacramento county. I have been receiving your valuable paper for two years, and not a copy have I perused without gleaning from its pages facts and information worth the full amount of a year's subscription. We have here "Enterprise Grange No. 129," organized Dec. 12th with 25 charter members. Since that time we have worked diligently, and last Saturday initiated a class of 25 in the first degree, 11 ladies and 14 gentlemen. We all work harmoniously and are prospering beyond the expectations of the most sanguine. Our Worthy Master, J. M. Bell, and Manrice Toomey, Secretary, are the right men in the right place; in fact all the officers are well qualified for their positions, and work with a will for the elevation of the farmer and his interests.

Owing to the excessive rains there will not be much grain put in this season, but summer-fallowing will be next in order, and next season we may expect to reap a bountiful harvest. Hay crops look finely.

[As "Granger" neglects to send his own name the admission of the above is therefore out of our usual practice; but we presume it is all right. Correspondents should bear in mind that their true name should always accompany their communications, but not to be used in print unless at their own option.—Ed. Press.]

ENTERPRISE GRANGE, SACRAMENTO COUNTY: Maurice Toomey, Secretary, writes as follows: "Our Grange started its first class last Saturday. We had twenty-five in the class, and scores that want to join as soon as we can receive them. We have a fine hall in a private dwelling. Our Grange is in a flourishing condition. Our members are diligent workers, and our number will increase rapidly, as soon as we can receive them. We are not going to take propositions but once a month. We all mean business, and put our shoulders against the wheel manfully and work harmoniously as brothers and sisters. I am trying to get up a club for the Rural Press, and hope to send you soon a goodly number."

SALIDA GRANGE, STANISLAUS COUNTY:—A. H. Elmore, Secretary, writes:—"Farmers generally in this vicinity, and especially Patrons are highly pleased with the Rural Press, both as an agricultural paper, and as the Patrons paper for the Pacific coast. Our Grange is moving slowly. We have done but little in the way of initiating since the early part of the winter. In fact there remains but few farmers in the neighborhood to be admitted. We have had an abundance of rain and grain crops look well. The prospect is certainly better for good crops than for a number of years past."

WILDWOOD GRANGE, SAN JOAQUIN CO. Bro. J. S. Muncy, G. K. of this Grange, writes:—"Our Grange is progressing. We commenced with 30 charter members, and have now received our charter, and feel that we are in good working order. Have 14 applicants for membership to be balloted for at our next meeting. We hope to have as good a Grange here, as any in San Joaquin county. It may not be as large as some, but it will be a star that will shine as bright as any." Our correspondent sends us his own, and several other names for the Rural Press and promises more soon.

FRANKLIN GRANGE.—Bro. P. R. Beckley, Secretary of the Grange, writes as follows:—"Our Grange was organized on the 9th of January, hence we have not been able to increase our numbers as yet, but there will not be anything in the way now of proceeding in a wholesale manner, as we have plenty of good material to work upon. We have been busy in fitting up for our use a good and suitable hall. Our village is quite small; the proper name of it is Franklin, although it is sometimes known by the name of Georgetown."

Shipping Grain in Bulk.

At a regular meeting of the Petaluma Grange, P. of H., held on the 14th of February, 1874, the following resolutions were unanimously adopted:

Resolved, That Petaluma Grange, P. of H., considers the shipping of grain in sacks, instead of in bulk, from California, as a custom kept up in the interest of the sack manufacturer and speculator, and directly against the interest of the grain producer.

Resolved, That we hereby fraternally call the attention of all good Patrons of Husbandry, in California, to the necessity of devising some plan by which the shipping of grain in bulk may be secured.

Resolved, That the Executive Committee of the State Grange should take some action, as early as practicable, to ascertain the feasibility of shipping grain in bulk from this State to Europe.

Resolved, That we consider that if the system of shipping grain in bulk from California to Europe is adopted, it will be a saving of upwards of three millions of dollars annually to the farmers of this State.

Resolved, That we, as Patrons of Husbandry, will, to the greatest possible extent, exert ourselves to break up the custom of shipping grain in sacks, and, instead thereof, do all we can to adopt the system of shipping in bulk.

Resolved, That a copy of these resolutions be forwarded to the Secretary of the State Grange, also a copy to the Pacific Rural Press for publication.

D. G. HEALD,
Secretary Petaluma Grange.

The Granges and the State Agricultural Society.

PREAMBLE AND RESOLUTIONS ADOPTED BY
HEALDSBURG GRANGE, No. 18, PATRONS OF
HUSBANDRY.

WHEREAS, It is the opinion of this Grange that the management of the State Agricultural Society has fallen into the hands of those who, in conducting its annual fairs, have laid aside the avowed objects for which it was organized, to wit:—"To encourage the cultivation of the soil and the general development of all the agricultural resources of this State—to foster every branch of mechanical and household arts. To extend and facilitate the various branches of mining and mining interests"—by making the annual fairs of the Society, one grand carnival of horse-racing, pool-selling and gambling of various species.

By making the agricultural products of the State, its mechanical and household arts, and its mining interests secondary considerations, as is shown by the following figures taken from the annual report of the Society for 1872:

Total amount of expenditures.....	\$47,831.16
Amount paid for racing premiums.....	12,422.00
Total amount of agricultural, stock, mechanical, mining and premiums of all kinds paid by the Society.....	7,493.00

Showing that more than twenty-five per cent. of all the expenditures was paid for racing premiums, which latter exceed all other premiums awarded by \$4,488. That the money appropriated by the State, \$5,000 annually, as stated by the law "for the purpose of paying premiums for the various agricultural, mineral, mechanical and manufacturing products of this State, and for no other purpose" (Statute of 1872), has been merged into the General Fund of the society, and used for purposes other than those contemplated by the law. That the management of the Society has been extravagant in the past, and promises to be more so in the future, as is shown by the proposed erection of a grand racing stand to cost \$25,000, which will only be used four or five days of each year.

That the management of the annual fairs has driven the farmers and mechanics from their desired attendance, as they do not wish to contaminate themselves and their families by being thrown in contact with horse-racers, gamblers and thieves of every description. Therefore,

Resolved, That we call upon all the Granges in California; all mechanical and industrial societies, all farmers and good citizens to unite with us, to bring about a reform in the management of the California State Fairs, pledging ourselves not to contribute to them until such reform is brought about.

Resolved, That we have confidence in our Governor, Hon. Newton Booth, the people's choice, and hereby ask his assistance and co-operation to assist us in this matter.

Resolved, That we demand that the State Board of Agriculture shall be composed of practical farmers only, and also demand a change in the mode of their election.

Resolved, That we hereby enter our earnest protest against the expenditure of \$25,000 of the people's money for a racing stand.

Resolved, That we call upon the Press of California for their all powerful aid, to assist us in making the California State Fairs an honor to our state, instead of a stigma upon its fair name.

Resolved, That copies of this preamble and resolutions be sent to his excellency, Governor Newton Booth, to the State Board of Agriculture and the Press generally.

T. H. MERRY, } Committee.
W. H. GLADDEN, }
R. ABBEY, }

Los Angeles' District Council.

The L. A. and S. B. District Council met at Los Nietos, on Feb. 10th, 1874, Master Thos. A. Garey, of Los Angeles, presiding. The attendance was large, and much interest manifested. Forty-one delegates were present, representing seventeen Granges.

A report from the Committee on Agricultural Exposition was received with much applause, and a vote of thanks tendered the Committee. The report recommends the establishment of an Agricultural Exposition under the control of the Patrons of Husbandry, and declares emphatically against horse racing, pool selling, dead-heading, or liquor selling, in connection with the fair. Action has already been had at a special meeting, and an incorporation effected, stock books opened, and the movement is already an assured success.

The report of the Committee on Grange Co-operative Company was also received and adopted.

This is the favorite movement with the farmers, and bids fair to prove all its most sanguine friends hope for it. Blanks for stock subscriptions were sent out some ten days since, and at this meeting over five hundred shares were reported taken.

Among the resolutions meeting with favor, was one introduced by Bro. J. F. Gordon, of El Monte, calling for a committee of five to draft a bill, to be transmitted to our delegation in the Legislature, providing for the payment of county officers in this county by salaries, with a view to have action during the present session.

And also a preamble and resolutions from Bro. Porter, of Florence Grange, relative to the centennial exposition, provides for a committee on correspondence, who will report from time to time, and also provides for the creation of a centennial exposition fund, with a view to have the products of our semi-tropical orchards, our vineyards, apiaries, etc., placed on exhibition.

A resolution introduced by Bro. Peck, of El Monte, and adopted, requests the Board of Supervisors to erect guide-posts and sign-boards.

And one by Bro. Every, of Fairview, looking to the defeat of a bill now before the Legislature providing for an increase of the salary of county Superintendent of schools, was after a lively debate laid on the table.

A notice was also received, of a desire on the part of several parties, to form a company corporate under the laws of the State, to be called the "Farmers' Warehouse and Lighterage Co., setting forth the objects, etc.; paper received and a committee appointed to investigate and report.

Mr. McCombs offered the following:

Resolved, That it is the sense of this Council, that some law should be passed by our present Legislature, looking to compulsory means of destruction of squirrels and gophers. Adopted, and secretary instructed to furnish copies to our delegation in the Legislature.

Much other business, of local importance and private nature, was transacted, and Council adjourned to meet in Los Angeles on the second Tuesday of May, 1874, at 10 o'clock A. M.

J. F. MARQUIS, Sec'y.
Gallatin, Cal., Feb. 10th, 1864.

Orange—Its Grange and Surroundings.

Editors Press:—In looking over your issue of 31st ult., I noticed some extracts from a letters by "Alpha" written at this place, and would, with a large number of brethren in our Grange, like to see his real signature in full; and should also be pleased if you would admit a few remarks in vindication of our climate, soil, irrigation system, Grange matters, and the industrial habits of our people.

We suppose our brother intended well, but if as his name indicates, it was his first attempt of the kind, he should be excused. We would recommend "Omega" as his next, and offer him an open door as one who manifests but little intelligent, local or general interest in either Grange or country. Our climate is not surpassed in all the varieties possessed by our fair State. The wind referred to is the same current of air that passes through San Bernardino and Riverside, down the Santa Ana river to the sea, and not more severe here than at those places, nor more so than the coast winds of Suisun, Stockton or San Francisco. The "fine house" was only a frame that was two stories high, open at both ends, having a deep and wide cellar, and no floor, so that an ordinary breeze in its unbraced condition might have wrenched it. With the terrible winds of "Alpha's" origin this house was not injured seriously.

Our climate is so mild that this year, when Compton, San Bernardino, Riverside and Los Angeles have been visited with biting frosts, we have had none, and ice has formed at those one-tenth inch thick.

Our soil, combined with our excellent climate, produces every variety of fruit that grows in all the combinations of other sections, from the richest of semi-tropical, to the largest pumpkins, beets and turnips in the State.

Our irrigation system is worthy the intelligence and industry of the place. The ditch is 12 miles long, 8 ft. wide, 6 at the bottom and affords a sufficiency of water for a large expanse of country. A new ditch is to be opened this spring to supply the beautiful plains of Tustin and Santa Ana. Any settler has the right to become a stockholder, and may pay for his share in work on the ditch; or, buy water and pay for that in labor to keep these arteries in working order. This is a new settlement and we can safely say that no serious damage has arisen from the neglect of the Water Commissioners or any other one concerned.

Our Grange, we can very truly say, is in as fine and flourishing condition as any of its age in this county. Any one who is at all conversant with the rituals and usages of secret orders will understand that time and hard study are required, as well as experience before any order can run smoothly. We have a good corps of officers. They do their duty well, and we think this Grange a little above the average. We admit that there is room for improvement in all our human institutions, and think "Alpha" as a true Patron should keep the rules by defending the Order as his best friend, instead of raising his voice in a tell-tale epistle through our popular organ. We forgive him, but ask him to consider his own interest as identical with the community in which he lives, and the Grange of which he is a member.

The industrial habits of the people here are above criticism, and "Alpha" slurs some one, in a manner far from truth or justice. Not a member of this flourishing settlement has neglected his duty to his home. Plowmen are out by the first dawn of day carrying into effect their beautiful motto, and completely routing all their enemies. About 60,000 vines will be planted this year, and all other kinds of fruit in proportion. A new school house is to be built and every department of intelligent labor is receiving marked attention. We hope

much success to your valuable paper in advocating the grand principles of the Patrons, and that the support may be mutual to the end.

Respectfully,
Orange, Feb. 16, 1874.

K. W. A.

VALLEJO GRANGE.—We last week gave a few lines from Bro. Haile, who, in connection with Bro. A. L. Hatch, of Suisun Valley Grange, officiated at the installation of officers of Vallejo Grange on the 14th inst. In addition, we now add the following from Bro. C. B. Deming, Secretary of the Grange: In Bros. Haile and Hatch we recognize the earnest workers and genial companions who constitute the proper material for Granges. We hope to see them often with us, and feel deeply indebted for a pleasant and instructive meeting. Our Grange is not growing very rapidly, owing to the fact that a great portion of the farmers in this section are renters, and mostly of the Catholic faith, (who are forbidden from joining by an edict of their church,) leaving us but little available material upon which to draw. I don't remember so unfavorable a season for the farmer as the present—not from any excess of rainfall, but from the distribution thereof throughout the season. For nearly three months there has been scarcely a time when we could turn over the land in proper shape for seeding; for as soon as the ground began to work about right, down came another installment of rain, making it as bad as it was before. However, there will be quite an area planted here, as the land is mostly rolling, (indeed, I might say hilly,) and such land can be worked, though not to so good an advantage as in fine weather. Up to the present time the rain-fall has been about 17 inches in this vicinity.

ENTERPRISE GRANGE, SACRAMENTO COUNTY.—Bro. S. W. Haynie writes as follows: All works well in our Grange. Everyone takes hold with a determination to do all in his or her power to advance the interests of the farmers, and help bring about the reformation that their cause has so long needed. We have to return many thanks to the noble hearts who first started the Grange movement. Last Saturday we conferred the first degree on twenty-five new members, which we consider good for the first; and there are now as many more waiting to join us in the good work. We hope soon to get up a club for the RURAL PRESS, which we consider the farmers' paper.

COUNTY COUNCIL FOR SANTA CLARA.—At a meeting of the subordinate Granges of Santa Clara county, held on Monday last, a County Council was organized, which will hold its first meeting on Monday next. According to the Call, 180 Patrons were present at the meeting for organization.

WALNUT CREEK GRANGE, CONTRA COSTA Co.: Bro. W. K. Daly writes: "Our Grange is progressing, and, with a charter membership of 25, we have a class of seven in progress, and many signals at the outer gate."

THE PATRONS are about to start a beet sugar factory at Dayton, Washington Territory. Negotiations are said to be pending for the construction of the necessary machinery in San Francisco.

JOIN THE GRANGE, and show your neighbors why it is to their interest to go into it.

WIND-MILLS AND HORSE-POWERS.—One of the best evidences of the growing demand abroad for articles of California manufacture, is exhibited in the fact that recent shipments of wind-mills have been made from one establishment in this city to Costa Rica, Central America, to the Sandwich Islands, and to Australia. At the same factory there is also in process of construction a large wind-mill, destined for some place in Mexico, while but a short time since wind-mills and horse-powers were forwarded from the same place in the opposite direction to Oregon and to Puget Sound, showing a wide range of territory looking to our mechanics for supplies. Mr. W. I. Tustin, the builder of these mills, is no novice in this line, having pursued the business here and in this vicinity upwards of twenty years. His factory at the corner of Beale and Market streets presents a lively and business like appearance, and is fitted up with ample facilities for finishing the work under his immediate supervision, having for the purpose the necessary machinery of his own.

EARLY-CUT GRASS BEST.—The German papers publish the details of a series of experiments carried on at the agricultural schools of Fatherland, for the purpose of testing the nutritive properties of grass and hay at various stages. The experiments were initiated by the excessive demand for forage in Germany, but are not the less valuable on that account. By an elaborate series of analysis, it is shown why young grass is more nutritious than mature grass. The physiological experiments show that it is more easily digestible. Thus grass 2½ inches high, contains nearly 50 per cent. more of albumenoids than grass which is 6 inches high, and about 10 per cent. more of "crude fat" (5.24 per cent. against 4.82). The mature grass contains more woody fibre and less flesh forming matter than the young grass; and, besides this, it is found that the nutritious albumenoids exist in a less soluble form in hay than in young grass. Hence, the difference of nutritive value and digestibility. Autumnal hay was found to be more nutritious and digestive than summer hay.

FARMERS IN COUNCIL.

Santa Rosa Farmers' Club.

Interesting Report on Beet Sugar.

The Santa Rosa Farmers' Club met in Hood's Hall for the purpose of receiving the report of the Committee on Beet Sugar Manufacture. About twenty pounds of sugar of excellent quality were exhibited. It was found in all respects up to the standard of A 1 remarkable sugar. The following report of the Committee was read:

To the President and Members of Sonoma County Farmers' Club:—Your Committee, to whom was assigned the duty of testing Sugar Beet grown in this vicinity, beg leave to report that we have tested four separate lots of beets grown on different varieties of soil; from which, with very imperfect appliances, we obtained from four to seven per cent. of sugar. The best was obtained from beets grown in Bennett Valley by G. N. Whittaker; but we are of the opinion that we would have obtained more satisfactory results from the others, but for the fact, that owing to some delay in getting the machinery in operation, the beets were allowed to remain in the ground until they had taken a second growth, after the rain set in. From the result of the experiments made, we are satisfied that the beets grown in the vicinity of Santa Rosa, are as rich in saccharine, and as free from deleterious salts, as those grown in any other locality. We are satisfied, too, that beets can be grown in this vicinity as cheaply as in any part of the world, and that the establishment of a sugary here, would be a profitable investment, paying a handsome dividend, and at the same time imparting a wholesome stimulus to every other industry, and especially agriculture.

Our lands are being rapidly exhausted by growing grain from year to year. By alternating with beets they would be recuperated and made to yield heavier crops without the loss of time.

The summer tillage necessary for a beet crop would improve the land much more than a mere summer fallow, while it would yield a crop more valuable than one of wheat.

The offal from the sugary would furnish food to fatten a large number of beef cattle, or it might be probably fed to dairy cows. During its running season, a sugary would give employment to from sixty to eighty men. It would require a large quantity of coopers' material. It would require a large quantity of bones, and for refining, it would require blood, thus utilizing great quantities of materials that are now wasted at our slaughter-houses.

For the foregoing reasons, and others too numerous for explanation in this report, your Committee most earnestly recommend the enterprise to your favorable consideration.

For a detailed account of the experiment, we refer to the report of Mr. Velling.

S. T. COULTER,
R. A. THOMPSON,
THEODORE STALEY,
H. P. HOLMES,
JOHN ADAMS, } Committee.

Mr. Velling read his report, which is too long for publication at this time. On motion, the thanks of the Club were tendered Mr. Velling for his interesting report. On motion, a committee was appointed to confer with our citizens on the subject of the establishment of a Beet Sugar Factory and Straw Paper Mill. The President named upon the committee, S. T. Coulter, Geo. Hood, Geo. W. Davis. On motion, it was resolved that the seeds and documents from the agricultural department at Washington in hand of the Secretary, be distributed among the members not in arrears on the books of the Club.—Sonoma Dem.

San Jose Farmers' Club.

The farmers' Club met at the usual hour Saturday. On motion, the Secretary was instructed to report the action of the Club on the Referee Law, to the Santa Clara delegation in the Legislature, and request its passage, and also to solicit the co-operation of the San José Grange in the matter.

One of the members thought the programme for the Club meetings was not sufficiently varied and attractive to call out a good representation of those interested in agriculture and the other industries. He favored the idea of introducing set addresses or essays on subjects of general interest.

Another member was of the opinion that if a lunch was spread at each meeting the attendance would be larger. He held that the hot bed pressure style of keeping up the interest in the organization would last but a short time.

On motion the time of meeting was changed from 1 P. M. to 12 M.

It was also resolved to have a lunch at the next meeting.

The general subject of manuring and tillage was selected as the question for next week's discussion.

One of the members read an admirable article on "Deep Plowing."

The school question and the so-called "Teachers' Ring" was then taken up and discussed.—San Jose Mercury.



Plain Talk to Rural Readers.

EDITORS PRESS:—What delightful entertainments your correspondents are getting up for your rural circle! Picnics, indeed! Who ever guessed there was so much to inspire, in brown bread, roasts rare, murrin—in or out of his brown, torn jacket—"bean porridge hot" and turnips?

Mr Berwick gives us a capital sermon; may it not be the last. But whether Mary Mountain's "gems" or Mr Olden's turnips furnished the text and the inspiration, I'm in doubt. And, further, I want him to explain how it is, that he disclaims the woman's (?) ambition of obtaining the last word, provided it be a good, true word. He "don't believe in conceding to prejudice even the value of a turnip!" Then why should he throw a corky old turnip at us—women—until he can "demonstrate," that to have the last word is more a woman's than a man's ambition? He is a freeman

Whom the Truth Makes Free,

Wrote Pollock. And yet, brother B., our antecedents or our associations are such, that prejudices, like tobacco smoke, lurk in the skirts of the freeman who eschews them. Why, my dear sir, it will be a long time before, with our best endeavors, we will cease to stumble over our own small prejudices. But bravo! how we struggle for the mastery, and lo, one after another, they fall from us, loosed probably by some iconoclast we have turned our back upon.

The San Joséans scented a prejudice in the

Hired Man Question,

And two conscientious Grangers' wives—why are they not themselves Grangers?—have been worrying the poor thing, which has, most likely, as oft before escaped to cover, to be again and again unearthed till all men are tidy and all women kindly considerate. It was told of the wife of one of our Vermont Governors, that once on a time company from town made them a flying visit and partook of the mid-day meal with the Governor, his wife and hired harvesters. One of the lady visitors expressed her astonishment, that Mrs. Galusha should "sit at table with hired help." "Well," gravely replied the Governor's wife, "I confess it don't look quite right and I often feel that I ought to wait and serve them first."

So you see the question is by no means a new one. And I might not suggest a new thought even, by asking why women, whose special vocation is that of house-keeper—I should say housemother—will persist in practically degrading that vocation by excluding from the family table and sitting-room, decent young women, while admitting to them the hired helpers of their husbands, kinsmen of these girls perhaps, or youths who associated with them in their own homes? Is the bread-winning vocation of the father more honorable than that of the bread-making, bread-dispensing mother, that his assistants should be more honored? Has not this

Silly Ambition

To stand head and shoulders above somebody, let down our own standing place, made respectable, self-respecting young women averse to house service, burdened the hardworking farmer with the support of daughters competent and willing to support themselves, or induced them (the daughters) to marry for homes? Has it not, to some extent, imbued the present generation of young women with low ideas of domestic occupations and economics, as involving menial service, and resulted in a ruinous inefficiency? Excuse me, Mr Editor, but I was "brought up"—a westerner would say "raised"—among the Green Mountains of Vermont, where to be inefficient in one's sphere of duties was to be "a good-for-nothing." To be "lazy" was the unpardonable sin. One might outlive the theft of a lean sheep, but the suspicion

of laziness was more damaging to a pretty face, than malignant small pox.

God, who instituted labor and made it a condition of physical and mental health, also instituted the family as a normal school for the discipline of young men and women in the duties of mature life. And so far from the prompt payment of fair wages vacating our contract with such helpers, I believe we still owe them the sympathy, the influence, the watch-care of a home, while in our employ. These are conditions from which neither we nor they can release us. I am not speaking of moral lepers or filthy livers. For such, society should provide reform labor schools and "sweat houses," Sins of ignorance and uninstructed manners are certainly subjects of family discipline. "Equal rights and honors" is it? Why, my dear Mountain, you will raise a breeze! Less "will do us."

With Equal Rights, "Honors Are Easy."

Give us equal rights and we may trust to our worth or wit to win equal honors. Ah! who is that suggesting, that to be submissive and forbearing are womanly virtues and incompatible with a demand for equal rights? Forbearance in men has allowed the grasping few to rule and rob the many; forbearance in woman, was, no doubt, a very saving quality when fathers, husbands and brothers were barbarians enforcing their demands by brute force. But in an era ruled by moral forces, forbearance has ceased to be a universal panacea for aggressive tendencies in man or woman. My friend L., who humorously related to me the following incidents of

His Courtship,

Has found out a better womanly quality than submissiveness, *alias* passivity. Let me tell you the story and suggest that a "Dora D." is a good person to have in our circle,—good for the "E. E. A's." My friend L. had been bereft of an excellent wife and having several children, some of them nearly grown, he thought it wise to choose for a second companion a stranger to the community in which he lived and accordingly wrote to an old friend, a clergyman, some hundreds of miles distant, inquiring if there were a suitable person in his vicinity, etc. The reply being in the affirmative, my friend made the journey and found a maiden lady of very agreeable manners spending some time in the family of his friend—the clergyman. After a pleasant visit of two or three days, being about to return home, my friend mentioned to the lady, that he was in quest of a companion and being pleased with her society, would like her to tell him frankly if there existed in her mind any objection to a more intimate acquaintance. The lady having confessed that, so far, she had discovered no insuperable bar to a more intimate acquaintance, he entered upon preliminaries and with a view to hasten the desired understanding, "made a clean breast" of his faults, the principal being "a hot temper that wouldn't bear provocation, but soon cooled," etc. The lady listened but made no remark and my friend—eager to win a response—finally added, that as he "had confessed his besetting sin, he would like her to be equally frank." Looking up with a mischievous twinkle in her eye, she replied—"Well, Mr. L., I am not a putty woman; you can make the fire fly." "And," said my friend, in concluding his story, "the possibility of making the fire fly, has effectually prevented any exhibitions of my hot temper to the little woman at home." N. B. The world has no further use for putty women or putty men.

And now, my dear Mrs. M., as the mountain cannot be expected to come to me, allow me to come to the mountain with my brown loaf. But first let me ask, why do you hide behind a mountain? Why use a *nom de plume* at all? Is it to escape personal responsibility for the printer's blunders? And can we hit him hard from such an ambush?—pelt him into the *amende honorable* with whole-souled forgiveness? Very well. If he spoils the point of my "love story" by substituting *putty* for *putty*, or *lightning-bug* for *fire fly*, there is a nice foot hill at hand. And now my

Brown Bread.

When I am out of unbolted wheat meal—and often when I am not—I mix, in bulk, $\frac{1}{2}$ bran to $\frac{1}{2}$ fine flour or middling. For two 3-lb loaves I use one cup potato yeast, $\frac{1}{2}$ teaspoonful soda and two spoonsful molasses, not to make it appreciably sweet, but to correct the raw taste of the wheat; add water and stir in the meal till it can be turned (not poured) in a mass from the dough pan. I like this bread better than gems or fine unbolted; it has the flavor of the famous brown bread of

New England—the old fashioned "rye and Indian bread," of those conceited Yankees who—as one of their own poets hath said—"Would shake hands with a king upon his throne, and think it kindness to his majesty." C. I. H. NICHOLS.
Potter Valley, Feb. 14, 1874.

DOGS GOING TO BED.—What is the reason a dog will turn around several times before lying down on his bed?

Dogs are governed by certain instincts, and in the wild state they are liable to lie down on sharp stubbs or stones unless they turn around to survey the ground. A horse rarely lies down in field to roll, or to rest, without turning around, sometimes five or six times, in the same manner that a dog does. You may ask, then, why the dog, that has a sheep-skin with the wool on it, or a buffalo-skin, or any other nice, soft bed should thus turn around. The reply is, that he follows the instincts of his nature. He does not know why he does it, but is impelled to do it by instinct, because, in the wild state, it is necessary. The same instinct teaches the dog to scratch vigorously, as if he were covering up something though he may be on a hard floor or a flat rock. His labor accomplishes nothing, but it answers the demands of his instinct, and perhaps may be regarded as a token of neatness. The squirrel will pretend to bury walnuts in the corner of a clean, tin cage; will go through all the ceremony of poking dirt on it, and patting it down, and having finished, will retire contentedly.—*Phre. Jour.*

NATURE'S DECORATION.—Beautiful flowers! No work of art can compete with them, a truth which is now fully recognized, though the introduction of natural ornaments into our houses is of comparatively recent date. Fashion in her changing moods has willed it, and the conventional and artificial have had their day. Rustic baskets of trailing ivy, stands of gaily tinted growing flowers, mimic ponds teeming with finny life, and vases of autumnal leaves and grasses have replaced the cumbersome china or queer old ornaments of burl and marqueterie; and even in art, the graceful negligence of nature is imitated in the decoration of our modern dwellings, in showy contrast to the geometrical embellishments and prim finery of the houses of half a century ago. And this is true in public as well as in private edifices. A recently built theater, in place of the meaningless frescoes surrounding its proscenium arch, substitutes huge palm trees with their broad leaves (of tin) drooping from their summits; another fills its lobby with vases of flowers and trailing plants, while a third arranges similar ornaments in conspicuous places in its auditorium, and rumor says a fountain is to be constructed in the center of the parquet.

IDLE GIRLS.—It is a painful spectacle in families where a mother is the drudge to see the daughters elegantly dressed, reclining at their ease with their drawing, their music, their fancy work, and their reading, beguiling themselves of the lapse of hours, days and weeks, and never dreaming of their responsibilities; but as a necessary consequence of neglect of duty, growing weary of their useless lives, laying hold of every newly invented stimulant to arouse their drooping energy, and blaming their fate, when they dare not blame their God, for having placed them where they are. These individuals will often tell you with an air of affected compassion (for who can believe it real) that poor mamma is working herself to death, yet no sooner do you propose that they should assist her than they declare she is quite in her element, in short that she never would be happy if she had only half so much to do.

TWO PERSONS who have chosen each other out of all the species, with the design to be each other's mutual comfort and entertainment, have, in that action, bound themselves to be good-humored, affable, discreet, forgiving, patient and joyful, with respect to each other's frailties and imperfections, to the end of their lives.—*Addison.*

THE ART of being happy lies in the power of extracting happiness from common things. If we pitch our expectations high, if we will not be happy except when our self-love is gratified, our pride stimulated, our vanity fed or a fierce excitement kindled, then we shall have but little satisfaction out of this life.

A MUSIC-TEACHER was tried in the "scales" and found wanting.

The Woman's Dress Question.

Mrs. Lester was in this afternoon, and we discussed the much-mooted topic of woman's dress. She thinks there need be no conspicuous reform inaugurated. If the sensible women all over the country, who are doubtless in the majority, will each in her own way attire herself simply and appropriately with suitable regard and disregard for fashion, the movement will result, she thinks, in all that can reasonably be desired. Women who have no brains are well enough employed in ruffling their skirts; those who have, can afford to wear them plain—rather a sharp remark for Mrs. Lester to make, but containing a kernel of truth.

The flowers get themselves up beautifully in all rich and harmonious coloring, in miraculously fine texture and with most elaborate garniture; how they adorn our houses and our tables! What would the earth be without them? Corn and cabbage, beans, pumpkins and potatoes, are very useful in their way, but hardly appropriate for bouquets; we must have roses and violets and dahlias and tulips, both for color, form and fragrance. This was my friend's view of the case.

The fact is, when a lady is simply and tastefully dressed, in neither extreme of the fashion, and thinks nothing of it herself, scarce any one can remember, after having been in her society, what she had on. It seems to me that one's dress should by all means correspond with one's age, personal appearance, circumstances and character. Diamonds on coarse hands lose half their lustre; gay ribbons about cadaverous and wrinkled faces excite mirth or derision in people of taste; and expensive clothing on poor people starts questions that should never be raised.

When the summer solstice of youth is past and we should begin to think longingly of the robes of white worn by the saints, what a pity to be occupied with the vanities and fripperies of ephemeral fashion.—*Hearth and Home.*

Fact and Fancy.

An enterprising farmer of Essex county gives a chromo to every purchaser of a load of manure.

When you see a bare-headed man following a cow through the front gate and filling the air with garden implements and profanity, you may know that his cabbage plants have been set out.

A Vermont youth who desired to wed the object of his affections, had an interview with her parental ancestor, in which he stated that although he had no wealth to speak of, yet he was "chock full of day's works." He got the girl.

"FELLOW travelers," said a colored preacher, "if I had been eaten dried apples for a week, an' then took to drinkin' for a mon' I couldnt feel more swelled up than I am dis minit with pride an' vanity at seein' such full 'tendance har dis evenin'."

HOW SUCCESS IS ACHIEVED.—When Prof. Agassiz was asked to become a member of a firm, with the assurance that he could make "any amount of money" he replied "I have no time to make money." The principal of this doctrine is the secret of success in life. If a man could multiply himself, issue himself in many copies and each copy apply itself to some business, he would, if he were a capable man, like Agassiz, succeed in all. But each man can apply himself only to his own business, and *there* he must use his energy if he would succeed. This is the secret—concentration upon one business. Agassiz had no time to make money, to make love, to be a statesman, lawyer, mechanic, anything but what he was, a scientist, whose specialty was ichthyology. All his energy was devoted to this purpose, and he succeeded. The concentration was intense and long continued, and not even the great Cuvier was his equal.

THE FUTURE is always fairy-land to the young. Life is like a beautiful, winding land; on either side bright flowers, and beautiful butterflies, and tempting fruits, which we scarcely pause to admire and to taste, so eager are we to hasten to an opening which we imagine will be more beautiful still. But, by degrees, as we advance the trees grow bleak, the flowers and butterflies fail, the fruits disappear and we find we have arrived, to reach a desert waste; in the center, a stagnant and lethean lake, over which wheel and shriek the dark-winged birds, the embodied memories of the past.

Odd Minutes of Waiting.

While you are arranging the parlor, just have a thought for the visitors who must sometimes wait to see you, and carefully refrain from putting every object of interest beyond their reach. Of course, as a careful hostess, you never mean to keep callers waiting; but if they come when the baby is on the eve of dropping to sleep, or you are in the midst of planning dinner with the cook, you must wait a little, while they are reduced to staring out of the window, or to an involuntary effort to penetrate some insignificant household secret. The family photograph album is usually regarded as a sufficient resource in moments like these, but is there not something akin to indelicacy in allowing strangers and ordinary acquaintances to turn the likenesses of our nearest and dearest; perhaps to criticise them with the freedom of unfamiliarity, or the unsympathy natural to a lack of personal appreciation?

The late magazines a book of good engravings, a household volume of poetry, a stereoscope and views, photographs of foreign scenes, and a dozen other things, are all good aids to the occupation of stray minutes. Moreover, they often suggest to the visitor and the host topics of conversation more profitable and interesting than the state of the weather or the history of the kitchen.—*Scribner.*

A FOE OF HER SEX.—A Massachusetts woman, it is said, has lately patented a self-fastening button, which needs no button-hole, which holds as fast as the most desperate person can desire, and which yet can be unfastened by a simple touch. The time will come when that unhappy, too ingenious woman will be denounced as one of the worst foes of her sex who has ever existed. Nothing is a greater provocative to connubial ideas in the mind of a forlorn bachelor than the difficulties which he has with his apparel on the subject of buttons. How these useful fastenings leave his wristbands and collars and vests and pantaloons every man who has been single can sadly tell, and how he himself has made absurd attempts to repair the damage by sewing on buttons himself he would be ashamed to tell. Despair at inability to conquer this annoyance of single life has made many a man double, reduced the wild bachelor to the discipline of a home, taught him his duties as a citizen, and made him in time respected as a husband and father. And this Massachusetts woman, who undertakes to emancipate the male sex from the social influence of buttons, will become in after years a scorn and byword to her sex, especially among single sisters.

THE NEW BABY WASHER.—"You simply insert the begrimed and molasses-coated infant in an orifice, which can be made of any required size by turning a cog wheel with electric attachments. The child glides gently down a highly-polished inclined plane; his lips are met at its termination by an India-rubber tube, from which it can draw lacteal nourishment. While in this compartment, which is lined with plate-glass mirrors, the perturbed spirit of the infant is soothed by its frantic efforts to demolish its own image, reflected in the glass, with a nickel plated combined teeth-cutter, nail-knife, rattle and tack-hammer, which are thrust into the baby's hands by an automaton monkey. Fatigued by its destructive efforts, the infant falls asleep, while the organ attachment plays softly the melody of "Put me in my little bed." Then it slips into the third compartment. Here the baby is washed. Another small tube administers a dose of soothing syrup, and the infant glides from the machine, its nails pared, its hair combed, ready for the habiliments rendered necessary by the fact of its first parents."

A RURAL gentleman standing over a register in one of our stores attracted general attention to himself by observing to his wife, "Mariar, I guess I'm going to have a fever, I feel such hot streaks a runnin' up my legs."

Good, kind, true, holy words, dropped in conversation, may be little thought of, but they are like seeds of flowers or fruitful tree falling by the wayside.

A PHOTOGRAPHER requested that his sign, "taken from life," should be his epitaph.

"SPIRIT OF THE PRESS."—A glass of cider.

Young Folks' Column.

Matties' Wants and Wishes.

I want a piece of talito
To make my doll a dress;
I doesn't want a big piece,
A yard'll do I guess.

I wish you'd find my needle,
And find my fumble, too—
I has such heaps a sewin',
I don't know what to do.

My Hopsy tared her apron
A tum'lin down the stairs,
And Cesar's lost his pantaloons,
And needs anuzzer pair.

I want my Maud a bonnet,
She hasn't none at all,
And Fred must have a jacket,
His uzzer one's too small.

I want to go to grandma's,
You promised me I might;
I know she'll like to see me—
I want to go to-night.

She lets me wash the dishes,
And see in grandpa's watch—
Wish I'd free, four pennies
To buy some butter-scotch.

I want some newer mittens—
I wish you'd knit me some,
'Cause most my fingers freeze,
They leak so in the fun.

I wore'd it out last summer
A pullin' George's sled;
I wish you wouldn't laugh so—
It hurts me in my head.

I wish I had a cookie—
I'm hungry's I can be;
If you hasn't pretty large ones
You'd better bring me free.

—North Texas Enterprise.

A LITTLE HERO.—A gentleman, while passing through a street in New York heard a child's voice, from a basement, crying "Help! help!" He ran in and found a little five-year old boy holding a blanket around his sister, two years younger, who had caught her clothes on fire, and the little hero had succeeded in putting out the flames.

The boy, in answer to the question why he wrapped the bed-blanket around his sister's burning clothes, said his ma had told him that was the best way to put out fire, and to why he cried "help! help!" that he was afraid that he could not do it, and wanted some one to help. He was then asked why he did not leave his sister and run into the street, and cry for help. He answered with tears in his eyes, "No, I would never have left her, she was my sister. Had she burned up, I would have burned too."—*Child's World.*

MIND YOUR P's AND Q's.—The leader of this game addresses the party with the remark, "My mistress is dainty, she does not like peas—what shall we get her for dinner to-day?" One may suggest, "Roast beef, potatoes, and plum-pudding." The leader gives a shake of the head, demands a forfeit, and turning to the next, repeats, "My mistress is dainty and she does not like peas—what shall we give her for dinner?" "Roast pork and parsnips!" cried another. "She does not like them, pay a forfeit," and the same question is repeated. The third, perhaps, suggests "Boiled mutton and cauliflower, and dry bread." "These will please her," replies the leader, and he pays a forfeit. If only two or three are in the secret, the game may proceed for some time, to the intense mystification of the remainder, who have no idea what they have said to incur or escape the penalty. It depends merely on a play of words. The mistress' not liking "P's," the players must avoid giving answer in which that letter occurs. As the same proposition must not be repeated twice, those even in the plot are sometimes caught; as the reply they had prepared for themselves is occasionally forestalled by another player, and they have no time for consideration.

A CAT AND DOG STORY.—A tradesman, owner of a dog and cat, had been in the habit of letting his dog go to market and buy his own meat. The dog would bring the meat home and deposit it somewhere in the store, and when hungry would go and get it. The cat had a habit of stealing his meat, and the dog would lie down near it, and watch for the thief, and when the cat came would drive her away. But at last he became tired of this business, carried the meat down the cellar, and covered it up in the sand. One day the owner of the dog thought he would get the meat, and bring it up-stairs, and see what the dog would do. After taking a nap, the dog went down the cellar in search of his meat and commenced digging as usual, but there was no meat to be found. He laid himself down a minute, as if in thought, and then rushed up stairs, and, spying the cat, "went for her," and chased her all around the store, as closely as a police officer in pursuit of a thief. Can a dog reason?

Good Health.

Eat Slowly, Please!

Now do not suppose we are going to drag you back two or three centuries and parade the virtues of our great, great-grandfathers, who were wont to spend two or three hours over their meals, before your eyes, for we are not; simply because the doctors and life insurance tables prove that, with all our dyspepsia and indigestion, we live longer and suffer less from the gout than they did. Only apply the same common sense to your eating and drinking, that you do to the ordinary business affairs of life, and do not require of a thin, muscular sack the work for which nature has provided a complete apparatus of the very hardest material in the whole human frame. Masticate your food thoroughly; thereby securing the advantages of fully appreciating the savory odors and taste of your food, completely triturating and mixing it with the saliva, and of furnishing it to the stomach in such quality and at such a rate that this organ shall be able to appreciate the proper quantity, and tell you when you are "done."

Hunger is a purely reflex action; the want of material to properly conduct its labors is felt all over the whole system, but referred by means of the great sympathetic system to the point from which supplies are usually furnished—the digestive tract; which includes the stomach and upper portion of the small intestines. Now, when the stomach has received a sufficient supply for the wants of the system, the fact is announced by means of this same sympathetic system to the millions of millions of little chemical laboratories which make up the whole of the "human form divine," and the demand ceases, and "we have had quite enough, thank you." But, when we tumble food in the stomach almost at the rate at which a Mississippi river elevator conveys wheat into its spacious reservoirs, how can we expect our stomachs to be able to take cognizance of the amount, and proclaim "enough" at the proper time? Besides if we try to swallow a doughnut, gulp half a cup of tea, masticate a good-sized piece of beef-steak and tell the cook to "hurry up with those potatoes" all in the same breath, the chances are greatly in favor of our getting seriously choked; and having to submit to the partial dislocation of our spinal columns at the hands—doubled up, too—of our frightened better half before getting relief. And choking does not always end so favorably; it sometimes kills. We recall a case now that occurred in our student life, which is exactly in point:

The body of a brawny, muscular man, who had died quite suddenly, by one of those dexterous manipulations known only to medical students, found its way to the dissecting room of a well-known college. The doctors had puzzled their brains in vain trying to determine the cause of death, and had turned the "subject" over to the class for dissection. Being a remarkably well-developed, muscular man, it was voted to appropriate him to illustrate the various operations in surgery. Accordingly, scalpel and amputating knife were soon busily at work; and limbs were amputated, arteries ligated, joints resected and disarticulated until nothing was left that seemed to afford any chance for any further operations; when one of our number suggested "tracheotomy." No sooner said than done. The delicate rings of the trachea were quickly divided by the "direct thrust," when, lo! the cause of the mysterious death was at once apparent. Filling almost the entire cavity of the larynx, completely occluding the chink of the *rima glottidis*, and extending some distance down the trachea itself, was a roll of half-chewed food; shutting off his supply of "wind" far more effectually than ever did hangman's rope. The struggle for life had been a terrible one; the powerful muscles of inspiration having forced the obstructing food into the trachea so firmly that it seemed as though it had been "tamped" there.

Now, don't get alarmed and refuse to eat at all because of this little incident, for that is not the object of this article; but put your trust in providence, eat slowly, stop when you feel satisfied, and enjoy the luxury of an undisturbed digestion.

TO REMOVE BOILS.—Dr. Simon, a physician of Lorraine, gives a new cure for boils, by treating them with camphorated alcohol. As soon as the culmination point of a boil makes its appearance, he puts a little of the liquid in a saucer, and dipping the ends of his little fingers in it, rubs the inflamed surface, especially the central part, repeating the operation eight or ten times for about half a minute. He then allows the surface to dry, placing over it a slight coating of camphorated olive oil. He says that four such applications will, in almost all cases, cause boils to dry up and disappear. The application should be made at morning, noon and evening.

TREATMENT OF CHILBLAINS.—Sulphurous acid should be applied with a camel-hair brush, or by means of a spray-producer. One application of this usually affords a cure. The acid should be used pure. A good wash for hands or feet affected with chilblains is sulphurous acid, three parts; glycerine, one part; water, one part. The acid will be found particularly useful in the irritating, tormenting state of chilblains.

FISH AND TEA AS FOOD.—The London *Times* sharply controverts the assertion made by Dr. Edward Smith to the British Association, that fish is rather a relish than food, and contains little more nutriment than water. As opposed to this statement the investigations of M. Payden are cited, who proves that the flesh of fish on the average does not contain more water than fresh beef, and has as much solid substance as the latter. For instance, the flesh of salmon contains 75.50 per cent. water and 24.296 per cent. solid substance, while beef (muscle) contains 75.89 per cent. water and 54.12 per cent. solid substances. The flesh of herring contains still less water than that of salmon, and even flat-fish are as rich in nitrogenous substances as the best wheaten flour, weight for weight. Another statement made by Dr. Smith, that the amount of nutriment contained in an ounce of tea is infinitesimal, is met with the assertion that, while tea is no "nutriment" in the ordinary sense, the individual who takes tea after his meals feels, without being able to define it, that tea has a favorable effect upon certain highly important functions in his body, that digestion is accelerated, and facilitated, and his brain work benefited thereby. Though not nutriment, tea is thus alleged to possess a really higher value, in medical properties of a peculiar kind.

DIFFERENCE IN HUMAN EXHALATIONS.—It is a well-known fact that the human body contains in itself various humors and acids similar in action and having the same tendency toward the baser metals, as nitric and sulphuric acids; namely, to tarnish them, these acids varying in quality in different persons. No better proof need be given in support of this than in noticing the effect which different persons have on the jewelry which they wear. There are thousands who for fancy or economy's sake wear continually the cheaper kind, known under the name of "fancy jewelry," having brass ear-wires to the drops, without any ill effect, while many others, after wearing them a few days, are troubled with sore ears; in other words, the acids contained in the perspiration of some persons are sufficient to act upon the brass. There are persons by whom jewelry of any grade below 18 karats fine would be tarnished in a few days, and if such persons were to condemn all jewelry they thus tarnish as brass, they would do great injustice to the jeweler. These are extreme cases, it is true, but there are many persons who cannot even wear iron or steel about them without causing it to rust by the acidity of their perspiration. —*Exchange.*

OUR FLANNELS.—The value of flannel next the skin can not be overrated. It is invaluable to persons of both sexes, and all ages, in all countries, in all climates, at every season of the year, for the sick and the well. In brief, I can not conceive of any circumstances in which flannel next the skin is not a comfort and a source of health. It should not be changed from thick to thin before the settled hot weather of the summer; which, in our Northern States, is not much before the middle of June, and often not before the first of July. And the flannels for the summer must not be three-quarters cotton, but they must be all woolen, if you would have the best protection.

In the British army and navy, they make the wearing of flannel a point of discipline. During the hot season the ship's doctor makes a daily examination of the men at unexpected hours, to make sure that they have not left off their flannels. —*To-day.*

HOW FAR CHEMICAL WORKS POISON THE AIR.—Sulphuric acid does not remain any perceptible time as a gas when it comes into the open air. Muriatic acid will go several miles, and sulphurous acid goes farther, but is diluted more rapidly, and therefore is less perceived. Chlorine will go four miles and be quite distinct to the smell, if the ground be smooth, but if it be roughened by trees or vegetation the trees obstruct the motion of the air and gases, and the absorbable portion is removed; but not without damage to vegetation. Chemical works generally are greatly in the increase, and the power to repress escapes of gas does not increase with them. When new manufactories are proposed, the air should be examined, and if the air be injured to a certain extent, no more of the same manufactories should be allowed at the same place. —*Ex.*

HOT SAND BATHS.—One of the most attractive therapeutical novelties for some time past in London—recently introduced from the continent—consists in the erection of establishments for administering hot sand baths as a remedy for rheumatism, recent cases of nervous disorders, affections of the kidneys, and all cases where heat is needed as the chief remedial agent. The advantages claimed in behalf of this method of treatment are, that it does not repress respiration, like the hot water bath, but rather increases it, and does not interfere with respiration after the manner of the steam bath or the Turkish bath. It is found that the body can endure the influence of this kind of bath for a much longer time, and a much higher temperature can be applied.

ALLEGED CURE OF LEPROSY.—The *Friend of India* reports that the Madras surgeon in medical charge of the penal settlement at Fort Blair believes he has made a valuable discovery in the cure of leprosy. He is of opinion that leprosy can be cured by the oil of the garjun tree. Every leper in the settlement is, it is stated, being cured fast of this loathsome disease. In no case has there been the slightest relapse, and the disease has been arrested at every stage.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, Feb. 28, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—J. M. Mayfield; The New Era in Farming; State Legislature, 129. Farming in the Foothills, 136. Education in Oregon: Artificial Rain; Flax; Kamie, 137.

ILLUSTRATIONS.—J. M. Mayfield; Machine for Making Artificial Butter, 129. St. Helen's Hall, Portland, Oregon; Bishop Scott Grammar School, Portland, Oregon, 137.

CORRESPONDENCE.—Protection of our Raptorial Birds; Raising and Slaughtering Beef Cattle; The Use of Bluestone—Smut; Our Native Fish, 130. The Corn Worm, 131.

HORTICULTURE.—Interesting Facts About Cottonwood Trees; The Wild Morning Glory; Tree Ferns from Sandwich Islands; More Alfalfa Experience; Grapes—Best Varieties, 130-131.

THE SHEEP FOLD.—Angora Goats in Oregon—Information Wanted; The Poetic and Prosaic Sides of Sheep Husbandry, 131.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 132-133.

FARMERS IN COUNCIL.—Santa Rosa Farmers' Club; San Jose Farmers' Club, 133.

HOME CIRCLE.—Plain Talk to Rural Readers; Dogs Going to Bed; Nature's Decoration; Idle Girls; The Woman's Dress Question; Fact and Fancy; How Success is Achieved; Odd Minutes of Waiting; A Foe of Her Sex; The New Baby Washer, 134-135.

YOUNG FOLKS' COLUMN.—Mattie's Wants and Wishes; A Little Hero; Mind Your P's and Q's; A Cat and Dog Story, 135.

GOOD HEALTH.—Eat Slowly, Please! To Remove Boils; Treatment of Chills; Fish and Tea as Food; Difference in Human Exhalations; Our Flannels; How Far Chemical Works Poison the Air; Hot Sand Baths; Alleged Cure of Leprosy, 135.

USEFUL INFORMATION.—Oils from Seed; Gilding Glass; Care of Varnish Brushes; Cleansing Barrels; A New Application of Gypsum; Prevention of Boiler Explosions; Cleansing Silver-Ware; Parisian Wood Varnish; Hypochlorous Acid for Bleaching; Ether Glue; Screws in Plaster; Hard Plaster; Black Branding Ink, 138.

THE DAIRY.—The Artificial Manufacture of Butter, 138.

AGRICULTURAL NOTES from various countries in California, 140.

MISCELLANEOUS.—Walla Walla; Shipping Barley East; Eureka Bullion; The Pacific Coast in 1873; Mines on Goat Island, 131. Proposed Tunnel between Scotland and Ireland; Red and White Muscles, 139. Patents and Inventions, 140.

Substitute for a Roller.

A correspondent of the *Country Gentleman* writes that journal an account of a device for breaking lumps and smoothing the surfaces of fields which he thinks preferable to the rollers usually employed for these purposes. The "drag," as he terms it, is a sort of combination of a sled and a stone-boat; the front and back ends being turned up like a sled, and the bottom being of flat board like a stone-boat. The affair is described and commended as follows:

"I make the side pieces or frame of 2-inch plank, eight inches wide, and turned up at the ends, and nail the bottom board on with heavy spikes. I use 1½ inch lumber for the bottom, and it does not matter how wide or how narrow it is. I put a seat on it and ride, as my weight helps to crush the clods. By having the ends slightly turned up, it runs easier and does better work. I always haul all small stone off the field on my drag.

"Any farmer who can use an axe, a saw, a hammer and auger, can make one, and after he has once used one he would not farm without it. They run lighter than a roller, and grind the clods and lumps to powder, while a roller very often only presses them into the ground. And they level the ground better than a roller can do; after going over the field with a drag, it looks as if it had been gone over with a smoothing iron, and it never packs the ground."

The Salem (Oregon) flouring mills during the year 1873 turned out 33,800,000 pounds of ground stuff, as follows: Flour, 26,000,000 pounds; bran, 6,500,000 pounds; shorts, 1,300,000 pounds. The Willamette Woolen Mills turned out in the same time 299,000 yards of cloth, consuming 400,000 pounds of wool.

Farming in the Foothills.

Our brief remarks on Farming in the Foothills, published in the *Press* of February 7th, have called out two correspondents, the first of which, from a party resident in Santa Clara valley, seeks for information and reads as follows:

EDITORS *Press*.—In your issue of February 7th, I read an article headed "Farming Among the Foothills in the Sierras," in which I took much interest. I judge the article an editorial, if so, would you be kind enough to answer a few questions through your valuable paper, viz: In what counties does most of the land spoken of lie, and is it far from market—so that one would have to carry their imports and exports far; also the best way to get to them. If the piece was written by a resident, I would be pleased to hear from him again (and also his address if he is willing to give it) through your paper.

We take the *RURAL PRESS* and prize it highly. Its coming is always watched for with interest, and many are the articles which find their way to a private book to be easily found when wanted. YOUNG FARMER.

Santa Clara Co., Feb. 10th, 1874.

Our correspondent will find his queries answered in general terms, by perusing the balance of this article.

The second letter is from a correspondent who resides at Lincoln, Placer county, a location among the coarse gravel drift, somewhat unfavorable for farming, and characteristic of the hills near the western base of the Sierras. The letter reads as follows:

EDITORS *Press*.—When anyone asks me the way I generally try to direct him; this idea is suggested by an editorial paragraph in the *Press* of February 7, on Farming Among the Foothills of the Sierras, which appears to want an answer. You advanced the idea that this is a good dairying and stock-raising country, when the fact is the feed here is poor at any time, and it is only at its best from the middle of March until some time in June. I came here last fall with a few head of stock, which I have been feeding since the first of September, and they actually would have died if they had not been fed, and I am somewhat discouraged to find two-thirds of the ranchers trying to sell out. As for the cereals, they do not try to raise them for the grain, only for hay, and they only get from one-half to three-fourths of a ton per acre, from the average of the land. True there are spots of land on the ravines that are as good as any in the State; but they are very limited, and those that are there know their value. Most of the fruits do well on the best land, yet nothing but vines will do well on the second quality of land, and they do not produce more than one-fourth what they do in the valley lands of Napa, or Sonoma.

Some one may inquire what are the foothills good for? My answer at present is for what little scrubby timber there is, and if Cashmere goat breeding ever becomes a success, they may be utilized for range for these animals.

My advice to emigrants is if you are able to buy land, go into some of the fertile coast valleys, as land is cheaper there at \$100 per acre than it is here at government price, and those that cannot buy or rent such lands, can have the consoling reflection that they had better have staid at home. F. G.

Lincoln, Placer Co., Feb. 14, 1874.

Our last correspondent is evidently earnest and honest, but it appears by his letter that his experience in foot-hill farming is very limited. He says: "I came here (to Lincoln) last fall, with a few head of stock, which I have been feeding since the first of September, and they actually would have died if they had not been fed." Of course they would, and so they would on four-fifths of the entire pasturage of the Union; but we fail to see why that fact should be any serious objection to the locality as a farming region. By "farming in the foot-hills" we meant diversified farming—sowing a little grain, a little corn, plenty of potatoes, and other roots for family use, and to help out a little in feeding stock, a little wheat should be sown for hay, until a good growth of alfalfa can be obtained, or other suitable grass; set out a few choice varieties of fruit trees and vines, the product of which, when they come into bearing, may always be utilized either for sale near home while fresh, or dried for a more distant market, if necessary. Grapes (of the right kind and properly prepared) may always be converted into raisins, which will meet with a ready sale. Poultry, hogs, and perhaps sheep, or improved goats should always form a portion of the farm stock in the foot-hills. We fear our correspondent has not looked around much in the little valleys and plateaus above him for wheat, root crops, etc. He certainly could not have seen Mr. Bugbee's vineyard, only five or six miles distant, or partaken of the delicious grapes and apples raised all about that region; the like of which, for flavor, he never ate in the Sacramento valley.

And Still there is Room,

Unless there has been a great rush to the mountains within a few years, there certainly must be much room yet left for small mountain farms, where, with well directed industry and no more hard work than is expended on Eastern farms, hundreds, if not thousands either of emigrants or those young men who are barely making a living on the uncertain labor to be found in the valleys and cities below, might find locations for building up neat, comfortable and productive homes. Small streams and springs or mining ditches are found very generally scattered all through the mining regions, from whence water, in greater or less quantity can be obtained for irrigation. When water is scarce it can be economized by starting a few trees or vines and a small patch of alfalfa the first year—the area of which may be gradually increased from year to year, according to the supply of water. Very little water is required for either vines, trees or alfalfa the second or third year, and eventually the rains of winter will be all that is needed. When water is very scarce one or two windmills will be found a great help and will cost but little. Often a small tunnel driven into a hill-side—merely a horizontal well—will furnish water

enough to help out other supplies; or be sufficient of itself alone to make a respectable start. Reservoirs may be also constructed in many places so to save up large quantities of water from the winter rains, to be used after the rains cease.

How to Begin.

A little patch of roots, mellons, pumpkins, etc.; a little corn, if only for fodder and roasting ears, should be planted to supply the family and tide the stock over the short period of drouth, and through the early storms that precede the starting of the new native grasses on the hill ranges. Proper shelter should also be provided, which will add largely to keep up the strength of the stock, and enable the animals to convert their food into flesh, instead of heat to keep the life in them. A very few acres of naturally arable land, with plenty of "range" will make a good mountain farm. The vines and many trees will do well on the hill-sides, or among rocks through which the plow cannot well be driven, provided the soil is good, as it generally is in such places in the mountains.

Stock raising, in connection with culture of the soil utilizes all the products and keeps the land in good condition. The straw from grain, blades from corn, and that portion of all crops which are generally wasted may be advantageously consumed by stock. It is one of California's greatest errors that stock raising can be successfully conducted only with large herds or flocks.

Extent and Nature of the Soil.

The western slope of the Sierras, some four hundred miles in length, by about one hundred and sixty in breadth, contains an almost innumerable number of little nooks and bits of valleys of the richest and most productive land in the State, each of which may be made the nucleus of a farm, which should also include a larger extent of hill and wood land. This immense area also embraces a great variety of climate, from the semi-tropical where the orange, lemon, and fig flourish luxuriantly, to an altitude where the ground is covered with snow, from three to four months of the year. The soil of the foot-hills, where not made up of coarse gravel, (and that is the rare exception) is formed by the decomposition of granite, slate or lava, with everywhere more or less lime, generally covered with a good depth of loam, and underlaid with rocks so broken and porous that the roots of trees, vines and alfalfa, readily penetrate to perpetual moisture, and find in these deep crevices the very richest of mineral food, principles largely wanting in the soil of the great river valleys of the State. No floods destroy the crops or stock there, and mosquitoes and land speculators seldom put in an appearance to disturb or annoy the settler. If the wise grower of Europe should picture in his mind the topography and climate that should best suit his avocation; and with that picture still fixed in his memory, should he suddenly set down in the foot-hills of California, at an elevation of 1,500 to 2,000 feet above the sea level, his first, and most natural exclamation would be—"Eureka!" He wants a dry climate and hilly land, not plains. We never read of the vine-clad plains of sunny France.

Another important fact should also be considered, that fruit of every description, and nut crops as well, produced in the mountains, is much better than that raised in the valleys, and command a higher price in all our valley towns and cities.

Cause of Non-Success.

We fear that the great want of success in mountain farming is the unwillingness to put in hard honest work, as to live apart from large settlements, or allow for time to get a farm properly started for diversified farming—the only true system, indeed, anywhere—which is there absolutely essential to success. It is hard to overcome the California mania for large farms, ranches and immense herds of cattle, flocks of sheep, hundreds or thousands of acres of wheat and vast orchards of trees or breadths of vines. Each must be a specialty, so that the farmer can crowd all his farm work into three or four months of the year—planting or pruning and harvesting time, the balance of the months to be devoted to the enjoyment of the proceeds. There are too many who desire to get possession by lease or location of large tracts of valley land, where they may get rich by two or three successful crops of wheat, and then leave for the city or other where. Such men are not farmers in any proper sense of the word. These systems are pernicious in many ways and detrimental to the true development of the resources of the state, and to the increase of its population. At the risk of exposing ourselves to a severe criticism, we must still adhere, in the main, to our original proposition, as stated two weeks ago, under the same caption which heads this article. By information derived from reliable sources, and from somewhat extended, though not recent personal observation, we are led to believe that, as a general thing the mountains of California are, or soon will be worth more for food winning than for gold mining. The success of mountain farming is only a question of time. The experiments already made, afford sufficient evidence to warrant this prediction.

Conclusion.

Two of the finest vineyards in the State are in the mountains, at an elevation of some twelve or fifteen hundred feet above the sea level—we allude to Bugbee's, above Lincoln, and the brothers Jarvis, in the coast range of mountains above Santa Cruz. We appeal with confidence to the intelligent experiments

which have been made by these men, and have no hesitation in saying that there are at this time millions of acres of unoccupied land in the mountains of California just as good as that which has been improved by these gentlemen. Hundreds of experiments in every variety of farming, have also been made and may be witnessed, to day, by any one who will take the trouble to go through Nevada, Placer, El Dorado and other counties, north and south, along the great western slope of the Sierras. Energy, intelligence and perseverance is all that is wanting to make a large portion of all this country literally, blossom as the rose, and send forth its productions of semi-tropical and dried fruits; its nuts, raisins and figs, and its oil and wine, not only to the various parts of our own State, but to every State in the Union as well.

We grow hopeful, but we hardly think much over earnest, in the belief that, ultimately, the mineral regions of California will be as much blest as any other portion of the State, instead of being pointed at, as is now done by many, as morally the worst. For the fixed abode of intelligent, agricultural humanity—the best acknowledged conditions of morality—no mountain country on the globe is more admirably fitted by nature than Eastern California.

If the Swiss can live, prosper and make noble history, and develop the greatest mind on earth amid the rough and rugged gulches of the snowy Alps, it is folly to deny that the Anglo Saxon may not win as much from the genial slopes of the Western Sierras!

The University of California.

On Washington's Birthday the Regents of the University and invited guests made a visit to the State University at Berkeley and inspected the grounds and buildings. Lunch was served, and speeches were made by several gentlemen, after which the guests went over the buildings and grounds while the Regents and the Joint Legislative Committee held a conference with respect to the affairs of the University. The committee consists of Senators Laine, Keys and Evans and Assemblymen Ammerman, Canfield, Turner, Friedenrich and Myers. They have requested full written information from the officers of the University on the following points in conformance with the resolution of the Legislature:

First—What instruction has been given in agriculture and the mechanic arts, in the University of California; whether the same has been defective or not, and, if defective, wherein such defects consist, and what is the cause, as well as the remedy for such defect. Second—What has been the management by the Regents of the University of California of the 150,000 acres of agricultural lands donated by the Congress of the United States to the State of California, and by the State to the University; whether the same has been defective or not, and, if defective, wherein such defect has consisted, and what is the cause, as well as the remedy, for such defect. Third—Whether or not the Regents have properly administered the funds of the University which have been intrusted to them, and if not, in what particulars. Fourth—Also upon any other matters relating to the University upon which, in the opinion of the Committee, information may be of use to the Legislature or the public.

The Committee have made an examination of the buildings and have expressed their determination to look thoroughly into the subjects referred to above. By this means the public ought to be able to know all about the University and its management, a subject in which they are just now much interested. The farming community in particular are anxious to learn what facilities are to be afforded to learn the science of agriculture and what steps are to be taken to give the students instruction in its practical departments. As stated in a former issue, this hitherto apparently neglected Department of the University should be placed on its proper footing. Its importance should give it all the special legislation necessary to secure this result.

New Brooms.—A factory is just started in Vallejo, to make brooms in a new way. The broom is made independently of the handle. A tin socket takes its place, around which the broom is formed more conveniently. Sockets are made so cheaply of scrap-iron by machinery, that the price is not affected. The handles being shipped separately, brooms occupy only one third of the space, and all breakage is avoided. They are transported at half price; the broom is improved in appearance. San Francisco lost this industry, because it is said that broom-makers of the old fashion conceived the idea, that by buying all the broom-corn in market, the new broom could be shut out; which proved true, so far as till the next crop comes. We shall be glad when new industries command favor instead of repulsion. San Francisco will then enter upon a new era of prosperity.

FOWL CIRCULAR.—We have received a finely illustrated circular of thoroughbred fowls by M. Eyre, Jr., Napa, Cal. It contains a list of different varieties, prices, and valuable directions in regard to selecting, mating, feeding, etc. Send for free circular.

Education in Oregon.

St. Helen's Hall and the Bishop Scott Grammar School.

Though one of the youngest States in the Union, Oregon is by no means behindhand in the matter of education. Besides her system of common schools, which is fast approaching proportionately in completeness and importance that of the oldest and most populous States, she has some of the finest private collegiate institutions in the Union. Prominent among them are those of the St. Helen's Hall and Bishop Scott Grammar School—both located in Portland, and belonging to the Episcopal denomination.

St. Helen's Hall

Is one of the finest educational institutions north of San Francisco. It is on Fourth street, between Madison and Jefferson streets. The buildings have a frontage of 75 feet on Fourth street by a depth of 120 feet, and a frontage of 30 feet on Madison street by a depth of 70 feet, are three stories in height, and have a Mansard roof. Besides the study hall, classrooms, etc., they furnish accommodation for 50 boarders and 200 day scholars. They are well lighted and ventilated, and are furnished with gas, water, and all the modern improvements. The rooms set apart for boarders are very superiorly arranged and furnished.

The institution has fine conchological and botanical collections, and in the latter special attention is paid to the botany of the coast. There is a beautiful flower garden in connection with it, which is admirably arranged with spacious walks, and the playgrounds are particularly ample and well-furnished.

The institution is entered from Fourth street, and the visitor is at once ushered into a spacious hall, which leads to the first of the large class-rooms. On the right of the hall is a spacious parlor, furnished in first-class style and capable of being divided into two apartments by means of folding-doors. A door on the left leads into the rector's study, where a splendid library invites the studious to explore its treasures of theological and secular lore. Adjacent is a pleasant, well-lighted sitting-room, on the left of which, forming a kind of L, is the teachers' room, the view from which, looking out over the broad, placid Willamette, the youthful city, and the fertile valley that is finally seen to lose itself amongst the romantic mountains of the south, is peculiarly grand and imposing.

The faculty are as follows: Rector—The Right Rev. B. Wistar Morris; Principal—Miss Mary B. Rodney; Assistant Teachers—Miss Lydia Rodney, Miss Lydia H. Blackler, Mrs. Mary B. Clopton, Miss Catherine C. H. Burton, Miss S. E. Boyd, in charge of the Musical Department—Miss Clementina Rodney; Teacher of Music—Miss C. A. Yarnley.

Bishop Scott Grammar School.

Bishop Scott Grammar School is a boarding and day-school for boys, and as a preparatory institution for entering on a course of professional studies is, in its way, unrivalled. It has been established only quite recently, in 1870, but already gives promise of a great and prosperous future. It commenced on a small scale, but has now 100 pupils from all parts of the Pacific Coast; California, Utah, Alaska and British Columbia being represented, as well as Oregon and Washington Territory. The building, which has accommodation for a much larger number of pupils, is a frame one; is three stories in height with a mansard roof, and has a frontage on the east of 85 feet, on the south of 94 feet, and on the north of 60 feet. During the last year a new wing, 24 feet by 60, and three stories high, which furnishes two additional school rooms, a chapel and a large dormitory, has been erected. The grounds occupy four blocks in the western portion of the city, 'neath the shadow of the hills that overhang the valley of the Willamette.

The grammar school has attained to such perfection that the scholars can now be advanced as far in their studies as they could be in the second or third years of a collegiate course.

The officers of the school are: Right Rev. B. Wistar Morris, Doctor of Divinity, Episcopal Bishop of Oregon and Washington; Rector; R. W. Laing, M. A., L. L. D., Head Master; Rev. D'Estaing Jennings, M. A., Senior Master; W. M. Baker, B. A., Junior Master; Miss I. A. Buss, Preceptress; Edward T. Coleman, Drawing Master; Richard T. Yarnley, Music Master; R. R. Anderson, Drill Master; Rev. D'Estaing Jennings, M. A. Chaplain; Miss Maria Emery, Matron.

The Two Institutions.

These two institutions are representative in their character and are so efficiently conducted and so complete in their every department, as to cause some wonder, that a single religious denomination should be able to support them, and in so young a State, even though it be the vigorous and go ahead one of Oregon. We have already dwelt sufficiently on the advantages offered by the St. Helen's Hall Institu-

tion for girls, and as to the Bishop Scott Grammar School we doubt whether it could be beat by any of the more pretentious private institutions amongst ourselves. One of the most commendable features is the military organization, known as the Bishop Scott Cadets in which the young gentleman preparing for an active business life or a profession may not only learn to bear arms in the defence of his country, but in which the regular drill supply the want of much needed exercise and makes the thews and sinews strong while the mind is being cultivated. Other features of these excellent institutions we might dilate on had we the space, suffice it to say the completeness and efficiency of both institutions speak well for the interest taken in educational matters by the people of Oregon.

Artificial Rain.

The desirability of having supplies of rain at command has of late years attracted the at-

tion to bring it down. There it might be expected to rain, "free gratis, for nothing." But where there are no clouds, any amount of artillery practice would fail to make them, and the plan would fail in the only case in which it could possibly be of the slightest use.

If the scheme were practicable, what an enjoyable state of things would ensue. Imagine a grand plebiscite of the farmers of a certain county, or rain district, to decide whether or no they wanted rain; and if so, how much. We should have suits for damages from excitable tea-drinkers and nervous chickens without end. The price of ordnance would rise so high that no one could afford to go to war. Glass and glaziers' materials would be in request, and the piano and flute at a ruinous discount. Finally, there would be no danger of misunderstanding the epithet "loud," as applied to American society.

But it often happens that where a supply of water is at hand, from rivers, wells or reservoirs, a judicious sprinkling will be much more effective than irregular soaking. In England, where

Flax.

The rains this season have been abundant—too much so, it would seem, in certain localities. Here and there we learn of farmers who have felt unwilling to put in wheat, on account of the sodden condition of the ground, which, it is feared, would rot the seed planted, and thus disappoint expectations of a good, or even moderate stand.

We have before alluded to flax as a remarkably sure crop, and even at this late hour repeat the suggestion that it is likely to do well on lands which are made by the weather unsuited to wheat growing, or where the result is dubious. In spite of the many well known difficulties and vexations of raising and marketing a wheat crop, this is still undoubtedly the leading article of produce in the State. We, as Californians, have ever taken pride in the full, plump grains of our great cereal, and its recognized superiority abroad has been a source of great profit in years past and probably will be

for years to come. But we must not lose sight of the danger and disadvantage of depending so largely upon a single staple. Even where the ground is in favorable condition for putting in wheat, there is always an open question as to the comparative superiority of some one other crop, and flax is certain to be a strong competitor for the favor of the farmers. There are many others, which should not be neglected; but, just now, flax appears to occupy a prominent position.

It has long been urged, not only in California but wherever agriculture is made a matter of study and systematic calculation, that where the soil, other conditions being similar, is equally adapted to the growing of many products, as great a variety should be raised as possible. Thus if, from any unforeseen cause, one crop should fail, others may succeed; or if it happens that the world's market for one staple is over supplied, others may bring fair returns.

Now as to flax. It is certain that there will be a constant and steady demand for flax seed, if not for the fiber, for some time to come. The oil manufacturers in this city are willing to contract in advance for as much as the farmers of the State are likely to raise this year. Thus, not only on account of the relative immunity of the seed from rotting, but also because of the promise of a certain market, flax is well worthy the attention of farmers.

Ramie.

The nursery of Mr. Finch at Haywood, Alameda county, proves the complete adjustability of our climate to the growth of ramie.

The plants are now 7 feet high, in February, and it is the most severe winter we have had. On Twitchel Island in the San Joaquin river is a plantation of 26 acres, which last year yielded two cuttings. The weight of stocks to a cutting is astonishing; not less than 40 tons to the acre, salable at \$5 per ton. Two cuttings therefore bring \$400. But if the stalks be passed through a brake (now in use), when taken green from the field, the raw fiber commands 30 cents a pound. D. H. Craig of New York offers to buy all the raw fiber our State can supply, at a contract price to be fixed for 5 years. He will set up a machine wherever wanted, by which he refines the raw fiber, so that what he buys at 30 cents becomes valued at \$1 per pound. This process reduces one ton of 30 cent fiber, to 80 pounds superfine. There remains a very large proportion for which uses are being found. After cordage, bagging, rope, etc., paper suggests a means of clearing up the remainder. The outer bark makes a beautiful fixed green dye, if one may judge by the impression on the hands of the workmen. The pith of the stalk contains a salad oil of peculiarly pleasant flavor; certainly those who have tried it pronounce it superior to olive oil, and predict for it a great demand. Further experience may modify this report.

The leaves of ramie make a great tonnage, and probably they may make paperstock. If they do, the quality will most likely resemble Japanese paper in toughness and in silky texture.

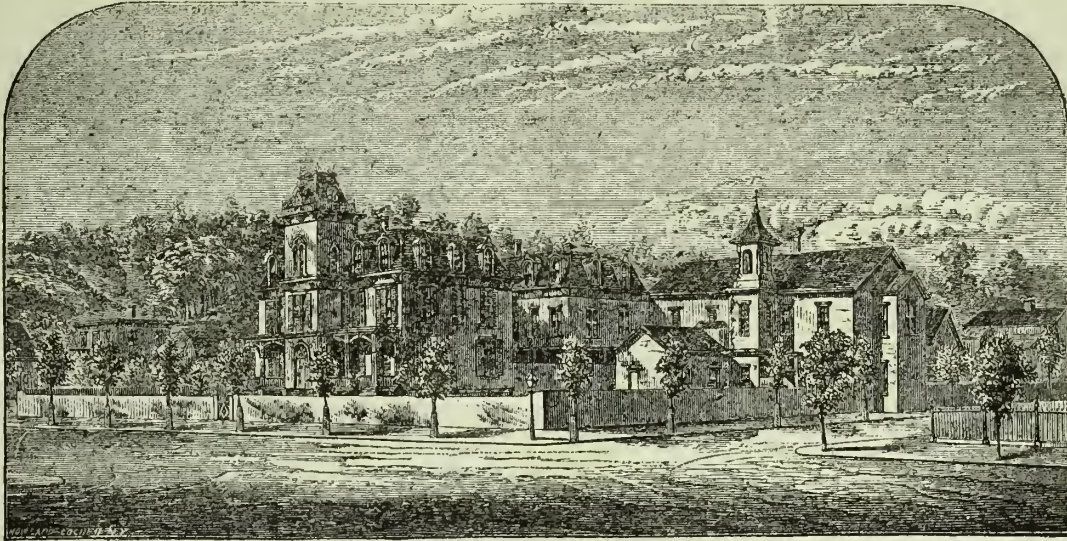
There is yet a valuable and very interesting product, the first which the plant yields in the earliest spring-time. The young sprouts of ramie will vie with asparagus, as a delicious table vegetable.

We earnestly commend this textile plant to the consideration of agriculturalists on this coast. Rules for cultivation are usually found where the plants are for sale.

It is easy to keep a field of ramie in order, when once established. After the first year, the ground is so covered with the spread, that little attention is needed. The plant is perennial. If the soil has not a moist bottom, we imagine that irrigation will be indispensable after cutting, to give the second growth a fair start.

The acknowledged necessity for alternation of crops, will induce our farmers to examine the claims of this textile plant upon their attention.

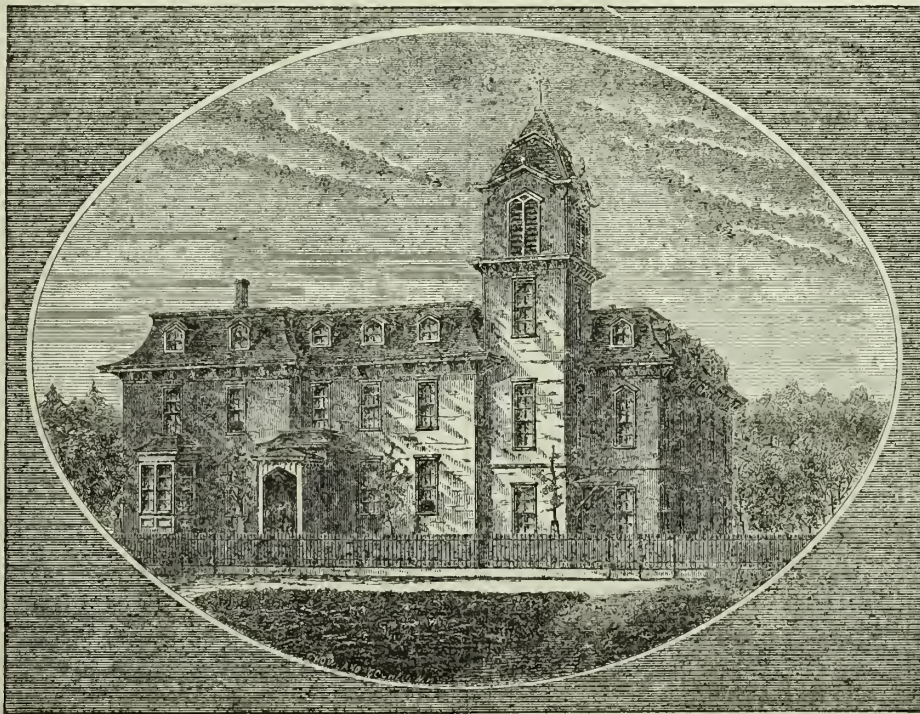
PETALUMA is to have a cheese factory.



ST. HELEN'S HALL, CORNER FOURTH AND MADISON STS., PORTLAND, OREGON.

tention of scientific men and inventors. We say, and inventors, because the terms are by no means interchangeable and should not be confounded. As an example of the former class may be cited an aspiring genius, who, not satisfied with succeeding in producing artificial clouds by means of smoke from brush or straw fires, was led by certain delicate meteorological relations existing between smoke and real clouds to attempt the production of the latter,

land is cultivated so carefully and minutely, that first expense is not of so much consequence, the plan of Mr. Isaac Brown is being adopted in many localities. His process consists in forcing water through small perforations in lead pipes, by means of a powerful force pump. The lead pipes are laid down 16 yards apart. A 12-horse power engine works a force pump; with a pressure of 60 or 70 lbs. per square inch, or a head of 120 or more feet, the engine maintains a shower upon a plot of about an acre and a half, applying 10 tons of water



BISHOP SCOTT GRAMMAR SCHOOL, PORTLAND, OREGON.

indirectly, through the former. Of course he succeeded—in the newspaper item.

Ever since the application of explosives to the art of war it has been noticed that, in nearly every instance, a great battle is succeeded by copious rain showers; this the poets call Heaven's weeping over earth's carnage. Not very long ago an observing person, upon whom the fact, already demonstrated, had evidently made an impression, applied to the War Department to grant him the use of a park of artillery for complete and satisfactory trial on a large scale, the experiment to be made somewhere on the plains. We have not yet learned the result of the application, but presume that the government is content with the amount of powder now burnt in missing Indians. Where there is sufficient moisture in the air, the concussion of heavy firing would certainly suffice

in 15 minutes. Plot after plot is watered in rotation, the work taking place principally in the night. There is no probability that this system will be found of practical use in farming on a large scale; but in private grounds or city parks having a good head of water—the engine is unnecessary—the plan might be found of use.

GOAT HUSBANDRY.—A correspondent asks us for the title of some work especially upon goat husbandry. We have no knowledge of any such work extant.

ON FILE.—Letters with queries from D. J. A., Satacoy; from J. W. A.; from J. A. E., Dixon Grange; also two or three other items from different Granges, and several queries, which we will endeavor to answer next week.

USEFUL INFORMATION.

OILS FROM SEED.—The vegetable oils that may be produced in the United States are those from cotton seed, linseed, olive, hemp seed, rosin, sunflower, castor bean, rape seed, peanut, poppy seed, and colza. All these seed oils are prepared from seed first crushed between heavy rollers, and then ground between two pairs of granite stones five to seven feet in diameter, which are made to turn upon their axes while traversing a circular path. The soft pulp thus supplied is inclosed within a woolen sack, and this again within an outer horsehair sack, and then exposed to immense pressure by means of heavy wedges, each about 600 pounds weight, which are forced into cases just fitting the sacks by the action of cams upon a horizontal shaft. The oil thus expressed is known as "cold drawn." Afterward the cake is pressed between heated plates, and an inferior quality of oil is expressed from them. The olive is successfully grown on the island of St. Simons, near the coast of Georgia, and five gallons of oil have been produced the past season from each 250 trees. The fruit is subjected to pressure sufficient to crush the seed, and the oil expressed falls into cisterns upon water, from which it is skimmed. This finest quality is called virgin oil. Second and third qualities are procured by the aid of hot water and heavier pressure. Poppy oil greatly resembles olive oil of the finest quality, and is used to adulterate it. Thirty per cent. of oil may be extracted from poppy seed, which, when boiled, is equal to linseed. Cotton seed oil is largely used to adulterate olive oil; in fact, it is bottled in a pure state, and labelled with the foreign title of *huile vierge* (virgin oil), and sold as the best salad oil from olives. Cotton seed oil is again adulterated with rosin oil. The manufacture of seed oils is one that might be made to contribute to the variation of our farm crops, and also to return to the soil in the refuse cake, either directly as manure or indirectly as feed for cattle, a large amount of fertilizing material.—*Tribune*.

GILDING GLASS.—Gilding glass can not be patented—every one may do it; but the manner how is subject to a patent. Such is Schwarzenbach's method. He dissolves pure gold in aqua regia, and evaporates till crystallized, in order to free it from the acid. Then it is dissolved in pure water and filtered. The solution must contain 2 grains of metallic gold to the pint of water; add soda till alkaline. Then prepare the reducing solution by saturating alcohol with oiliant gas, and adding an equal volume of pure water. Take two glass plates, and clean them as carefully as a photographer does for a picture; place the cleaned surfaces together at a distance of one-eighth of an inch in horizontal position, with the largest plate below; mix the two liquids and bring them between the plates, which is readily accomplished by their capillary action; leave them two or three hours, and when they are removed, the gold will be found reduced and deposited on the glass, washed and varnished. Such is the method patented, but we would suggest to take a single plate well cleaned, placed perfectly horizontal, the edges greased so as to prevent the solution from running off, and then covered with the freshly mixed liquids to the height of about one-eighth of an inch, in the same way as plated glass mirrors are now silvered by means of a reducing silver solution.—*Manufacturer and Builder*.

CARE OF VARNISH BRUSHES.—Brushes used for applying finishing varnishes should be cared for with the utmost pains, as good work depends much upon the good condition of the brushes. A good way to keep them is to suspend them by the handles in a covered can, keeping the points at least half an inch from the bottom, and apart from each other. The can should be filled with slow drying varnish up to a line about a sixteenth of an inch above the bristles or hair. The can should then be kept in a close cupboard, or in a box fitted for the purpose. As wiping a brush on a sharp edge of tin will gradually split the bristles, cause them to curl backward, and eventually ruin the brush, the top of the can should have a wire soldered along the edge of the tin turned over, in order to prevent injury. Finishing-brushes should not be cleansed in turpentine, except in extreme cases. When taken from the can, prepare them for use by working them out in varnish, and before replacing them cleanse the handles and binding with turpentine.—*Am. Homestead*.

CLEANSING BARRELS.—The rancid grease wherewith ancient barrels are saturated is very frequently the cause of the tainting of the meat. This may be removed by scalding the barrels with boiling water and a few handfuls of wood ashes, or one handful of concentrated lye. A brisk scrubbing with a stiff corn broom and a rinsing with hot water, followed by another with fresh cold water, will render these barrels sweet. But on no account should a meat barrel be defiled by using to scald hogs in. There is in such an act a departure from that virtue which comes next to godliness.

A NEW APPLICATION OF GYPSUM.—Gypsum mixed with 4 per cent. of powdered marshmallow root will harden in about one hour, and can then be sawn or turned, and made into dominoes, dice, etc. With 8 per cent. of marshmallow, the hardness of the mass is increased, and it can be rolled out into thin plates, and painted or polished.

PREVENTION OF BOILER EXPLOSION.—The daily papers contain all kinds of suggestions in regard to this subject, as that certificates of inspectors should accompany bills of sale, that the seller should be made liable for all damages resulting, that the maker should be punishable if damage was the result of defective construction or design, etc. This is all nonsense. Simply let all those who use a steam boiler employ an engineer who knows as much, or more about it than a boiler inspector; and this indeed is not requiring a great deal. If it is objected that such men require too high salaries, it is simply caused by the fact that there are not enough of them. Increase the supply by proper and more universal instruction in the right kind of subjects, and the price will come down to a reasonable standard, say \$5 or \$6 a day; and it is worth all that, if it guarantees us against such losses in life, limb, and property as we have had to deplore during the last few years by unpardonable boiler explosions.—*Manufacturer and Builder*.

CLEANING SILVER-WARE.—A freshly made solution of hyposulphite of soda will often wash off at once any thin dark film which silver is apt to be covered with when exposed to the air. If the coating is thick, the silver must be left immersed for half an hour in this solution, to which some ammonia may be added. When taken out, wash in water, dry, and rub with leather and Paris white. For spoons, forks, and small plate, boil them for 20 minutes in water containing some carbonate of potash and Paris white; let them cool in the liquid, take each piece out, and rub it with soft leather. For the embossed and engraved parts use a soft brush.—*Journal of Chemistry*.

PARISIAN WOOD VARNISH.—To prepare this varnish, which has been long celebrated, Graeger dissolves 1 part of good shellac in 3 or 4 parts of alcohol, of 92 per cent. (by volume) on the water bath, and cautiously adds distilled water, until a curdy mass separates out, which is collected and pressed between linen; the liquid is filtered through paper, all the alcohol removed by distillation from the water bath, and the resin removed and dried at 100° until it ceases to lose weight; it is then dissolved in double its weight of alcohol, of at least 96 or 98 per cent., and the solution perfumed with lavender oil.

HYPOCHLOROUS ACID FOR BLEACHING.—De-mailly has invented a method for manufacturing hypochlorous acid gas for bleaching purposes. The apparatus consists of a vessel for the generation of chlorine, connected with a vertical tube, which may be heated, which is filled with balls of terra-cotta impregnated with some sulphate, as potassium, sodium, magnesium, etc. Under the influence of the heat and the presence of the chlorine, an acid sulphate forms, half the chlorine is fixed as a chloride, and the oxygen of the base unites with the other half of the chlorine, forming hypochlorous acid; at least such is the reaction as described.

ETHER GLUE.—An excellent liquid glue is made by dissolving glue in nitric acid. The ether will only dissolve a certain amount of glue, consequently the solution cannot be made too thick. The glue thus made is about the consistency of molasses, and is doubly as tenacious as that made with hot water. If a few bits of india-rubber, cut into scraps the size of buck-shot, be added, and the solution be allowed to stand a few days, being stirred frequently, it will be all the better, and will resist the dampness twice as well as glue made with water.

SCREWS IN PLASTER.—It often becomes desirable to insert screws in plaster walls without attaching them to any woodwork; but when we turn them in the plaster gives way, and our effort is vain. And yet a screw may be inserted in plaster so as to hold light pictures, etc., very firmly. The best plan is to enlarge the hole about twice the diameter of the screw, fill it with plaster-of-Paris, such as is used for fastening the tops of lamps, etc., and bed the screw in the soft plaster. When the plaster has set, the screw will be held very strongly.

An improved packing for steam-engines, pumps, etc., is composed of fibrous strands into which melted paraffine, stearine, or other lubricant, with a suitable powdered substance, is introduced during the plaiting of the strands, in order that the fibers be thoroughly impregnated. The fibrous material is hemp. The braid at or near the point where the different strands are interlocked passes through an opening in a plate, when the strands are condensed and the braid rendered uniform in thickness.

HARD PLASTER.—To a thin milk of lime or lime-water add ten or fifteen drops of liquid silicate of soda for every pint of fluid used; this is then thickened with plaster to a thick cream. Plaster thus prepared, will set in five minutes or thereabouts, according to the thickness of the cream. If too much silicate is used, the soda will effervesce on the surface, and spoil the sharpness of the impression.

BLACK BRANDING INK.—Triturate together 1 part of pine soot and 2 parts of Prussian blue with a little glycerine; then add 3 parts of gum arabic and sufficient glycerine to form a suitable paste.—*Jour. of Chem.*

COMMON cast iron, or iron in any form, may be plated with tin by cleaning with acid, dipping in zinc chloride, and then in a bath of melted tin.

THE DAIRY.

Conducted by J. H. Hogler, Manager of the Dairy Department of California Granges.
Reports of Experiments, Communications, Hints, Suggestions and all Facts that will be of interest to Dairy-men are particularly solicited for this Department.

The Artificial Manufacture of Butter.

That our practical dairymen may be fully informed in regard to the nature of counterfeit butter, as well as to afford them some facts not universally known about the making, keeping and purifying of genuine butter, we condense the following from an interesting article recently published in the *Scientific American*:—The extent of the topic necessitates its subdivision, and hence, in its consideration, we propose to treat it under the following heads: Manufacture of butter and shortening for culinary use from fats; manufacture of butter from whey; modes of purifying and improving butter; and, finally, butter-coloring compounds.

Butter from Fat.

The first patented process on record, dated Jan. 3, 1871, consists in using a mixture of refined vegetable or fixed oil, hog's lard or stearin, and tallow, heated and agitated with water by means of a current of steam. After a suitable length of time, the oil is drawn off and allowed to cool. This produces a purified grease, which may answer for some culinary purposes, but is hardly, we should imagine, palatable for table use. The same inventor describes a mode of removing the offensive taste and smell from cotton seed oil, by adding one ounce of chlorate of potash and niter to each gallon. After heating and agitation, the oil is drawn off and treated with a current of pure oxygen, the effect of which is to deodorize and oxygenate it, rendering it, according to the patentee, sweet and palatable for cooking purposes.

De la Perouse, in the same year, proposed to render fats, however rancid, neutral and pure—to produce a low priced cooking butter, which will always remain sweet. The operation consists in placing a ton at a time of raw fat (beef, pork, or mutton) with distilled water, in which is dissolved a quantity of the sesquicarbonates or bicarbonates of oxide of potassium or aluminum. A solution of chloride of sodium or potassium is then added, and the whole boiled, first actively and then moderately, for several hours, when all the fat becomes separated from its cellular tissue. After a repose of two or three hours, the melted fat is passed into refrigerators, and thence into casks for the market.

Mr. Paraf's patent, which is next in date, April 8, 1873, is that under which the oleomargarin butter is made. This process has already been fully described in the *RURAL*, but a brief review of its salient points will not be here out of place. The fresh fat, finely chopped, is mingled with its own weight of water at 120° Fah., at which temperature it is maintained for hours. The whole is then allowed to cool, when the mixture of congealed oleomargarin, stearin, and membrane is separated from the water and worked with common salt between cylinders, after which it is placed in bags and squeezed in a hydraulic press. This operation is performed in rooms at a temperature of 60° Fah., which is the melting point of oleomargarin, so that, by this means and by the mechanical contrivances, the latter is separated. It is finally reworked with salt, and churned into butter in the ordinary manner, with a proportion of buttermilk.

A process which seems different from any yet described, and which is claimed to consist of artificially performing the natural functions of the lacteal system of the cow, when it absorbs its fat in order to transform the same into butter, consists in neutralizing the ferments; and to this end the fat, as soon as the animal is killed, if possible, is immersed in a solution of sea salt and sulphite of soda. Crushing under millstones follows, and then artificial digestion, at a temperature of 103° Fah. This is accomplished by a compound of half the stomach of a pig and biphosphate of lime. When the fat is perfectly liquid, showing no lumps, more sea salt is added, and it is drawn off into water, at 86° Fah., contained in wooden tubs. Here most of the stearin is deposited in the form of teats in the middle of the liquid, which then goes to a hydro-extractor, or centrifugal machine, which effects the

complete separation of oleomargarin and stearin. The former, says the inventor, is an excellent butter for kitchen use, but he improves it as follows: Cream, bicarbonate of soda, and the udders of a cow, chopped, are macerated and passed through a fine sieve. This mixture, with coloring matter, is added to the margarin, which becomes thick, tastes like cream, and, when cold, is passed through large cylinders, which give it a homogeneous mass, and complete the production. When the butter is to be kept for long periods, water is substituted for cream in macerating the udder.

Butter from Whey

Is made by three processes. In one, after cheese making, the whey is drawn off into a kettle, and to it is added dairy salt and a kind of acid made of old and sour whey. This is heated to about the boiling point, when the cream rises, is skimmed off, and, after cooling, is churned in the ordinary manner. The amount of whey given off by 450 pounds of milk will, it is stated, with suitable proportion of the ingredients above mentioned, give three pounds of butter.

The first operation of another process is to pass the whey into a cooling chamber which is surrounded with cold water. A solution of saltpeter, borax, and saleratus is added, and the whole left in the cooler for twenty-two hours, at the end of which time the cream, having risen to the surface, may remove and made into butter.

In the third process the whey is allowed to stand 24 hours; and to the cream, which is then skimmed off, saltpeter is added. The butter obtained by churning is worked with salt and sugar.

There is another plan for butter making which though not properly coming within the above sub-heading, nevertheless is interesting from the novelty of the means employed. It is the invention of Mr. Mot, of Washington. We give an illustration, on first page, this issue, which fully shows the construction of the apparatus. There are two tubes, the inner one, A, of which may be revolved by suitable means within the outer. Within the tub, A, the sides of which are perforated, are placed, first, a quantity of pumice stone, baked clay, or similar porous substance, B, the cream, C, tied up in small bags, and, finally, more pumice. The effect of the latter is, after a few hours, to separate the buttermilk from the cream, leaving pure butter in the bags. Tub A is then revolved, and the liquid is projected through the perforations into the outer vessel, and, lastly, water is added for washing purposes, which is got rid of in a similar manner.

Refining and Purifying.

Among the many processes for this purpose, one consists in adding to one pint of milk, fresh from the cow, the yolks of two eggs and a pound of poor butter; this is churned, salted, and worked in the usual way, producing, it is stated, two pounds of fresh butter. A patentee proposes a somewhat similar operation, churning together 1 gallon of sweet milk, 1 ounce of loaf sugar, 20 grains of nitrate of potash, 1 ounce of liquid rennet and 10 grains of annatto, with 8 pounds of butter. Another suggests that butter, after churning, will be less likely to turn rancid if heated to a semi-liquid condition, and then washed, first with warm and afterwards with cold water, so as to remove the buttermilk and other impurities. Butter already rancid, it is claimed, in another specification, may be restored and purified by adding two ounces of pulverized alum to every five pounds of butter, the latter being melted. The butter, while still liquid, is passed through a fine sieve into clear cold water, from which it is removed and worked with dairy salt, saltpeter, and sugar. Still another inventor offers the following mode: A quantity of butter in a melted condition, is put in a reservoir, its temperature being kept between 100° and 120° Fah.; there is a congealer, which is filled with milk or buttermilk, and through the hollow sides of which a current of cold water is maintained, so that the temperature of the milk is retained between 55° and 65° Fah. Pressure is next applied to the surface of the melted butter in the reservoir pipe, and a valve being opened, forces the butter down through the tube, and out of the perforated nozzle at its end into the cold milk. The congealed particles, after being skimmed, are thrown into a filter, through which the milk escapes and runs down the inclined trough, back into the congealer. The butter is subsequently worked in the ordinary way.

Different from any of the above plans, and apparently much simpler, is a process

consisting simply in removing the hoops from the firkin, containing the spoiled butter, placing it in a bag, and burying the whole in charcoal, contained in a barrel or other receptacle. Two

Compounds For Coloring Butter

Have been made the subjects of patents. One consists in adding annatto to pure oil obtained by melting the butter. The annatto is mixed mechanically with the liquid, and produces a compound of a reddish golden color, 75 pounds of oil to 5 pounds of annatto being the proportions. One or two pounds of the coloring matter suffice for 100 pounds of butter. Another coloring compound is composed of annatto, 5 ounces; curcuma, pulverized, 6, ounces; saffron, 1 ounce; lard oil, 1 pint, and butter, 5 pounds. It is said that the amount of coloring thus obtained is sufficient for 5,000 pounds of butter.

PROPOSED TUNNEL BETWEEN SCOTLAND AND IRELAND.—For many years there have been projects more or less before the public for uniting Scotland and Ireland by means of a tunnel; and the scheme has recently been again put forward; this time, however, with some reasonable probability of its being carried out. A single line tunnel, 15 feet wide at base, 25 feet wide at the maximum, and 21 feet high, the side walls of which would vary from 4 to 7 feet in thickness, is estimated by the present projectors to cost nearly \$23,000,000, with the approaches. The length of the tunnel would be about twelve miles, and it would extend from a point on the north shore of Ireland, near Belfast, under the Irish sea, to the extremity of the peninsula opposite to Scotland.—Exchange.

RED AND WHITE MUSCLES.—On application of the electric current, the white muscles are found to contract almost instantly, and respond even to rapid and continuous shocks. The red muscles, however, require a certain time to feel the excitement, and when quick, interrupted discharges of electricity are administered, they assume permanent contraction. Hence it is concluded that the latter are involuntary, and of the nature of the muscles of the heart, while the former are controlled by the will.

DAIRY PRODUCE
DEPARTMENT
OF THE
CALIFORNIA STATE GRANGE,
P. OF H.,
414 & 416 Sansome St., Cor. Commercial,
SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.
This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.
In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. j31-tf

ATTENTION, DAIRYMEN!

RALPH'S PATENT
ONEIDA CHEESE VATS,
TO HOLD FROM
One Hundred to Five Thousand Gallons.
CHEESE HOOPS,
FROM SMALLEST TO LARGEST SIZE.
PRESSED MILK-PANS,
PIECE MILK-PANS,
STRAINER PAILS,
CREAM PAILS,
MILK PAILS,
ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,
614, 616 and 618 Battery St.,
SAN FRANCISCO.

H. H. H.
HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.
WILLIAMS & MOORE, Prop'rs,
Stockton, Cal.
3v7-3m

Anglo-Californian Bank.
LIMITED.
Successors to J. Seligman & Co.
London Office.....No. 3 Angel Court.
San Francisco Office.....No. 412 California street.
Authorized Capital Stock, \$6,000,000,
Subscribed, \$3,000,000. Paid in, \$1,500,000.
Remainder subject to call.
DIRECTORS IN LONDON.—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Scholfield, Isaac Seligman, Julius Sington.
MANAGERS:
R. G. SNEATH and IGNATZ STEINHART,
SAN FRANCISCO.
The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v7f-cowbp

THE BEST
SEWING MACHINE!

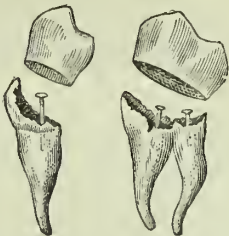
THE NEW IMPROVED
FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily operated Sewing Machine in the market.
Always in order and ready for work.
In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,
NO. 19 NEW MONTGOMERY STREET,
25v6-4m Grand Hotel Building, S. F.

Don't Have Your Teeth Extracted.



DR. BEERS' PATENT ENAMELED GOLD CROWNS, for Covering Teeth broken down by Decay, have been thoroughly tested, and when properly applied will surely restore them again to usefulness and beauty. Call and see them. Office, 230 Kearny street. 6v7-cow-bp-3m

IMPORTANT TO FARMERS!

X Line to Liverpool.
DIRECT.
The A 1 Iron Ship

Is intended to sail with dispatch. To be followed by other vessels.
Freight taken in lots to suit shippers.

Apply to **E. E. MORGAN'S SONS,**
320 California Street,
San Francisco.

McLAREN, BRYDGES & CO.,
DEALERS, MANUFACTURERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.
Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.
—ALSO—
Real Estate and General Business Agency.
NO. 605 CLAY STREET, SAN FRANCISCO, CAL.
ja10-bp-3m

AVERILL'S
CHEMICAL PAINT
Of any desired Shade or Color,
Mixed ready for application, and sold by the gallon

It is Cheaper, Handsomer, more Durable and Elastic than the best of any other Paint.
Office, corner Fourth and Townsend streets, San Francisco. Send for sample card and price list.
15v23-3meowbp **HEALY & JEWELL, Agents.**

OUR SPECIALTY: "BEYOND THE MISSISSIPPI."
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required: Nerve and Honest Industry.
THE FAR WEST,
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFUTT'S WESTERN WORLD,
for \$1.60 a year. With \$10 Premium Chromo,
"AMERICAN PROGRESS,"
free to each subscriber.
Two sample Worlds sent for 10 cents. Agents wanted.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

T. R. Church, 223 Montgomery Street,
(Russ House Block), San Francisco. Wholesale and retail dealer in Mens', Youths' and Boys' Fine Custom-made Clothing and Furnishing Goods: also Trunks, Valises, Bags, etc.

Brittan, Holbrook & Co., Importers of
Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission
St., S. F. C. H. Gruenhagen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San
Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of
Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,
For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; O. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

LOOK!
Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, at \$3.00 per dozen; White Leghorns, Game Bantams, Creve Coeurs, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, (first premium at Buffalo, 1873), Silver Spangled Barded Poland, Golden Barded Poland, Black Poland, White Crests, Brown Leghorns, White Sultans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland,
At \$3.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

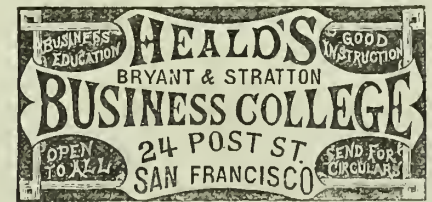
ALBERT E. BURBANK,
43 & 44 California Market.
Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C. O. D. 6v7-tf

SAN JOSE INSTITUTE

— AND —
Business College.

A Day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department
Is under the supervision of James Vinsonholler, who for many years was at the head of Business Colleges of San Francisco.
The Twenty-fourth Session commences January 19th, 1874.
For circulars address
3v7-2m **JAMES VINSONHALLER.**



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars
E. P. HEALD,
2v6-tf President Business College, San Francisco.

SANTA BARBARA COLLEGE,
SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to
22v6-1v **ELWOOD COOPER,**
President Board of Directors.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,
Manufacturers of and Dealers in
Monuments, Headstones, Tombs,
MANTEL PIECES, ETC.,
421 Pine street, between Montgomery and Kearny, SAN FRANCISCO.
21v2-1v

PURCHASERS please say advertised in Pacific Rural Press.

LANDS & HOMES FOR SALE

RANCHOS
FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho.

Apply to
ALFRED ROBINSON, Trustee.
542 MARKET STREET,
N. E. corner of Montgomery.

VALUABLE FARM FOR SALE.

The well known farm of Tower & Bisbee, Salt Spring Valley, Calaveras County, is offered for sale. The farm drew the premium as second best grain farm at the San Joaquin Valley Fair, and the premium as the best improved farm. The diplomas they now have. The farm contains 800 acres of land, with perfect title, and four hundred with title secured. Mr. Bisbee, one of the proprietors, wishes to go East to live with his aged parents, and rather than sell an undivided half, they offer the whole ranch for sale at a bargain, including team, wagons and farming tools, of which there is a large supply and of the most improved kinds. Also fifty head of cattle, besides other stock necessary on a farm. The farm is eight miles from Milton on the stage road to Murphy's and Big Trees, and is a desirable location to keep public house, and now has a good custom. Last year, as dry as the season was, there were over 300 tons of hay raised on the farm, with good market at the door for everything raised on the farm. The land is all enclosed with good and substantial fences and suitably divided. Four large and substantial barns, that will hold 600 tons of hay, large store-house for tools, house for hired men, granary and blacksmith shop. Also large two-story house, hard finished throughout and built in the most substantial manner, with a good garden attached and a never-failing stream of water running in the house and yard. The farm contains about 400 acres of land suitable for alfalfa or any other kind of deep-rooted grass. The farm to be appreciated must be seen, and will be sold at a good bargain to any one wishing to purchase a valuable and perfect home, where the climate is as good as in any other part of the State. Any one wishing to purchase the property can correspond with the proprietors by directing to "Milton, Calaveras County, California, to TOWER & BISBEE." feb14-3t

GRAIN & STOCK FARM FOR SALE.

A FINE FARM OF 140 ACRES;
Good Grain Land; all plowed and ready for seeding and promising fine crops, and 360 acres of good tide land adjoining; excellent pasturage; situated in Susan Valley, within one mile and a half of Indian Wells, San Joaquin County, and one mile of a railroad station. Has a good house, barn, corals and fences; also, work-horses and a full assortment of agricultural implements, seed, feed, etc. Price moderate and terms easy. Apply to BERRY & CAMP, 418 Montgomery street, Real Estate Agents. feb14-4w

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address
P. H. SUMNER,
311 Montgomery street, San Francisco,
Or Pacific Rural Press Office.

FOR SALE OR TRADE,

680 acres fine farming or grazing land, with frontage of three-quarters of a mile, on a fine stream of water. Located in Shasta valley, Siskiyou county, within three miles of a large town. Commanding a back range of from 50,000 to 60,000 acres, well adapted to sheep or cattle. Will sell for cash, or trade for city property, or a small improved farm in any of the bay counties.
Apply to **McLAREN, JONES & CO.,**
jan31-1m 605 Clay Street, Room 10, S. F.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,
On Gift Map 4,
Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. hptf

Encaustic & Geometrical Tiles.

BEAUTIFUL DESIGNS.
Reproduction of Ancient Work.
IMPERISHABLE PAVEMENTS

— FOR —
CHURCHES, INSTITUTIONS, HALLS,
SCHOOLS, CONSERVATORIES, CORRIDORS,
CLUBS, VESTIBULES, DAIRIES, ETC.
Suitable for All Climates.

Manufactured of the celebrated Jackfold and Broseley Clays, and arranged in the most beautiful patterns.
GLAZED HEARTH TILES. WALL AND BATH TILES.

Designs and Estimates on application to
CRAVEN, DUNNILL & CO., (Limited),
JACKFIELD WORKS, NEAR IRONBRIDGE, SHROPSHIRE, ENGLAND. ja17-6t

AGENTS WANTED FOR
MONOPOLIES AND THE PEOPLE.

Being a full and authentic account of the struggles of the American Farmers against the extortion of the Railroad Companies, with a history of the rise and progress of the Order of Patrons of Husbandry; its objects and prospects. It sells at sight. Send for specimen pages and terms to Agents, and see why it sells faster than any other book. Address
A. L. BANCROFT & CO., 721 Market St., S. F.
jan31-1m

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.
PIERCE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F.
de27-tf

AGRICULTURAL NOTES.

AMADOR.

FOOT-HILL FARMING.—*Tidings*, Feb. 21: John Campbell owns a ranch of 160 acres near Jackson, Amador county, on eight acres of which there are 5,000 vines and 200 fruit trees, all in good bearing condition. He manufactures from the vines annually 2,400 gallons of wine, worth \$1,200; and the trees yield 15 tons of fruit, worth \$600. In addition to the wine, he makes 600 pounds of raisins, worth \$120. Thus the aggregate for the products of the eight acres is \$1,920, or \$240 per acre. Mr. Campbell claims that, if properly irrigated, the yield would be 20 per cent. more. In addition, he raised on 30 acres of his ranch hay worth \$1,125; making the total yield of 33 acres, \$3,045. And still it is claimed by some that our foot-hill and mountain land is comparatively worthless.

CLAVERAS.

OUR USUAL VARIETY.—*Citizen*, Feb. 21: During the past week we have been favored with the usual "medley" of weather; snow storm and sun-shine have alternated, but at present the skies are clear, the weather delightful, and a prospect of a continuance as such—until it rains.

COLUSA.

BUTTE CITY ITEMS.—*Cor. Amador Ledger*, Feb. 21: The farmers in the foot-hills—or at least those in this portion of them—have not experienced the serious obstacle of saturated soil to the extent of precluding the cultivation and timely seeding of their lands. Although we have had the present season considerable more continuously wet weather than we are accustomed to have from the middle of December to the present time, the hay and grain fields of our ranches show that with all the inclement weather, their entire fields have been reasonably planted, and their crops are coming forward with seasonable rapidity, considering the long continued cold, ungenial weather. The loamy and warm nature of the soil of our lands which do not retain moisture like the valley lands and their susceptible cultivation soon after heavy rains, are great advantages in consequence.

The amount of land seeded the present year is in striking contrast with any former season. Since the fallowed grounds were planted in the fall our farmers have kept themselves busy in clearing, cultivating and seeding all the lands that it was possible for them to get in condition for the plow. The apparently neglected fields and portions of fields of years past, with plants left here and there uncultivated, can now be seen to be fully planted, and will yield a harvest that will be an ample reward for the good taste and enterprise manifested in the thorough work of cultivation.

EL DORADO.

Mountain Democrat, Feb. 21: Present indications are not favorable to an immediate protracted drouth, though on Sunday last we had one of the loveliest days imaginable.

AGRICULTURAL SOCIETY.—The annual meeting of the El Dorado County Agricultural Society was held, in accordance with notice given, at Coloma on Saturday last, and a full complement of officers chosen. Twenty-two new members were added to the list.

FRESNO.

SEEDING.—*Tidings*, Feb. 21: The farmers throughout Fresno county are plowing and planting almost every available inch of land, and getting ready for a large crop. The no-fence law having passed, farmers feel that their crops will be protected, and hence there will be more grain grown in Fresno county this year than ever before.

KERN.

CROP PROSPECTS.—*Courier*, Feb. 21: The rains in this county, the present season, have been more abundant than ever before in the memory of the oldest inhabitant. The earth is thoroughly saturated with moisture and the grass will be so abundant that such of the cattle men as imagine they would be inconvenienced by the No Fence law will have little difficulty in herding their stock and finding time for ulterior arrangements. Crops of course will be abundant, but a much smaller area of grain has been sown than would have been, had entire confidence prevailed as to the passage of the No Fence law. The present year promises to be one of great prosperity for this county. The wheat crop will be double that of any previous year.

LAKE.

THE WEATHER.—*Bee*, Feb. 19th: Our quotations are about the same as at last advices. On last Sunday there was a fine lot of sunshine in the market from first hands, which went off at wholesale rates. On Tuesday, the supply being exhausted, a miserable lot of rain flooded the market. It was taken under protest. On yesterday winds were "brisk," with an "upward tendency." A fair lot of sunshine again this morning.

MARIN.

Journal, Feb. 19th: Mr. Tompkins has cucumbers from his own garden, and has had for some days. They are grown in the open air, and we offer them for early.

There is a blue gum in the Magnolia nursery nineteen inches in circumference and about seventeen feet high, that twenty months ago was a seed in the package.

MONTEREY.

Democrat, Feb. 21st: The crops in our valley are about in now. Furthermore, we hear

good reports from every quarter of the county touching farming operations; grass is well up and stock are doing finely. *Per contra*, in the Sacramento valley the past six weeks have been very inclement, seeding is much behind, and heavy losses among stock are reported.

TALL OATS.—*Enterprise*, Feb. 14: Mr. McConnell left on our table yesterday, a bunch of green oat straw, grown in the garden of J. P. Crow in town, which measured upwards of three feet in length each. Pretty good for a February growth.

NAPA.

FROM POPE VALLEY.—*Register*, Feb. 21: By Messrs. H. A. Whaley and H. C. Deering, of Pope valley, who passed through town this morning, we learn that matters in that section are looking about as usual; the seeding, however, being much delayed by the continued rain. It is estimated that not half the grain is yet in.

FINE PROSPECT.—Clark Ralston was in town on Tuesday; he brings good news from the San Joaquin, where he has in some 800 acres of grain, which is about eight inches high.

NEVADA.

NORTH WIND.—*Grass Valley Union*, February 21st: Yesterday the wind came from the north, and it dried up everything it reached. The wind was a good strong one, and went about 25 miles an hour. The farmers below who wanted a little more dry will, we hope, be satisfied, with the weather's performance of yesterday. The thermometer was about 52 degrees above zero all day yesterday; the barometer indicates fair weather.

PLACER.

SHERIDAN ITEMS.—*Cor. Herald*, February 21: To judge from the prospect in western Placer, the grain crops in central and northern California will fall a long way below the average. After the rains set in last fall, they fell so continuously that many farmers could not sow at all, and in many cases where they were able to sow, a large portion of the seed has been "drowned out." Many of our foot-hill farmers have not sown at all; and of those who have few expect more than from one-fourth to three-fourths of a crop. Prospects are very poor, unless there is a favorable season for resowing.

PLUMAS.

LOSING STOCK.—*National*, Feb. 14: From Mr. Richard Bell, who came from Eagle Lake, Lassen county, this week, we learn that the stock men are in danger of meeting with very heavy losses before spring opens. He reports that Mr. Stiles, formerly of Indian Valley, has already lost about one hundred head of stock from his band, and that other cattle owners are suffering badly. The snow is deeper in the sage-brush country this winter than ever before known, completely covering the stock ranges which have always been depended upon as sure to furnish a living for cattle and horses. If February and March prove to be stormy months, the stock men who have no feed in reserve will be very seriously damaged.

SAN LUIS OBISPO.

THE WEATHER.—*Tribune*, Feb. 21: Till Wednesday last we have had for the preceding fortnight such a continuous fall of moisture as must gladden the hearts of all tillers of the soil, and more especially bless those who remember with dismay the dreful effects produced by the drought of '64. All the rain that has thus far showered down on us this year, has fallen in such a fashion as to have been of immeasurable benefit to the usually parched earth.

GUADALUPE ITEMS.—The yield of small grain will be larger on the Guadalupe, in proportion to the number of acres sown, than on any other ranch in the State. It will only require one thousand men to harvest that crop, and San Francisco may prepare to furnish her quota of laborers at the proper time.

SANTA CLARA.

PROSPECTS.—*Signal*, Feb. 11th: We were visited on Tuesday night and Thursday morning with delightful showers. They were much needed and will insure us an abundant harvest of wheat and barley, which never looked more promising at this season of the year than now.

SHASTA.

FALL RIVER VALLEY.—*Cor. Courier*, Feb. 14: The weather in our valley this winter has been the most severe of any that has been experienced for many years. The earth has not been entirely clear of her mantle of snow, since the 1st of December, and now the snow is six or eight inches deep and still falling, though it is not quite so cold as it has been the past few days.

It is my opinion that there will be much stock lost for feed, as the weather is so unusual, and so unexpected that many persons are not prepared to feed, and the feed is not in the country and cannot be had at any price, consequently large numbers of stock will have to perish if the weather continues. Already I learn that several persons have lost a considerable number of sheep, and cattle. Mr. Estep is losing a good many sheep, and Mr. Cripe, is also losing his sheep very fast.

Mr. Ames has lost a heavy per cent. of his cattle, and will likely lose a great many more. Our neighbors, of Big Valley, are faring even worse, as I understand that some of the largest sheep owners have already lost one-half of their bands.

SONOMA.

FROM WINDSOR.—*Democrat*, Feb. 21: The prospect of farmers is gloomy at this time. Continual rains have retarded plowing and

sowing. With favorable weather from now on, it will be the first of March before seeding can commence to any extent. The consequence will be, the breadth of land sowed will be small and light crops to be expected.

ROTATION.—Farmers are generally turning their attention to the cultivation of Indian corn by way of rotation with wheat, instead of summer-fallowing their wheat lands. Land in this vicinity on which the yield had decreased from forty to eight bushels to the acre by successive wheat crops, has been restored by corn culture to nearly its original productiveness. It is preferred to summer-fallow. Wheat land in the course of a few years becomes foul with weeds. The cultivation requisite in a corn crop in a single season destroys them; a succeeding wheat crop is free of weeds, and is otherwise improved in quality and quantity.

SUTTER.

THE WEATHER.—*Banner*, Feb. 21: Notwithstanding the favorable indications of "groundhog" day, the weather since then has not shown much improvement, and we are inclined to regard his hogship a failure, as regards California weather, at least. Most of the wheat sown on low ground has been drowned out. Many farmers have not yet had a chance to get all their summer fallow in, and unless we have clear weather very soon, a large amount of land will remain unseeded.

MORE BARLEY FOR THE EAST.—*Marcus Bros.* have shipped this week, 20 more car-loads of barley to St. Louis, making 45 cars, or about 500 tons, for the past two weeks, and considerable more has gone from this coast overland, and by ocean steamers to New York.

TULARE.

CROP PROSPECTS.—*Visalia Delta*, Feb. 19: The grain fields of Tulare are everywhere looking fine. We can hardly fail of having the largest crop ever grown in these parts. The rains have ceased, and "Old Sol" now shines forth in all his glory, making the grass to grow rapidly, and causing the farmers, stock men and mankind generally to rejoice "munchly."

TULE RIVER.—*Cor. Times*, Feb. 21: Everything in this part of the county is in a flourishing condition—grass growing, cattle improving, and stock of all kinds doing excellent for this season of the year. Crops are getting such an excellent start that they are almost sure to yield well. It has rained abundantly, and the ground is thoroughly wet. Tule river being bank full, and the snow very low on the mountains, all that is required now, for a flood, is a warm rain.

TRINITY.

STOCK DYING.—*Journal*, Feb. 21: The present winter has been the most severe one on stock that has been known for many years. The constant succession of cold rains which continued day and night for weeks at a time kept the animals chilled through, and the feed is not yet high enough to enable them to gain strength to resist the influence of the cold storms. We fear that much of the stock driven down from this county, for winter pasturage, will be lost.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Feb. 24, 1874.

FOR WEEK ENDING Feb. 10, 1874.

BOX FOR TRANSPORTING EGGS.—Hiram A. Knight, San Bruno, Cal.

DUMPING CARS.—Carl C. P. Meyer, Yankton, Dakota.

HORSE SHOE FOR MARSHY GROUND.—Samuel Milbury and George A. King, Oakland, Cal.

PERMUTATION LOCK.—Joseph G. O'Neil, Grass Valley, Cal.

TRADE-MARKS.

MALT LIQUORS.—Merrifield and Rosener.

LINIMENT.—Frank F. Porter, Soquel, Cal.

"The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

[A Card.]

Live Stock Exchange.

EDITORS PRESS:—Allow the subscribers, through your useful and meritorious journal, to tender to the farmers and stockraisers of California, their most sincere and warmest thanks for the generous and unprecedented manner in which they have patronized us—although we are hardly more than rightly established in our business.

We repeat—we heartily appreciate the favors shown and shall not fail to reciprocate the same, indicated by our endeavoring, by all just means in our power, to nourish, cherish and foster the interests of the farmers and stockraisers of this State, and to let them know and feel that we shall never stain our unsullied names by being unworthy the confidence reposed in us.

W. A. DAWSON,

A. T. BANCROFT,

Cattle Dealers, United States Cattle Market, corner of 5th and Bryant streets, San Francisco, Cal.] Monday, Feb. 23, 1874.

THE HORSE DISEASE.—Judging from reports from various parts of the country, we are to have more of the horse disease. The epizootic has made its appearance among the horses of Baker county, Oregon, and a number of fine animals have already died. The disease among the cattle on Snake river is also reported. It has also reappeared at several points in Montana, and some of the stage lines have been compelled to stop. If it comes among us here at harvest time it will be "rough" on the farmers.

CITIZENS of Tehama county have resolved to report and prosecute every violation of the game laws, which resolution should be adhered to by respectable people all over the State.

Pacific Coast Agency for Patent Rights.

WM. SMALL & CO.,

331 Kearny Street, San Francisco, Cal.

We offer for sale the right to manufacture and sell in the Pacific States and Territories the following new and valuable inventions:

Dahl's Improved Plow.
Pooley's Miter Machine.
Muntzberger's Barrel Washer.
Kaestner's Wire Coal Scoop.
House's Wire Fence Stretcher.
Ramsdell's Adjustable Plasterers' Float Handle.
Weiss' Improved Egg Carrier.
Buecker's Seat-Spring for Vehicles.
Campbell's Ice Cream Freezer.
Carlson's Clothes Line Reel.
Davis' Hand Corn Planter.
Kiviere's Improved Plow.
Mendenhall's Spark Extinguisher and Rotary Engine.
Philo Marsh's Defecated (lubricating) Oil.
Macks' Garden Cultivator and Lawn Mower.
Kiblinger's Improved Eaves Trough.

Call and examine samples and specifications. No unreasonable terms demanded.

WM. SMALL & CO.,

331 Kearny street, up stairs.

KA. K. Dahls' Patent Cast Steel Plow.—We have been appointed agents for the right of the above valuable patent, to which we would respectfully call the attention of manufacturers. Strong and durable, easily repaired, light draught, warranted to wear in any soil.
WM. SMALL & CO., 331 Kearny St.

Pooley's Improved Index Miter Machine.—This machine is calculated to cut miter by index of any size desired. Can be got up at low cost. The right for this coast for sale by WM. SMALL & CO., 331 Kearny St.

House's Patent Stretcher for Wire Fences.—Invaluable for the construction and adjustment of wire fencing. Gives uniform and consistent tightness, prevents breaking and pulling over of fence posts. For further particulars apply to Pacific Coast Agency for Patent Rights.
WM. SMALL & CO., 331 Kearny St.

Wood's Spiral Spring False Bottom for Water Coolers.—A sample of this important improvement for Refrigerators and Water Coolers can be seen as below. Efforts a saving of thirty-five per cent. in ice and a great increase in the durability of the cooler. Agents for right for Pacific Coast.
WM. SMALL & CO., 331 Kearny St.

Muntzberger's Patent Barrel Washer.—This simple but effective machine will clean ten or twenty barrels at a time, by hand or other power, at a great saving of labor. The right for Pacific States and Territories on reasonable terms. For sale by
WM. SMALL & CO., 331 Kearny St.

Kaestner's Wire Coal Scoop and Sifter.—The right of this handy article for housekeepers' use, for sale. A large size for furnace use can be manufactured. For right to manufacture and sell on this coast, apply to
WM. SMALL & CO., 331 Kearny St.

Ramsdell's Adjustable Handle for Plasterers' Float.—Manufacturers of pneumatic implements would do well to examine this improvement, which can be made to supersede all others. For right, apply to
WM. SMALL & CO., 331 Kearny St.

Tull & Weston's Improved Tub Washing Machine.—The latest invention in this valuable article of domestic machinery. Can be used in any ordinary sized wash tub. The right for the Pacific Coast for sale by
WM. SMALL & CO., 331 Kearny St.

SEED FOR GRANGES!

I offer Seed to my fellow Grazers at a liberal discount. Special rates sent to all Granges that apply through their Secretaries.

JAMES H. GREGORY,

123-21

Marblehead, Mass.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock: one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure White-faced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California.

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.

766-11 16p2

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GESE,

59 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS, COCHINS, BANTAMS, ETC.,

Black Chukras and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best.

Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address:

M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.

3v7-3m-16p-sp

LEY & RULOFSON'S GALLERY, with an Elevator
429 Montgomery street, San Francisco. 247-6m

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of
NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A
CHOICE COLLECTION OFFLOWERING BULBS AND SEEDS,
(Native and foreign.)Our catalogue is now ready, and is the most extensive
ever published on this Coast; we will forward it free to
all applicants.Nurseries on Lombard and Chestnut streets, near
Larkin street, at the terminus of the new Olay street
railroad. Floral and seed depot, No. 27 Post street, San
Francisco.

Letters by Mail or express will reach us.

ja16 MILLER & SIEVERS.

TREES, TREES, TREES

—AND—

PLANTS.

In any quantity from one tree to 100,000, both whole-
sale and retail, at lowest market rates. Fruits guaran-
teed true to name. I have many new varieties of fruit
in my collection which are far superior to the old stand-
ard varieties. Among them is the celebrated Beatrice
Peach, guaranteed true; this Peach is 20 days earlier
than the Hale's Early, and in every respect a fine peach.My stock of Shade Trees and Grape Vines is the
largest in the State, and a fine assortment. Have also
small fruits, hedge plants and hop roots.Send stamp for printed Catalogue, Price List and
directions for planting and training, or come and see
the stock, at the CAPITAL NURSERIES. Office and
tree depot U street, between 15th and 16th streets, Sacra-
mento, Cal.

ROBT. WILLIAMSON, Prop'r.

Special rates to Patrons of Husbandry. 24v6-3m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway,
Oakland, Cal.

GREEN HOUSE PLANTS,

EVERGREEN TREES,

SHRUBS, ROSES, ETC.

100,000 MONTEREY

CYPRESS TREES.

A superior stock of large sized AUSTRALIAN GUM
TREES, including—EUCALYPTUS GLOBULUS (Blue
Gum)—extra fine street and shade trees. EUCALYPTUS
VIMENALIS—both sorts very popular. ACACIAS in
variety. Monterey Pines, Lawson's Cypress, etc., etc.
Orders attended to. Address:

M. KING, Nurseryman,

23v6-3m OAKLAND, CAL.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of
trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for
beauty, and very prolific. The Chestnuts are delicate
in flavor and very large, and an almost endless variety
of rare, useful and ornamental trees.
Send for priced Catalogue. 24v6-6m

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph
Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental
Trees, Shrubs, Roses, GREEN HOUSE
PLANTS, ETC.We are constantly adding to our varied stock the NEW-
EST AND RAREST PLANTS on this Coast, and invite
all who are laying out grounds and planting to give us
a call.

Landscape Gardening attended to. ja24f

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Pinley Peach,
Georgia Freestone Seedling, the first offered in the State.
Its flavor being richer and superior to the finest of the old
varieties; it is the best for canning and shipping, and brings
double the price of any other Peach in market. Orders
promptly filled fresh from the Nursery.

H. A. & D. DOMINGOS,

P. O. Box 157, Sacramento, Cal.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and
Plants, and permanently located our Greenhouses and
Tree Depot corner Washington and Liberty streets, we
are prepared to furnish Fruit and Shade Trees, Small
Fruits, Evergreen Trees and Shrubs, Flowering Shrubs,
Greenhouse and Bedding Plants, etc. Send for De-
scriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER,

Petaluma, Sonoma Co., Cal.

Brooklyn Nursery,

13th AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cy-
press, (\$3 to \$15 per hundred), 10,000 Australian Blue Gum,
and about 3,000 assorted Roses. Also a choice selection of
the various kinds of ornamental shrubbery, etc. Special
attention given to the laying out of landscape Gardens.
Orders received at the Nursery, or at the office of J. P.
WEENEY & CO., Seedsmen, Nos. 409 and 411 Davis St., S. F.
24v6-3m JOHN CAREY, Proprietor.

BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.

HAS FOR SALE, WHOLESALERS AND RETAIL,
an immense stock of Evergreen Trees, Ornamental
Shrubs and Flowering Plants, suitable for the conserva-
tory, parlor window, flower garden, lawn, vases, rock-
eries, hanging baskets, ferneries, etc. Comprising in
part, Camellias, Magnolias, Daphnes, Aracarias, Yuccas,
Variegated Agaves, Roses, Fuchsias, Carnations, Eucal-
yptus Acacias, Peppers, Cypress, Pines, Junipers,
Cedar of Lebanon, etc. New and rare plants a special-
ty. Dealers and nurserymen supplied at low rates.
Hyacinths, Tube Roses, Tulips and other Bulbs. Choice
Flower Seed, Garden and Lawn Seed, fresh and genuine.
2v7-3m

ALMOND TREES.

40,000 Brier's Languedoc Almond Trees,

One year old from the bud—CHEAP FOR CASH.

Liberal deductions to the trade and to those planting
large numbers. The tree grows rapidly, bears young
and constantly, blooms late, is hardy. The almond is
large and sweet, with a soft shell.Send your orders for these and all kinds of fruit and
nut trees, to

W. W. BRIER,

febl4-3t Alvarado, Alameda Co., Cal.

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN
Trees, Shrubs and Plants, with all other general pro-
ductions of the Nursery and Garden. First-class two
year old Apple Trees at \$20 per 100, and all other Trees
and Plants at corresponding low rates. Fine Evergreens
grown in boxes and pots, warranted in any locality.
All Trees and Plants warranted true to name. Cash or
good reference must accompany all orders. Lombardy
Poplars, 1 1/2 to 2 inch trees, 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists,

K street, between 8th and 9th, SACRAMENTO, CAL.
4v7-3m

FOR SALE!

Valuable Fruit Orchard and Garden

Of ninety-two acres choice land, one mile from Rail-
road Depot; 10,000 fruit trees, grafted, best sorts, in
full bearing; five acres vineyard, half foreign table;
two acres best blackberries.Three Artesian Wells supply an abundance of water.
Seven-room Dwelling, hard-finished; barns, sheds,
vinegar house, fruit-drying house, steam engine, boiler,
saw for hog making, and every requisite for raising,
curing and shipping fruit on an extensive scale.This property will be sold as a whole, or in two sub-
divisions of forty-six acres each, on easy terms. Title
perfect.

For particulars, apply to

YOUNG & PAXSON,

No. 424 Montgomery St.,

San Francisco, Cal.

RAMIE PLANTS AND HOP ROOTS.

100,000 Outtings (Roots and Layers),

For sale in quantities to suit, at prices that will just-
ify parties in planting them out. Send for Circular and
Price List. Apply, or send orders to,

P. H. BOGGS, Emmaton, Sacramento Co.

Or to R. WILLIAMSON, Capital Nursery, Sacramento,
Cal. febl4-1m

FOR SALE,

To Close out for the Season.

PAPER SHELL AND LANGUEDOC Almond
Trees, Cherry and Peach Trees, Three-Year Old
Asparagus Roots (Giant Variety). Samples of
Almonds to be seen at store of Drake & Emerson, 528
Sansome street, San Francisco.

SIMPSON THOMPSON,

Snscol, Nepa Co., Cal.

THE FINEST COLLECTION OF PINES,

Cypress, Australian Eucalyptus,

EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices.

Send for priced Catalogue to

8v7-3m A. D. PRYAL, Oakland, Cal.

THOS. A. GAREY'S

Semi-Tropical Nurseries,

San Pedro street, two miles below the Court House,

LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit
Trees in Southern California,

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

AUSTRALIAN

GUM TREES.

250,000 on hand for this season, at rates to encourage
forest culture. Also, 50,000 Cypress, in shipping order.
Nursery on 12th street, one block north of Tubbs'
Hotel, East Oakland, Cal. or address, Box 80, Oak-
land.

BAILEY & CO., Proprietors.

Beautiful fresh Cypress Seed, \$4 per pound, sent by
mail, warranted pure and of the finest quality.
25v6-3m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy
BLACKBERRY SETS, for sale at LOWEST RATES.
Orders may be addressed through DEWEY & Co., of the
Rural Press, San Francisco; ROBT. WILLIAMSON, Capital
Nurseries, Sacramento; or to me,

CALVERT T. BIRD,

San Jose, Cal.

TREES FOR SALE.

The undersigned offer for sale at their
Nurseries,Near Niles Station, Central Pacific Railroad, Alameda
county, Cal., a fine stock of STANDARD FRUIT
TREES of the orchard varieties, best adapted for Cali-
fornia. Our Trees are one and two years old, and all
well grown and well rooted, and true to the label.We invite Planters and Dealers to examine our stock be-
fore purchasing. Send for a Descriptive Catalogue and
Price List. Trees can be sent by regular freight route or
by Express, as directed. Careful attention given to pack-
ing for shipment. Local Agents wanted, to whom a liberal
commission will be paid. Address the undersigned, either
at Centerville, Alameda Co., Cal., or at 415 California st.
San Francisco, Cal.

SHINN & CO., Proprietors.

Ornamental and Evergreen Trees for Sale
at the Old Maple Leaf Nursery.I have now on hand the largest and best varieties of or-
namental Evergreen Trees, Fruit Trees of all kinds, also a
large lot of the Blue Gums, from six inches to 12 feet high,
at from \$4 to \$100 per hundred. A large lot of Cypress,
Vines and Junipers of every kind. Green House Plants
and a large quantity of Roses, Maple and Laburnum
Trees for street planting. I would call the attention of
the trade to a large quantity of Australian and African
Timber Seeds, and especially Cedrus Decadare, or Dea-
vinc Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubbs' Hotel.

Send for Catalogue. ja16

BEATRICE PEACH TREES,

AT GLEN GARDENS.

To close out my stock of new Peaches, one year old
from bud, such as Beatrice, Louise, Foster, Freemason,
Glen Garden Seedling No. 1, Stanwix Early York, etc.,
I have reduced the price to 25 cents each, where 50 trees
are ordered. Beatrice, in dormant bud, 15 cents each.
E. F. AIKEN, Sacramento, Cal.

P. O. Box 212.

f21-1m

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT
TREES for sale, from three to five years old. The
five-year old Orange Trees are the largest ever offered for
sale in this county. For Price, address,

MILTON THOMAS,

6v7-2m

P. O. Box 304, Los Angeles, Cal.

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF
EVERY VARIETY.And raised by the most experienced and reliable grow-
ers of Europe, Eastern States and California.My stock is complete; quality unsurpassed; prices as
low as from the best Eastern houses; embracing Vegeta-
ble, Flower and Agricultural, Fruit, Shade, Ornamental
and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick,
(Rochester) and Monice & Co., (France.)NOW READY FOR THE TRADE, 100,000 POUNDS
EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,

Red Clover,

White Clover,

Musquit Grass,

Timothy,

Redtop Grass,

Orchard Grass,

Rye Grass,

Vernal Grass,

And all other Grasses adapted to the climate of the
Pacific States and the interior.All the better grades forwarded by mail (post-paid),
at catalogue rates. Money forwarded in postal orders,
registered letters or express, at my risk.My Agricultural Almanac and Price Catalogue is
ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

ESTABLISHED 1850.

PATRONIZE HOME INDUSTRY,

SEVIN VINCENT & CO.

Being the only Seed Growers on the Pacific Coast who
raiseVegetable, Flower and Tree Seeds of
all kinds.Long experience, extensive practice, and the abun-
dant production of this year's seed crop, enables us to
offer a selection of Superior Seeds for California and
Foreign Soils, and also places us in a position to main-
tain the lead in the market for Pure Seeds, and much
cheaper than those sold by other seedsmen.A large assortment of Imported DUTCH BULBS and
GLASSES just arrived.ALFALFA, CLOVER, TIMOTHY, KENTUCKY BLUE GRASS,
ORCHARD GRASS, and all other varieties.FRUIT TREES, SHADE TREES, HARDY SHRUBS, and a
general assortment of all kinds of VEGETABLE PLANTS.NOTICE.—We will send, free of postage, on receipt of
order, 25 varieties of garden seeds in small packages
price, \$1.25; or the larger size packages—price, \$2.50.
Send for Catalogue and Price List.

SEVIN VINCENT & CO.,

607 Sansome st., San Francisco.

18v6-4m

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.

18v6-1f

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a
rates that, with proper cultivation on suitable land,
will make them among the most profitable crops grown.
For further particulars address

PACIFIC OIL AND LEAD WORKS,

3 and 5 Front street, San Francisco.

12v6-3m P. O. Box 1443.

AGRICULTURAL ARTICLES.

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great Plowing
Match in Stockton, in 1870.This Plow is thoroughly made by practical men who
have been long in the business and know what is re-
quired in the construction of Gang Plows. It is quickly
adjusted. Sufficient play is given so that the tongue will
pass over cradle knolls without changing the working
position of the shares. It is so constructed that the
wheels themselves govern the action of the Plow cor-
rectly. It has various points of superiority, and can be
relied upon as the Best and Most Desirable Gang Plow
in the world. Send for circular to

14v2-3m

MATTESON & WILLIAMSON,

Stockton, Cal.

G. CREGO.

S. O. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top
and open Rockaways, Jump-seat Buggies, Track
and Road Sulkies, Skeleton Wagons, Basket Phaetons of
the very latest styles and finest workmanship.We would call particular attention to our fine stock
of light Road and Trotting Wagons, made to order by
the following celebrated makers:Charles S. Coffey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to
sell on the most reasonable terms.Also, a large assortment of single and double Har-
ness, of the most celebrated makers:C. Graham, New York; J. R. Hill, Concord; Pittkin
& Thomas, Philadelphia.Also, a full assortment of Dress and Light Blankets,
Fur and Lap Robes, Whips, Halters, Surcingle, etc., at
wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,

24v5-3m San Francisco.

WAKELEE'S

SQUIRREL EXTERMINATOR.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be com-
pelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels
should be destroyed, or they will be the destroyers.
This new compound has all the merits claimed for it.
Is convenient and cheap. There is no danger from
fire in using it. It will kill every time. The squirrels
die in their holes from its effects.Put up in packages of one or five pounds, convenient
for sending by express. Cost, \$1 per pound, ready for
use. Very economical. Is sent so that the squirrels
like it. Testimonials from reliable parties who have
tried it, will soon be published. Reasonable discount
for large orders. Directions for use on packages.Owing to the chemical composition of the Extermi-
nator it can be used without the slightest danger of
fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the
establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed.

3v7-3m

H. K. CUMMINGS.

1868.

H. H. RALSTON.

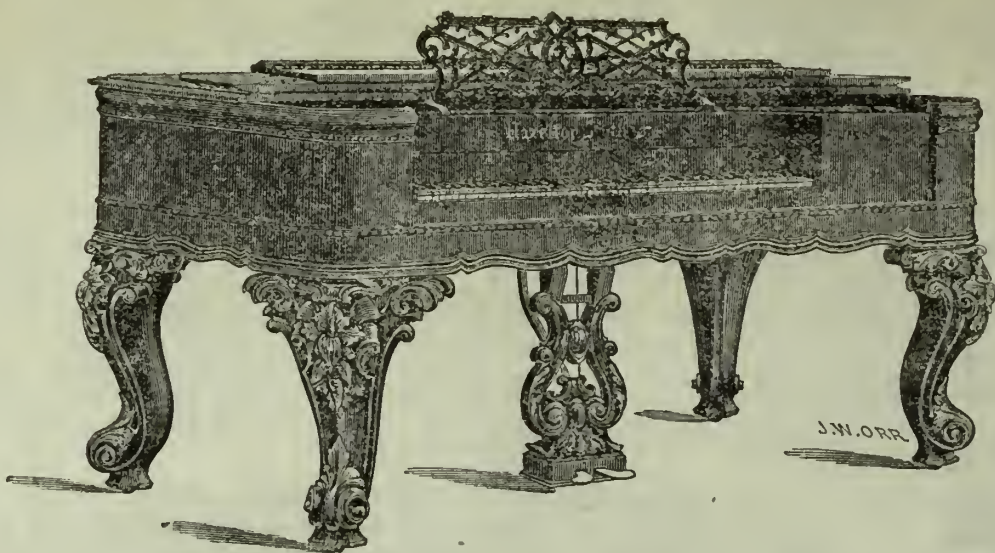
1873.

HENRY K. CUMMINGS &amp

Hazelton Brothers' Piano Fortes

ARE CONSIDERED
By all Responsible Musicians
TO BE
FULLY EQUAL
TO ANY IN THE MARKET.

Their Superiority
HAS BEEN ESTABLISHED BY
THE MOST
THOROUGH TEST
—OF—
OVER 20 YEARS,



AND IN
NO INSTANCE
Have they failed to Give Satisfaction.
BEING MADE OF THE
BEST MATERIAL,
They will
Stand the Most Trying Climate.
EVERY INSTRUMENT
HAS A WRITTEN GUARANTEE
—FOR—
FIVE YEARS.

Send for Catalogue and Price List

Agency at Eaton's Music Store, 138 Montgomery Street, Occidental Block, San Francisco.

9 9 9 9 9 9 9 9 9 9 9

GROVER & BAKER'S
IMPROVED
LOCK STITCH
SEWING MACHINE.



No. 9.
SIMPLE, DURABLE,
LIGHT RUNNING, RAPID,
EASILY OPERATED,
Accurate and Perfect
in Principle,
Beautiful in Appearance.
In every respect the best and most popular
Lock Stitch Machine made.

R. G. BROWN, Agent,
116 Montgomery St., San Francisco.
25v6-1am-ss

9 9 9 9 9 9 9 9 9 9 9

TO FARMERS.

WE ARE PREPARED TO CONTRACT FOR NEXT
SEASON'S CROP OF

FLAX SEED at 31-4 Cent per Pound,

Delivered at our works in this City. Will also furnish
Seed for sowing, to be paid for from the contracted
crop. Will also advance

Money Necessary for Harvesting Crop,
required. Farmers can ship direct to us, thereby
saving all

EXPENSES OF COMMISSION.

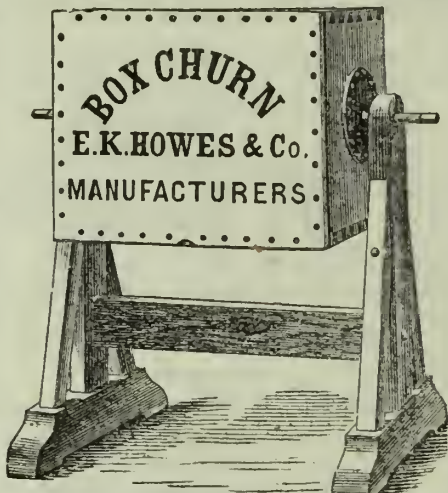
Now is time to sow. For further information apply
immediately to

THE PACIFIC OIL & LEAD WORKS,

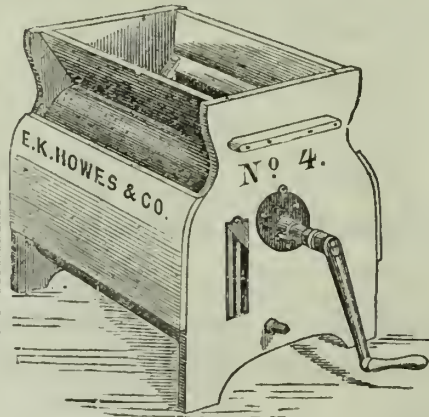
3 and 5 Front Street, San Francisco.
Feb14-16p-1m

PURCHASERS please say advertised in Pacific Rural Press.

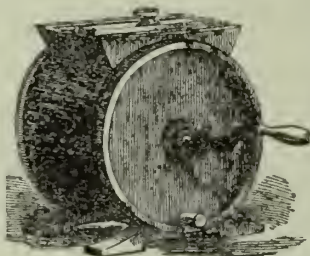
E. K. HOWES & CO.,
NOS. 118, 120 AND 122 FRONT STREET, SAN FRANCISCO.



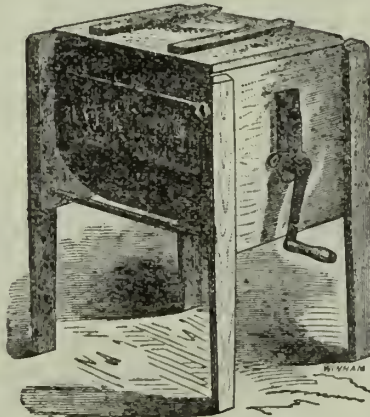
BOX CHURN.



THERMOMETER CHURN.



CYLINDER CHURN AND DASHER.



BLANCHARD CHURN.

SOLE MANUFACTURERS ON THIS COAST OF
All Descriptions of Churns, Butter Workers & Moulds, Butter Tubs, (35, 50 & 60
Pounds), Butter Kegs—Plain and Gal Hoops—Wholesale & Retail.
Send for Price List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.
6v7-16p-cow-3m

BEST SHADE IN USE. —THE— RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture
IS FAST SUPERSEDING ALL OTHER STYLES OF
WINDOW SHADES IN USE
Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS
Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the
Bottom.

And forms a complete and THE ONLY SUBSTITUTE
FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the
slightest injury. Its fixtures are simple, work to per-
fection, and never get out of order.

Our facilities for the rapid manufacture of a perfect
article are now such that we defy competition in quality
and price with any window shade in the market. Or-
ders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by
GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.
6v7-16p-2m

SEEDS! SEEDS! CROP OF 1873.

I am now receiving a choice collection of
Vegetable,
Agricultural,
and Flower Seeds,

Containing all the BEST varieties, and selected with
great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER,
WHITE CLOVER.

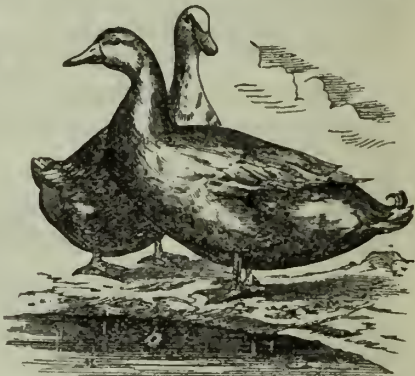
FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,
No. 317 Washington Street,
SAN FRANCISCO.
6v7-1y16p

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than
Poor Ones!

OAKLAND POULTRY YARDS,
COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.



Ducks for Pleasure! Ducks for Profit!

AYLESBURY DUCKS, \$12 per pair; Eggs, \$6
per dozen.
ROUEN DUCKS: Drake weighing 10½ lbs; Ducks,
9 lbs each; Eggs, \$8 per dozen.
BLACK CAYUGA DUCKS, \$35 per trio; Eggs,
\$8 per dozen.

For further information send stamp for Illustrated
Circular, containing a full description of all the best
known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed.
5v7v1

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street.....San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants,
Ornamental Shrubs, Fruit and
Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of
Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in
quantities to suit, at the lowest market rates.
MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD
GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS,
FINE MIXED SEED FOR LAWNS, WHITE and RED CLOVER
SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which
are offered at Nursery prices, free of freight charges to
San Francisco.

To parties desiring to purchase anything in the above
line, I will send any of my catalogues FREE OF CHARGE.

BULB CATALOGUE now ready. SEMI-TROPICAL CAT-
ALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE,
embracing Seeds of all the valuable varieties, Flower-
ing Plants, Ornamental Shrubs, Fruit and Shade Trees,
etc., ready Nov. 15th.

R. J. TRUMBULL,
427 Sansome st., San Francisco.

W. M. BRANDON. JACOB W. ROGERS

BRANDON & ROGERS,
California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO,

Buy and sell unimproved lands, farms and city property
throughout the State of California. Farms to exchange
for city property and city property for farms. Eastern
property to exchange for California property. Tracts
favorably located, furnished for Colonies. A large list of
property to select from. Money invested for other parties
on advantageous terms. Long experience in the business
and extensive acquaintance in California and the Eastern
States, enable us to effect speedy and satisfactory sales and
exchanges.
20v6-1y-16p



Volume VII.]

SAN FRANCISCO, SATURDAY, MARCH, 7, 1874.

[Number 10.]

Beach Mining.

Among the many different modes of obtaining the precious metals, the mining operations carried on at Gold Bluffs, where the auriferous sand is gathered from the beach, are something peculiar to California, but outside of the immediate vicinity in which the gold sands are found little seems to be known of the mode of working them.

In 1850 gold was found along the coast line of Klamath county, and the famous Gold Bluff excitement ensued. Since that time the beach mines have been worked at intervals and recently in a systematic manner. Fig. 1 shows a view of the beach at Gold Bluffs. It is found that when the surf breaks square on the beach, it rolls up masses of coarse gravel and black sand, and no gold is visible; but when it cuts the beach at a certain angle, the ocean makes a kind of natural separator, and deposits the rich black sand in spots, from which it can be taken. Thus success in finding the gold depends largely upon the direction of the wind.

Fig. 2 is a sectional view of the bluff, which is similar or nearly so, in stratification all along the auriferous belt. It is evident that the gold is derived from these bluffs, for it can be detected in certain strata, and it has been noticed that after a heavy cave of the banks the beaches are richer and the gold coarser. Attempts have been made to obtain the gold which is believed to be beyond the line of surf, particles of which are said to have been brought up by the leads of vessels, but thus far without success.

In Fig. 3 is presented a view of the mine at the lower end of the bluffs. The sand is gathered and placed in sacks, which are then conveyed by mules to the works, where the washing and amalgamating are performed. The yield varies; but usually the result is found to pay liberally for the labor and expense of collecting, packing and working the sands, and one claim took out \$25,000 in one year.

SIMULTANEOUS and concerted action is the only mode of fighting the many pests which annoy farmers and cost them so much. It was stated at the squirrel-law convention, held in this city last fall, that more squirrels were killed in a year than existed at any one time. The trouble is that the few which are not made way with multiply so fast as to produce a fresh and vigorous crop of young squirrels just when they would seem to have been exterminated. An example of the true system of war to the knife has been set by the farmers of Iowa, who have unanimously resolved, so far as possible, to employ the following means: Each farmer to plow up his fields that have laid under grass or in sod for a few years, to clean up and cultivate any land that may be but partially cleared in the vicinity of all brush, etc., and to raise a flock of turkeys. Such a determined course is what is wanted here against the squirrels. Let us have adequate legislation; but, besides, no means should be left untried, to destroy the common enemy.

A PECULIARITY in choice of the most profitable product to be raised, among farmers in this State, is forced upon them by the want of facilities for transportation, and the inordinate expense of freightage, in any case. In places remote from a market, such articles have to be raised as are either the least bulky in proportion to value, or will keep the longest time. A process of concentration, so to speak, thus becomes advisable and necessary. In the interior West, where corn often will not pay to move, and it is used as fuel, the usual course is to turn this food into pork, and that again into hams and bacon, still more concentrated forms. All this is an argument to our farmers to refine as much as possible at home. The case is the same as, or parallel with, that of home manufactures on the larger scale. The example of milling our wheat before shipment can be imitated in other directions, and an immense saving would be the result.

THOMAS A. GAREY, of Los Angeles, is experimenting extensively with different varieties of the orange.

Unestimated.

A gentleman who owns a nice little ranch in San Joaquin valley, and who has always been exact in his accounts, said the other day: "Farming isn't a money making business. Striking an average for several years, I find I have only cleared, above expenses, about \$500 a year. A profession or a good trade would pay better."

That farming is a money making business

pleasures too subtle to be expressed in dollars and cents, and many things deemed necessities in rural life, which are held to be luxuries by city people. But if these do not appear in the ledger, they are none the less felt and enjoyed.

After accusing farmers of an oversight, it would be hazardous indeed to attempt an enumeration of the numberless undetected gains. And we have a warning before us in the confessedly incomplete list of a thoughtful writer in the *Rural Home*, who specifies these points:

1. The rent of his dwelling. If he lived in town, and occupied a tenement suited to his position, provided he retained the same rela-

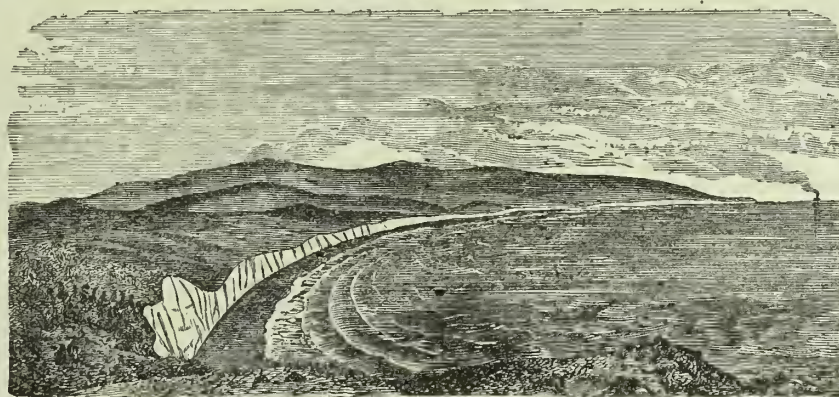


FIG. 1.—The Beach at Gold Bluffs, Looking South.

would be shown by simply pointing to the number of our wealthy wheat growers, orchardists and stock raisers. These are, it is true, those who farm on a large scale. But they must have commenced more moderately, and it is now beginning to be questioned whether

tive position in society, the rent would amount to several hundred dollars a year.

2. The use of his horses and carriages. Every family in easy circumstances expects, of course, to go to church, to visit friends, to attend places of instruction, or amusement, and to visit places of trade, and many of these

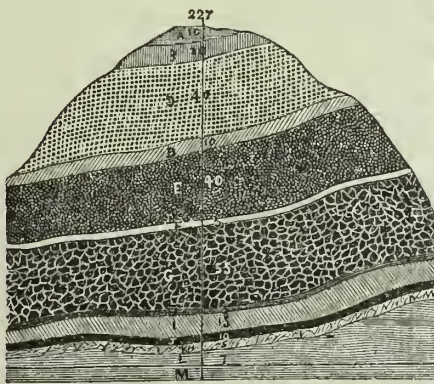


FIG. 2.—Section of Bluff.

In Fig. 2, A is loam; B, yellow clay; C, yellow gravel; D, sandstone; E, red and yellow gravel; F, sandstone with wood lignite; G, coarse red gravel; H, very fine bluish gravel; I, indurated sand; J, gravel with iron cement; K, sandstone with lignite; L, beach; M, low water mark.

the profits from the big ranches are so great, relatively, as those of small farms thoroughly cultivated. The tendency seems to be as much toward taking in horns and working smaller areas more systematically, as to seek to extend the boundaries. The immense ranches of early days are splitting up with wonderful rapidity; and this is due rather to an appreciation of the benefits of closer tillage than to any crowding of neighbors. There is plenty of room left.

But the majority are not what are called large farmers. Nearly all make some pretence of keeping regular accounts, and many develop true business ability and habits in this way. In posting their books they are careful to note the cost of land, seed, labor, implements, etc., and the interest on all real property and appurtenances. They scrupulously jot down the exact amounts they receive from the sale of produce and stock, make what they judge to be a reasonable allowance for the subsistence of the family, and then think they are ready to strike a balance—which often turns out disappointingly small. Not in reality, however. There are many returns which invariably escape the ken of the accountant. There are benefits and

are too distant for convenient walking for townsmen as well as farmers. The farmer who uses his own team and carriage saves a large bill for livery and omnibus and car fares. This amounts to several hundred dollars a year with families of affluence in cities.

3. Family supplies. We wish every farmer could know the entire value of the food which his family consumes annually, estimated at the prices that townsmen are obliged to pay for similar products. It would go far towards reconciling many discontented farmers to their lot. The single item of wheat flour, at retailer's prices, consumed by an average family, would amount to over a hundred dollars. Then there are cornmeal, buckwheat flour, garden and field vegetables, fruits, milk, cream and butter, eggs and poultry, pork, beef and mutton, lard and tallow, and many other items which help to feed the family and would amount to a considerable sum if purchased.

If a farmer, after balancing his debits and credits, finds but little left to compensate him for his labors, he need not consider that he has labored for nothing. If these unestimated items of income could be properly appraised, we think that they would amount to a very fair salary.

Workmanlike Habits.

We have so often urged the great importance and absolute necessity of care in the selection, use and keeping of tools, that perhaps an apology should be made for again returning to the subject. And it is, besides, a delicate topic to approach, with practical men, who will admit almost anything except a want of care in this direction.

There is, perhaps, nothing in which the truth of the old adage, that the best are the cheapest, is more visible than in farm implements. The dearest are not necessarily the best, by any means; but where one gets the real money value in buying tools, it is well, in selecting those which are intended to be used for several seasons, to be sure that the material and workmanship are such as will render them lasting. There are certain things of which it is said that they improve as they grow older. In spite of the disparaging remarks made about old hoes, every farmer who has intelligently observed will bear witness to the increased efficacy of a hoe that has grown venerable in honorable service, not nicked and bent, but worn thin and keen by careful use and repeated sharpenings.

Only a few days ago we had occasion to borrow a pen-knife. It was a knife which had evidently done good work, was from a good maker, and though each of the blades was worn completely out of the original shape, was very sharp and serviceable. It was natural enough to remark to the owner: You are in the habit of using tools? And the reply was that he had an amateur carpenter shop of his own. Now it is a small matter to keep a knife in working order, but the trait proves that a man who does so may be counted on for promptness and neatness in all he undertakes.

Machinery deteriorates, in most cases, more rapidly from disuse and want of care than when in constant employment. For this reason it is considered expensive to allow a quartz mill or a factory to lie idle. When in use the metallic parts are kept from rust and the wood from rotting. There is no reason why equal care should not be taken, when tools are laid aside.

Whether it be in the rainy or in the dry season, agricultural machines and all tools should be placed under cover. The blaze of the sun is almost as prejudicial as soaking from rain-water, but the two alternated will soon show their effect. All farmers know this, but how few take the trouble to put their knowledge into practice. It is one thing to believe, but quite another to prove faith by works. Ploughs, when done with for a time, should be thoroughly cleaned and then treated to a good dose of grease or oil—it does not matter which. Linseed oil applied to wood will render it very hard and tough, and has the peculiarity of forming a kind of impermeable varnish over metal, but is rather too costly for rough use. Crude petroleum is about as cheap as anything, and very effective. When the main labor of planting is over, the harvesters and threshing machines should be put in order for summer's work. Every surface of wood or metal should be looked to, and painted or oiled, as the case may be, and the requirements are. Finally everything that has an edge, from a chisel to a hoe, should be kept as sharp as it can be made. All farmers are in a measure carpenters, and they should borrow from the latter the maxim that there is no greater economy of time and labor than to bestow these in placing and keeping tools in condition. With good tools, good work.

EUCALYPTUS.—We have lately received many inquiries as to the history, uses and mode of growing the Australian Blue Gum, or Eucalyptus. To avoid repetition, we refer our correspondents to pp. 115 and 390 of Vol. II; 185, Vol. III; 70 and 119, Vol. IV; 40, Vol. V; 121 Vol. VI; 66 and 98, Vol. VII. The following named nurserymen have the Eucalyptus on sale: T. Corley, 315 Washington street, San Francisco; L. M. Newson, Twelfth street, East Oakland; Bernard S. Fox, San José; A. D. Pryal, Oakland; Jas. Hutchison, Oakland; Bailey & Co., East Oakland; John Carey, East Oakland; M. King, Oakland.

A LARGE band of sheep was recently sold in Park county, Oregon, at \$3.10 per head.

CORRESPONDENCE.

Tap-roots—Italian Rye Grass—Grange Sisters and Dram Drinkers.

[Written for the RURAL PRESS.]

"Subscriber" in last week's RURAL PRESS, enquires into the practice of destroying the tap-root of fruit trees by nurserymen. It is supposed that by so doing fruitfulness is induced. In Europe it is a common practice to make a layer of brick-bats, stones, or some such rough, hard material to prevent roots of fruit trees penetrating deeply into the ground, as the laterals are believed to furnish most of the nourishment to the flowers and seed vessels, or fruit.

For forest trees it would appear to be a mistake to injure the main root, as luxuriant growth of timber is the thing wanted in this case.

Italian Rye Grass

Can give Mr. Ward the result of a trial on a very small scale. On land where the moisture rises to the surface, without cultivation, all through the year, or on irrigable land, I think this grass would give more satisfaction than alfalfa. It is less vulnerable to the attacks of gophers than alfalfa, not being tap-rooted, and produces finer fodder or hay. If sown somewhat thinly one year, and allowed to seed, it produces the next season a fine, close sod, like velvet. On moist land, it would furnish about the same number of cuttings annually that alfalfa would, under similar conditions; but on dry soils alfalfa is far ahead. With manure and irrigation, Italian rye grass gives extraordinary results.

J. O. Morton, the great English agricultural writer, says it "is one of the best forage plants for cows when cultivated liberally. If manured abundantly after each cutting, especially if the dressing can be washed in by irrigation, another cutting, weighing 12 and 18 tons per acre, will be ready in a few weeks. As many as five heavy cuttings have been obtained from it in the season, on the liquid manure farms of Ayrshire. When sufficiently ripened, it is the best possible food that can be given to cows." Of course in Los Angeles it could be cut oftener and at shorter intervals than in Ayrshire. Mr. Morton speaks of alfalfa (or lucerne, which is the same thing), as yielding only "6 to 8 tons per acre each cutting," and that only "if the intervals between the rows are forked and manured" each time it is cut. This puts Italian rye grass 6 to 10 tons ahead of alfalfa, each cutting, and from what I have seen the result would be similar in California. Rye grass forms a close mat from one to three feet high, with abundant seed, while alfalfa is not so close, and would have no seed (barely flower) in so short a time as 6 weeks. I sowed a row or two of rye grass by the side of a row of alfalfa (Lucerne) two or three years ago. The rye grass has almost run out the alfalfa, the gophers having aided the process by cutting the roots of the latter, and, while the ryegrass volunteers splendidly, no fresh mats of the alfalfa appear. I tried a row of California brown grass, but it did not hold its own against the rye grass; it has, however, a fine large seed, and should make fattening feed when cut in right season; it will succeed on dryer soils than are adapted to rye grass.

You told us some weeks ago that a Mr. J. Rawson, Johnson had arrived in San Francisco, to lecture on the proposition that "To preserve the life of the nation, a stop must be put to the sale of ardent liquors."

No doubt others besides myself have been looking in the PRESS for some synopsis of his lectures, as the subject comes home, more or less to every household. To how many, alas! in the shape of disgrace, misery, and impending ruin, none the less inevitable because gradual! I think Mr. Johnson has chosen a very hard row to hoe: the weeds have such a big start that I doubt if his corn will ever get tall enough to see daylight. [We believe Mr. Johnson has not yet attempted the discussion alluded to, although he has spoken generally on the subject of Temperance. Eds. PRESS.]

By the good help of the Grange sisters, however, I think we may hope to see the

"Civil Damages Act"

become a law in California, as it already is in Ohio, New York and Illinois.

Prussia Bismark's government has lately advised German voters not to be unduly influenced, as to their political views, by their wives. Now this is a direct invasion of "woman's rights." Home influence has been an undoubted woman's right from time immemorial; and a loving woman's influence over her husband and offspring should render her personal appearance at the ballot box altogether superfluous. I appeal them to Pomona, to Ceres, to Flora, and their sisters to exercise this right in spite of Bismark, and to use all their influence, in the Granges and elsewhere, to stop this senseless intimation of dram-drinking, which is, surely a national curse.

An account of the beneficent antiseptic provisions of the civil damage act has already appeared in your columns, so I need not weary your readers by a repetition. I think a little effort would ensure its passage through the Legislature. I have canvassed my immediate neighbors, and they are unanimous in their approval of the Act.

Were the evils of dram-drinking confined to

those who indulge in the vice the case would be sufficiently serious; but when one thinks of the misery and suffering it entails on millions of innocent women and children it becomes a most imperative duty to do all that is possible to mitigate this unnecessary misery and distress.

In some countries there are poor wretches so utterly miserable in their poverty, with abodes (dens, rather) so comfortless, cheerless and chill, that one can forgive their craving after the warmth, brightness and oblivionsness that the dram-shop may afford them; though one cannot forget that each temporary indulgence but renders more hopeless their chronic wretchedness.

But how shall he be excused, who, surrounded with home comforts and loving faces, by a foolish infatuation for drink, scatters to the wind his household gods, and brings the shades of misery and despair on those loving faces?

"Sociality!" is the dram-drinker's pass word. Oh, no! he does "not care for the drink itself, it's the 'good fellowship and sociality' that are its accompaniments.

A man with a glass of water in one hand and a glass of whisky in the other, spasmodically tossing the latter down his throat and then turning on the water as though he feared there might be a Coroner's inquest on a case of "spontaneous combustion," cannot certainly be considered a perfect picture of enduring happiness, even though surrounded by "sociality" in the shape of one dozen other bipeds, going through precisely similar motions.

A reference to Webster tells me that society is the "union of rational beings." Now how a man can go to a dram-shop under pretence of enjoying himself with rational beings, I cannot conceive. Were the word irrational it might be comprehensible.

It would be naturally supposed that "sociality" would be more easily discoverable at home, along with the rational being that each man selects for himself as his help mate and intimate companion, to be loved, cherished and made much of, so long as life permits, aye, and after death, for then life and love are inseparable! And a love for those dear little ones, to whom an earthly father's care should be the visible image and token of the boundless tenderness and love of Our Father in Heaven.

I sometimes think how blank some dram drinkers would look, and how sheepish they would feel, if some evening their wives and daughters came to the dram shop to enjoy the "sociality," and to hear "dear pa's" refined and instructive conversation, after a few glasses of whiskey had loosed his tongue. And yet, Messrs. Editors, why not? "Sauce for the goose" was formerly considered "sauce for the gander." So please Flora, of the Grange, and all the other dear little geese who have ganders of their own, or who hope some day to have them, bestir yourselves now on behalf of thousands of your sisters, whose hopes were once as bright, and whose hearts once beat as light as yours do now, but who long have sat despairing and sorrowful, hoping against hope, that those whom they love may be disenthrall'd from the fast though fatuous fetters of the demon of drink.

I should like to write more Messrs. Editors, but you counseled brevity in a late issue. So I conclude by asking any one, intending to enter the "saloon" business, whether it is so difficult in California to find a worthy field for his capital and industry, that he needs must fatten on the vices of his fellow men.

EDWARD BENWICK.

Notes of Travel—San Joaquin County.

The farmers of this county are taking a deep interest in thoroughbreds. There is probably no other portion of the State where more attention is paid to that important branch of husbandry than in San Joaquin county. Horses, horned stock, sheep and swine are bred here with the utmost care and diligence. Among

The Most Prominent Breeders

And stock dealers are the President of the San Joaquin Agricultural Society, Messrs. Dodge, Noyes, Cole, Hildreth, Moore, Yates, Castele, Shepherd, Sargent, Sisson, Grattan, Judge Green, Cramer, Hitchcock and Beardsley—[Our correspondent furnishes us several other names which we cannot make out—Editors PRESS.] The above gentlemen are deeply interested in horses of the finest strains of blood.

Wm. L. Overhiser deals chiefly in horned stock; Messrs. Dodge and Thomas Wilson have a fine assortment of sheep, which class of stock receives their experienced attention. We would also mention Fred Arnold's Hambletonian stallion, a remarkable fine youngster. The sire is Whipple's old Hambletonian. Messrs. Beardsley & Fees have two noble looking stallions, Ontario and John Miller, sired by old Chieftain, Ontario is five years old; color—rich bay, 17 hands high, good action, and a heavy flowing mane and tail, weight, 1,500 pounds.

John Miller, full brother to Ontario is a bright bay, 16 hands high, weight 1,250 pounds. He took the first premium over a large field at year, at the San Joaquin Valley District Fair for stallions, for all purposes.

The ambition which is exhibited here to excel in producing stock is truly meritorious, and parties in other sections of the State will do well to visit Stockton and San Joaquin county if they wish to improve their grade of horses, horned stock, sheep or hogs.

There are many others also than those

named who are also engaged in raising pure and improved breed stock; but not being at this time fully versed in their particular line, I shall forbear mention of them until another day.

Stockford, Lodi and Woodridge.

These three prosperous and flourishing little towns are beautifully situated on the sparkling waters of the Mokelumne. This part of the San Joaquin valley is called the Live Oak region, because of its numerous and beautiful oaks, which stretch their long arms heavenward, perpetually clothed in green. This portion of the valley is quite thickly settled, with an intelligent, industrious, moral and frugal class of people. There is no part of the State which evinces more thrift, energy and enterprise. On all sides, whithersoever the eye may turn, you may see highly cultivated farms, luxuriant vineyards and thrifty orchards.

The Farm Houses

Are neat, substantial, and commodious, displaying taste, comfort and refinement. They are surrounded with all the necessary appendages of first-class farmers—granaries, stables and luxuriant orchards. All kinds of stock abound in this region, for which it is splendidly and peculiarly adapted, being well-watered and abundantly sheltered. The soil is of a rich, sandy loam; nature produces spontaneously, without cultivation, a rich and nutritious herbage, upon which numerous herds prosper and flourish.

A Trio of Cities.

Lodi is situated about fourteen miles from Stockton. Two miles to the north-west lies Woodbridge, and four miles north the city of Lockford.

We should not be at all surprised to see, not many years hence, those three cities extend their limits to such an extent as to form a practical union.

The Country Around.

There is no season of the year in which the roads are to be found in a bad condition. This section can be travelled in winter as well as summer, and the sight which greet the eye of the traveller at this season are really enchanting. The fields clothed with a rich verdure of grain; birds of varied plumage singing merrily amid the green foliage; the herds of sheep, horses and cattle which bask in a February sun, in meadows rich and nutritious—all together form an aspect pleasing indeed, and evinces the fact that here the ruralist is enjoying a world of admiration, splendor and sublimity, surrounded with all the necessities, comforts and luxuries of life. His land ploughed, sowed and completely pulverized; he sits in his domestic and from his bay window exultingly beholds himself, in this productive weather, growing constantly rich.

This is a very thickly settled section of the county, as its numerous towns sufficiently show, there being within a circuit of only a few miles, five flourishing cities, Lockford, Lodi, Woodbridge, A Campo and Liberty. Everything at present indicates a bright and prosperous year, an abundant return to intelligent labor. The farmers all around are beginning to realize the necessity of self protection against the oppressions of monopolies and middlemen, which have hitherto served as a sponge, to suck up not only the fruits of the toilsome labor of their hands; but in many cases all they could harrow from their neighbors also. For this season Granges are numerous and flourishing.

Mechanics, merchants and all the various classes of business men, have hitherto had their combinations for the purpose of self-protection, while the farmers have remained an easy prey to the acquisitiveness, and oft times rapaciousness of middlemen and monopolies. It becomes the duty then of every farmer to arouse and combine and organize, of course always paying due regard to the destructive evil of going to extremes. Everywhere your agent travels, he is treated with the utmost respect and decorum, because of the great popularity of the RURAL PRESS and your other well-known publications; and during the several weeks I have traveled in the various counties, not one single utterance has been made, but in terms most respectful of your publications. I shall continue my journey through Stanislaus county this week, going from thence into Merced.

Gilroy, 1874.

C. M. D.

Native California Coffee.

EDITORS PRESS:—I send you a more minute description of the native California coffee plant, which I have discovered.

Wherever the chapparel and manzanita are found in wild lands, you may be sure of finding a bush with red and black berries, which are commonly called wild cherries, having a smooth skin, a coffee odor and a bitter-sweet taste. These ripen in the month of August. The two leaves within are of the regular coffee shape. You can take the berry when it is ripe, wash off the outside, dry the leaves, grind them, and make your coffee within an hour. I have done this frequently.

When coffee is to be planted, take it from the sack and plant some four or five inches deep; the beans should be planted some ten feet apart, two or three in a hill, to be thinned to one, if more come up. To raise a nursery, the beans may, of course, be set as close as desired; but for a regular plantation the figures given are those ordinarily used. If the coffee plants prove successful, in three years one pound to the bush may be expected, and in five years as many as three pounds.

T. H. FOLINGSBY.

San Francisco, March 2, 1874.

The Proposed Squirrel Law—Pay of Inspectors, Etc.

EDITORS PRESS:—As one of the committee appointed by the Farmers' Convention, to draw up a bill for the abatement of the squirrel nuisance, I have been very much interested in the discussions, of which that document has been the subject.

While ready to admit that there may be imperfections in the bill, I notice that most of the objections now raised to its provisions were carefully considered, and voted down, in the Convention.

The Pay for District Inspectors,

While engaged at their work, is four dollars per day. It is claimed that this is too high, as men can be found who would take the office at two dollars. We do not doubt that men could be found to take this office, or any other, from day laborer to President of the United States, for that sum. What each district wants, however, is not a mere day laborer as inspector. On the contrary we want the most able, honest, energetic and careful, practical farmer, and land holder, residing in the district. To offer a man of this description less than \$4 per day would be an insult, and a person with the proper qualifications will accept the position, and faithfully discharge the duties of the proposed office, he will also deserve credit for a very considerable amount of public spirit. Let us bear in mind that

The Law is Made for Sinners,

The sinners in this case being those who are too lazy or careless to clear their land of squirrels. It is not to be supposed that any thrifty farmer, of sound body and mind, will fail to turn out at the time named in the bill, and unite with his neighbors to rid the country of these pests. If prevented by sickness or other cause, from giving proper attention to his land, he certainly would wish some competent person to do the business for him, and to be decently paid for the trouble. The tax which may be levied to carry out the provisions of the bill may be too high at 50 cents on \$100, but hundreds of our farmers would be glad to give that, if it would relieve them from the direct tax by the squirrels themselves, which has been from 10 to 100 per cent. of what their land produced.

The members of the Convention, and the committee appointed by them, are all taxpayers in squirrel infested counties, and just as anxious to have the taxes reduced as are the rest of the farmers, but we must recognize the distinction between economy and meanness.

If we want good work done, we must pay for it.

Let us remember this, whether we are fixing the pay of a President, Senator, Judge or Squirrel Inspector. If we give any one of these offices to the lowest bidder, we must be prepared for inefficiency and dishonesty.

Let us reflect further that if we pay no more for work which requires intelligence and exactness in the person performing it, than for manual labor, we discourage improvement in the young.

A schoolboy sees an office created which requires the incumbent to have a knowledge of the properties of, and best modes of administering poisons, and land surveying sufficient to follow out boundaries, and accounts so that he can keep his books straight. And what is the pay for all this? Just what the day-laborer receives, who has developed his arms instead of his brain. Is it any wonder if that boy wishes to throw his books aside, when the hard chemical terms and long rows of figures trouble him? The love of learning for its own sake is a noble sentiment, but it is often quenched by such examples as that just given.

To Return to the Squirrel Bill.

It was drawn up after careful consideration by a Convention of Farmers, to which all local organizations were invited to send delegates. The object was, to find out what was wanted, and to draw up a good law, with the advice of the Code Revision Committee.

While glad to receive good suggestions, we hope that the bill may not be opposed on trifling grounds, nor rendered inoperative by well meant, but unconstitutional amendments.

C. H. DWINELLE.

Oakland, Feb. 1874.

Information Wanted.

EDITORS PRESS:—We receive your paper regularly, and from the reports from different counties, etc., think that California must be the place to go to. There are several families here who intend to move down in the Spring. They all have more or less stock which they would like to take with them. If we knew how brood mares, cows, etc., sold in California, we could tell whether it would pay to take them. Horses, cows, and stock of all kinds are selling very cheap here; cows are \$20 per head and other stock in proportion.

If any one could inform us through your paper, we will be very much obliged. The RURAL PRESS is read by a good many here. We have about two inches of snow, very clear, and moderately warm.

The Grangers are at work pretty lively, and intend to start a sugar mill as soon as they can.

N. GREEN.

Walla Walla, February 11th, 1874.

Rural Homes Among the Foothills.

EDITORS PRESS:—In my article regarding Rural Homes and Surroundings, you must grant me a license to speak of all subjects, relating to life and scenery in the rural districts. In this short article I shall confine myself more particularly to the appearance and adaptation of the Sierras, hump-backed children—the foot hills. There seems to be different belts running parallel with the back bone of the Sierras, each being distinct in its productions and soil. The first is the great and grand Sugar Pine Forest, commencing near the summit with a stunted growth, increasing in density and majesty until the center is gained, where a marked change goes on towards the outside of the belt. Cedar, Yellow Pine and Tamarac, is intermixed with the more useful and highly prized Sugar Pine. Then comes

A Belt of Live Oak

And other hard species of a similar character; and here begins the first chance for farming and rearing rural homes among the foothills. Snow must be endured throughout the winter in this region, but other advantages reconcile the settler to this northern climate. Below this oak and snow belt, is the

Nut Pine and Chapparral Belt

Perhaps the most inhospitable region in all California in which to create home comforts, in many respects, and then again it has many features about it to invite a sparse population. There is not land enough suitable for cultivation to make it otherwise, as the hills are covered by the scraggy chapparral bush, and the soil is full of rocks, large and small. The only places fit for human habitation are the small valleys where running brooks or springs are found. This being the mineral belt many have been induced to locate and build houses where no one would dream of doing so if it had not been for the gold found in the placer diggings.

The Foto Hills Proper.

Commence below this pine belt and lose their rugged appearance as they merge into the plains of the San Joaquin and Sacramento Valleys. The Acorn Oak is found in great abundance in this belt, and supplies the farmers of the valley with an excellent article of fire wood. The soil found in the oak belt is good for pasturage, and is the main dependence of stock raisers for winter use. Much of this land is good for farming purposes, and many a comfortable home is to be found nestled beneath the beautiful shade of the oak. Sheep, horses and cattle find shelter and food in this belt until the heat of the summer sends them closer to the summit. This portion of Uncle Sam's domain has just begun to be improved and appreciated, and now that these lands are in the market a few years will work a very great change in their productiveness and appearance, and rural homes will smile in their whiteness through the green foliage of the beautiful oak.

The Nut Pine Belt

Is not so inviting, either in appearance or quality of soil. The great advantages of this belt are its climate and water facilities. These constitute the greatest attraction, except it may be the mineral deposits. Nowhere in California can fruits be cultivated with the same result. The climate is well adapted for variety and quality, and will always be the means of ensuring success by industry. The pasturage of this belt is very poor, the stock has hard work to live through the winters when not fed, and it is also a poor range for sheep, as the chapparral takes out the wool. The hills are only adapted to the goat; but those who have bred the Angora, find, that their wool is almost destroyed by the thorny nature of the bush. Still as the goats are very fond of the tender twig of the chapparral, they would seem to be the animal best suited for the Nut Pine Belt. Nature seems to have a gradation of tree crops, as the soil becomes adapted. The nut pine grows on the poorest land, then comes the white oak, live oak, maples, etc., we can judge of the soil from its natural products. This nut pine region is yet in its infancy. Owing to its adaptability to various vocations, its climate is inviting, its water power is unlimited, and its minerals inexhaustible. The few scattering houses found in favored spots, will yet give place to thriving villages, vine clad hills and gardens, outvying the favored Rhine. The

Sugar Pine Belt

Will be a source of thrift and health for many generations to come. It is destined to be the summer dairy of the Pacific. Butter, unsurpassed in flavor and richness can be made throughout the warmest months of the year. The grand question for dairymen should be—fewer head, and better quality of stock. It is really distressing to see so many half starved cows and young stock taking up their line of March, in the spring of the year, to eat up the green, succulent grass of the Sierras, enough of which may be found to supply the State of California with good, fresh butter and cheese. The present system of stockholders, claiming from ten to fifty miles as pasture lands for cattle and sheep, merely for creating numbers, and not for dairy purposes, keeps the small owners, who would make the most out of a few head, away altogether; and until these valuable pasture and timber lands are disposed of, his complaint will continue to exist.

In my next I shall give a few thoughts on the productions, and house-surroundings of these foothill, rural homes, whose natural scenery outrivals all other scenes in California, and attracts the lovers of nature from all parts

of the civilized world. To-day—Jan. 20th—I was bathed in sunshine and a summer atmosphere, while a snow storm was in full blast a few miles off, and the mountains all white with a wintry coat; grand indeed is some of our winter views, but being below the snow belt, we escape the rigors of the Sierra winter, which is always in sight. Unconsciously the mind expands, living in sight of so much grandeur, and the love of nature and nature's divine architect becomes a living reality. The coming years may make minor changes in the beautiful prospect, but nothing will ever destroy the wild sublimity of the outline. There will ever remain food ample for the poet, the painter, the naturalist and the lovers of God's handiwork. Jan. 20, 1874. JOHN TAYLOR.

Graham Bread Without Yeast.

EDITORS PRESS:—I notice, in the RURAL PRESS various ways recommended for making graham bread, all of which require yeast. Now here it a recipe for making graham biscuit without yeast, soda or cream tartar. Take cold water—say one pint or one quart, according to the quantity one desires to make, or the size of the family demands, and with one hand sift in the graham flour, through the fingers, stirring with the other till you have rather soft dough. Then knead it for about five minutes: roll to about three-quarters of an inch thick: cut out with a common husscut cutter, and prick with a fork, (this is done to prevent blistering over top), and place in a very hot oven, to bake thirty to forty-five minutes, according to the heat of your stove. Care should be taken not to burn the biscuit. This plan will make very light and sweet graham biscuit. Readers of the RURAL, try it for yourselves.

Here is a recipe for making graham pie-crust. Take graham flour in suitable quantity, have it in a basin or pan: pour on boiling water enough to scald all the flour; stir till the flour is scalded and no longer. Then have your molding-board well floured; knead the dough a very little, the less kneaded, the more brittle will be the crust, and roll just as for ordinary pie-crust. This should be baked in a very hot oven, the great secret in making graham bread or pies. By the recipe given can be made a pie-crust fit for dyspeptics. HYGIENIC. Cressy Station, Feb. 25, 1874.

More About Boiling Potatoes.

EDITORS PRESS:—I noticed an article in your issue for January 17, 1874, on the subject of boiling potatoes, and being by birth Irish could not, of course, let it pass. Mrs. Stowe's method is bad. But that of the *Saturday Evening Post* is still worse, and the writer of the latter article is certainly not Irish, because every Irishman or Irishwoman knows that potatoes steeped in water for ten hours would spoil, were they the best ever grown. I have cooked and have seen potatoes cooked in every form known to the culinary art, and the following is the best method I know of: Take your potatoes from the bin, wash them clean, pare them as thin as you can—but don't wash them after peeling. Now put them in the pot and cover them to the depth of half an inch or so with cold water, throw in some salt and a piece of fat pork. Put on a brisk fire, boil quickly, serve hot—and tell us the result. M. T. EVANS.

Our correspondent is, we think, right, about the over-soaking. But the writer in the *Post* did not name ten hours as a necessary time—two were specified, with the added explanation that ten, by which is simply meant an indefinitely longer time, would answer better for the purpose intended, that is, to get rid of the acrid principle. But in succeeding in this aim the *Post* writer, as our correspondent hints, would lose elsewhere.

NEW AND IMPORTANT USES OF THE OSAGE ORANGE.—The osage orange has become a familiar shrub in this and many other States of the Union as a hedge plant; but according to the report of the Agricultural Department, it is now proposed to utilize it for other and very important purposes. A decoction of the wood is said to yield a very beautiful and very permanent yellow dye; and this decoction, carefully evaporated, forms a bright yellow extract called aurantine, which may be used in imparting its color to fabrics. In addition to this coloring-matter, the wood of the osage orange is rich in tannin. Experiments made in Texas represent that hides are tanned quicker with the wood of this tree than with oak bark. The seeds yield a bland, limpid oil resembling olive oil, and which may in general use be substituted for it.

RED TOP GRASS.—A correspondent of a Minnesota paper writes: Red top grass will do well on good fair wheat land. Sown with grain it makes a firm, even sod, and is good for pasture or hay. It starts early in the spring, and is better relished by stock for early spring pasturage than timothy grass. It is believed to be more free from dust than timothy when cut and well cured for hay. Good, fair lands may yield one and one-half tons per acre. As grass or hay it is fine, sweet, nutritious, making a firm, even sod, well adapted to plow under to enrich the land. There has been an old impression that red top absolutely requires wet, swampy land, but such opinion seems erroneous. I think it may be made one of our staple crops for home use. In sowing, be careful not to bury the seed too deeply as it might not come up.

POULTRY YARD.

Poultry Show in Western New York.

EDITORS PRESS:—On passing over the recently completed railway from Ithaca to Geneva, en route for Rochester, I was induced to stop at the beautiful little rural town of Farmer Village, about eighteen miles north-west of Ithaca, to visit a relative, and at the same time attend a poultry show that had been advertised to come off at this place on the 5th and 6th inst.

It was a very creditable exhibition, taking into account that for most of the week previous the thermometer in this region had ranged from 10 degrees above zero to 10 or 12 below.

There were some 200 coops of fowls on exhibition, including some of the choicest varieties of nearly all the best improved breeds in the country, from the huge Asiatic to the diminutive seabright bantam, and many of the fancy varieties of pigeons, such as the fantail, the jacobine, the nnn, tumbler, etc.

The display of light brahmas, dark brahmas, buff coochins, white coochins, patridge coochins, houndans, dorkings, games and bantams, it would not be easy to excel at any exhibition. There was also a fine show of bronze turkeys, different varieties of ducks, geese, guinea fowls, mottled and white, a wild goose that seemed perfectly reconciled to its confinement, so long as its means of subsistence and daily comforts were so well attended to. Some fine brahmas were offered for sale at \$10 the trio. They sell the eggs of the choicest of these different kinds of fowls at from \$3 to \$6 or \$8 per dozen. These birds seem larger and heavier than I have seen raised in California, although I see no reason why California should not produce as large fowls as any other country, inasmuch as she excels almost every other country in the production of large things, from a four and a-half pound pear to a two hundred pound squash, and trees thirty feet in the diameter of their trunks, which tower over three hundred feet high.

These poultry shows are becoming quite common in this State. Two large ones, one at Utica and another at Buffalo, have been held within a few weeks past, and are represented, like the present one, to have been very successful, both in a financial point of view and as a stimulant to the prosecution of this useful enterprise. One of the bronze turkeys at this show weighed thirty pounds, and some of the brahma cocks as high as fifteen pounds.

I will give you the names of some of the principal prize-takers at this exhibition, so that any of your readers in California who may wish to order choice fowls or eggs from reliable parties may know who to address.

Premium List in Part.

LIGHT BRAHMAS.—To John H. Hall, Catherline, Schuyler County, first and second premium. Second premium, B. B. Stephens, Farmer Village.

DARK BRAHMAS.—F. Butts, Farmer Village, first premium and silver cup; James Brooks, Trumansburgh, second premium.

PATRIDGE COCHINS.—John H. Hall, first and second premium and silver cup; Wm. Bothy, North Hector, third premium.

BUFF COCHINS.—H. Butts, first premium and silver cup; S. P. Stone, second premium; Wm. Baby, third premium.

WHITE COCHINS.—John Brooks, Lodi, first premium; Anesey Woodruff, Farmer Village, second premium; James Brooks, third premium.

HOUDANS.—Fitzhugh Miller, Genoa, first premium and silver cup; S. P. Stone, Farmer Village, second premium.

GAMES.—Fitzhugh Miller, Genoa, first, second and third premiums and silver cup. Golden Seabright Bantam, S. P. Stone, of Farmer Village and James Brooks, of Trumansburgh.

BRONZE TURKEYS.—M. McDuffy, Farmer Village.

The shows at Buffalo, Pampan and Utica, were on a larger scale than the one here noticed, but as I was unable to attend the larger ones, I have thought this might be of interest to your readers.

The transition from the mild winters of California to these bleak storms and zero ranges of the thermometer, is somewhat chilling. But clad in my arctic over-hoes and arctic gloves, and Teuton fur robe I make out to keep from freezing, and hope to be again in my sunny home in the Sacramento Valley within two or three weeks from this time. Yours Truly, T. HART HYATT.

FIRE-BRICK stoves for hot blast furnaces are attracting a good deal of attention among iron producers. The improvement is designed to increase and utilize all the heat of the blasts and consequently to decrease the consumption of fuel necessary in operating the furnace. The greatest temperature which can be got through the usual system of metal pipes, without danger of the pipes melting, is 1,200 to 1,300 degrees, but with these new fire-brick stoves, the temperature may be advanced, without risk of damage, to 2,000 degrees.

The addition of a small quantity of boric acid to milk retards the separation of cream, and the milk does not become sour when kept several days. Beer also, to which boric acid has been added, does not so quickly become hard.—Hirschberg.

A Monster Ditching Plow.

Henry Sonther, of San Felipe, who intends putting in two thousand acres of cotton in the Kern river country, has constructed a mammoth plow having the following dimensions, as described by the *Gilroy Advocate*: Its beam is in the shape of an ordinary plow-beam, fourteen feet long by eighteen feet deep in the center, and six inches thick. The standard is five feet high, made of two bars of iron, one by three inches in thickness, welded together in the center, and spread two feet apart at the bottom. The land side is ten feet long, made of one by five-inch iron. The cutter is made of cast steel, one by three inches thick, and five feet high. The mould board is made of three-eighth inch boiler iron, ten feet long and three feet high. The handles are made of ordinary spring wagon poles, bent in the shape of plow-handles. Everything about the machine is made in the most substantial manner and of the best materials, thoroughly braced and strengthened, to bear the heavy strain it must be subjected to. The plow, with its heavy gearing, it is estimated, will exceed five thousand pounds in weight, and will require seventy-five to one hundred horses to draw it, when down to its greatest working capacity. It is claimed that this machine will throw out a ditch four feet deep by five feet wide. It is an unwieldy-looking instrument, and but few who have seen it have any faith in its working. Mr. Sonther has spent much time and money in its construction, and is quite sanguine of its ultimate success. The result of this experiment will be looked for with interest, for should it prove practicable it will be invaluable as a ditcher for irrigation or drainage purposes.

A BIG STORY ABOUT A LITTLE PIG.—J. Roberts, of Buchanan Co., Iowa, related the following in the *Iowa Homestead* last season: "Now Bro. Wilson, I have a little circumstance to relate that may be rather a hard pill for some of your readers to swallow, but nevertheless true: On the night of January 7th, Bro. I. C. Hubbard, the Worthy Secretary of my Grange, lost a very valuable pig in that long to be remembered snow storm. The snow was drifted so deep around his barn and hog pens, that he knew not where to look for his lost swine. He hunted, but in vain; his pigswill was nowhere to be found, and he gave up his Berkshire as lost. To his great astonishment on last Monday, the 24th day of March, his long lost pig made his appearance, or rather the snow was melted from his solitary abode and he was once more permitted to see the light of day, after being in utter darkness for the space of seventy-six days and nights, with nothing to console or comfort him but the dreary walls of his snowy prison. He was under snow eight or ten feet in depth. Brother Hubbard thinks he weighed eighty pounds when lost, and will hardly weigh twenty now; but is seemingly in good health, and appears to have the right use of his mind, for he went to eating corn when it was offered him. Now, Mr. Editor, if any of your readers can make a bigger hog story out of so small a pig as this, and tell the truth, let's hear from them!"

VESSEL FOR TRANSPORTING GRAIN IN BULK. Cross-stays are placed about half way between the deck and the bottom of the vessel, and are connected for the support of the sides. Stanchions are placed on each of the cross-stays, supported at right angles with the deck, and have partition boards upon each side, which divide the portion of the hold above the cross-stays into three compartments. The partition boards on the inside of the stanchions extend from the deck about one-third the distance to the stays. Those attached to the outer sides of the stanchions extend from the cross-stays upward a short distance above the lower edges of the inner partition boards, so that the two boards of each set of stanchions lap past each other. The compartments are connected by the spaces between the stanchions, so that the grain may pass over the outside partitions from the outside compartments, and under the inside partitions into the central compartment. This is done as the vessel rolls and is careened. The result is, the central compartment is soon filled after the vessel commences to roll, and the grain in that compartment is retained. By this improvement, shifting of cargo, it is claimed, is so prevented that no damage can occur, and the vessel is navigated as easily as it is when laden with immovable cargo.

SAFETY ATTACHMENT FOR CAR TRUCKS.—The rollers are about three times as wide as the truck wheels, and are provided with short side flanges, and turn in bracket-shaped bearings, which are pivoted in suitable manner to the cross-piece, to keep square on the track in case the truck is thrown off the track. They are hung at such height above the track that they just clear the same, the flanges keeping them on the track when thrown into use. The rollers may be connected suitably to the engine, to notify the engineer when the wheels are off the track. On the damaging or detaching of any wheel, they carry immediately the truck, taking the place of the wheels, and may prevent damage and accident.

A NEW packing for stuffing boxes is made of saw-dust mixed with talc, plumbago, plumbago, black-lead, or other like substance. The saw-dust must be well sifted, and that from white wood cut with the grain is preferred.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. O. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

California Subordinate Granges.

[This list contains the names of Masters and Secretaries, so far as reported to us, elected to serve during the year 1874. Secretaries and others will greatly oblige us by making needful corrections.]

ALAMEDA COUNTY.

CENTREVILLE GRANGE, Centerville, Alameda Co.: JAMES SHINN, Master; J. L. BEARD, Sec'y.
EDEN GRANGE, Hayward, Alameda Co.: THOS. HELLAR, Master; WM. OWEN, Sec'y. Agent, GEO. C. BAXTER.
LIVERMORE GRANGE, Livermore, Alameda Co.: DANIEL LEMAY, Master; P. R. FASSETT, Sec'y.
TEMESCAL GRANGE, Oakland, Alameda Co.: E. S. CARR, Master; JOHN COLLINS, Sec'y.

BUTTE COUNTY.

CHICO GRANGE, Chico, Butte Co.: W. M. THOMP, Master; J. W. SCOTT, Sec'y. Agent, W. M. THOMP.
NORD GRANGE, P. O. Nord, Butte Co.: G. W. COLBY, Master; ALBERT CARMEN, Sec'y.

COLUSA COUNTY.

ANTELOPE VALLEY GRANGE, Colusa, Colusa Co.: H. A. LOGAN, Master; A. T. WELTON, Sec'y.
CENTRAL GRANGE, P. O. Colusa, Colusa Co.: J. P. KIMBELL, Master; W. G. SANDER, Sec'y.
COLUSA GRANGE, Colusa, Colusa Co.: W. K. ESTELL, Master; R. JONES, Sec'y.
FRESHWATER GRANGE, P. O. Colusa, Colusa Co.: I. H. DURHAM, Master; R. A. WILLEY, Sec'y.
FUNK SLUGH GRANGE, Colusa, Colusa Co.: E. O. HUNTER, Master; GEO. B. HARDEN, Sec'y.
GRAND ISLAND GRANGE, Sycamore, P. O. Colusa Co.: J. J. HICOR, Master; J. O. WILKINS, Sec'y.
OLIMPO GRANGE, Olimpo, Colusa Co.: F. C. GRAVES, Master; W. H. GLEN, Sec'y.
PLAZA GRANGE, Olimpo, Colusa Co.: F. C. GRAVES, Master; W. F. GREEN, Sec'y.
PRINCETON GRANGE, Princeton, Colusa Co.: A. D. LOGAN, Master; R. R. RUSH, Sec'y.
SPRING VALLEY GRANGE, Spring Valley, Colusa Co.: D. H. ARNOLD, Master; L. T. HAYMAN, Sec'y.
UNION GRANGE, P. O. Princeton, Colusa Co.: M. DAVIS, Master; ISAAC L. MCDANIEL, Sec'y.
WILLOWS GRANGE, P. O. Princeton, Colusa Co.: J. W. ZUMWALT, Master; GEO. T. HICKLIN, Sec'y.

CONTRA COSTA COUNTY.

ANTIOCH GRANGE, Antioch, Contra Costa Co.: J. P. WALTON, Master; J. D. DARRBY, Sec'y.
DANVILLE GRANGE, Danville, Contra Costa Co.: CHAS. WOOD, Master; JOHN B. SYDNER, Sec'y.
POINT OF TIMBER GRANGE, Antioch, P. O. Contra Costa Co.: R. G. DEAN, Master; J. E. W. CAREY, Sec'y.
WALNUT CREEK GRANGE, Walnut Creek, Contra Costa Co.: NATHANIEL JONES, Master; WM. K. DALY, Sec'y.

EL DORADO COUNTY.

CLARKSVILLE GRANGE, Clarksville, El Dorado Co.: ROBT. T. MITCHELL, Master; S. M. CASE, Sec'y.
PILOT HILL GRANGE, Pilot Hill, El Dorado Co.: P. D. BROWN, Master; A. J. BAYLEY, Sec'y.

FRESNO COUNTY.

ADAMS GRANGE, Big Dry Creek, Fresno Co.: T. P. NELSON, Master; THOS. H. WYATT, Sec'y.
BORDEN GRANGE, Borden, Fresno Co.: J. W. A. WRIGHT, Master; J. S. PICKENS, Sec'y.
FRESNO CREEK GRANGE, Fresno, Fresno Co.: J. W. A. WRIGHT, Master; THOMAS HYATT, Sec'y.
FRESNO GRANGE, Fresno City, H. W. FASSETT, Master; F. DUB, Sec'y.
GARRETTSON GRANGE, King's River, W. J. HUTCHISON, Master; W. W. PHILLIPS, Sec'y.

HUMBOLDT COUNTY.

ELK RIVER GRANGE, Eureka, Humboldt Co.: THEODORE MEYER, Master; D. A. DEMERITT, Sec'y.
FERNDALE GRANGE, Ferndale, Humboldt Co.: F. L. BOSTON, Master; G. W. GRIFFITH, Sec'y.
KIWELETT GRANGE, Arcata, Humboldt Co.: LEWIS R. WOOD, Master; D. D. AVERILL, Sec'y.
ROHNERTVILLE GRANGE, Rohnertville, Humboldt Co.: B. T. JAMESON, Master; H. S. CASE, Sec'y.
TABLE BLUFF GRANGE, Table Bluff, Humboldt Co.: JACKSON SAWYER, Master; B. H. O. POLLARD, Sec'y.

KERN COUNTY.

BAKERSFIELD GRANGE, Bakersfield, Kern Co.: S. JEWETT, Master; GEORGE THOMAS, Sec'y.
KERN ISLAND GRANGE, P. O. Bakersfield, Kern Co.: P. D. ROBB, Master; J. F. GORDON, Sec'y.
NEW RIVER GRANGE, P. O. Bakersfield, Kern Co.: JOHN G. DAWES, Master; JAS. DIXON, Sec'y.

LAKE COUNTY.

OTENOC GRANGE, Guenoc, Lake Co.: H. A. OLIVER, Master; A. A. RITCHIE, Sec'y.
KELSEYVILLE GRANGE, Kelseyville, Lake Co.: D. P. SHATTUCK, Master; T. ORNSTON, Sec'y.
LAKEPORT GRANGE, Lakeport, Lake Co.: C. CUTTER, Master; N. PHILLIPS, Sec'y.
LOWER LAKE GRANGE, Lower Lake, Lake Co.: A. E. NOEL, Master; HORACE STOW, Sec'y.
UPPER LAKE GRANGE, Upper Lake, Lake Co.: D. V. THOMPSON, Master; D. Q. MCCARTY, Sec'y.

LOS ANGELES COUNTY.

ALLIANCE GRANGE, El Monte, Los Angeles Co.: S. S. REEVES, Master; J. W. MARSHALL, Sec'y.
AZUSA GRANGE, El Monte, Los Angeles Co.: W. W. MAXEY, Master; J. C. PRESTON, Sec'y.
COMPTON GRANGE, Compton, Los Angeles Co.: C. W. COLTREN, Master; J. A. WALKER, Sec'y.
ENTERPRISE GRANGE, Los Angeles, Los Angeles Co.: A. M. SOUTHWORTH, Master; W. T. HENDERSON, Sec'y.
EL MONTE GRANGE, Los Angeles Co.: G. C. GIBBS, Master; P. O. Los Angeles, J. H. GRAY, Sec'y; P. C. El Monte.
EUREKA GRANGE, Spadra, Los Angeles Co.: T. C. TANNER, Master; JOSEPH WRIGHT, Sec'y.
FAIRVIEW GRANGE, Anaheim, Los Angeles Co.: EDWARD BRYCE, Master; D. EDWARDS, Sec'y.
FLORENCE GRANGE, Los Angeles, Los Angeles Co.: JOSEPH RUSSELL, Master; WILLIAM PORTER, Sec'y.
FRUIT LAND GRANGE, Tustin City, Los Angeles Co.: A. B. HAYWARD, Master; E. H. NICOLAS, Sec'y.
LOS ANGELES GRANGE, Los Angeles Co.: T. A. GAREY, Master; T. D. HANCOCK, Sec'y.
LOS NIETOS GRANGE, Los Nietos, Los Angeles Co.: E. B. BRANDON, Master; P. O. Los Angeles; J. F. MARQUIS, Sec'y; P. O. Anaheim.
NEW RIVER GRANGE, Los Nietos, P. O. Los Angeles Co.: WILLIS NEWTON, Master; S. G. BAKER, Sec'y.
ORANGE GRANGE, Richland, Los Angeles Co.: JOSEPH BEACH, Master; J. W. ANDERSON, Sec'y.
SILVER GRANGE, Los Nietos, Los Angeles Co.: H. L. MONTGOMERY, Master; P. McDonald, Sec'y.
WESTMINSTER GRANGE, Anaheim, P. O. M. B. CRAIG, Master; HENRY STEPHENS, Sec'y.

MARIN COUNTY.

NICASIO GRANGE, Nicasio, Marin Co.: H. T. TAFT, Master; J. W. NOBLE, Sec'y.
POINT REYES GRANGE, Point Reyes, Marin Co.: A. H. STENSON, Master; JOHN A. UPTON, Sec'y.
TOMALES GRANGE, Tomales, Marin Co.: WM. VANDERBILT, Master; R. H. PRINCE, Sec'y.

MENDOCINO COUNTY.

LITTLE LAKE GRANGE, Little Lake, Mendocino Co.: B. G. MAST, Master; W. A. WRIGHT, Sec'y.
MANCHESTER GRANGE, Manchester, Mendocino Co.: JOSEPH WOODEN, Master; B. F. MCCOY, Sec'y.
POTTER VALLEY GRANGE, Pomo, Mendocino Co.: J. MEWHINNEY, Master; T. MCCOWAN, Sec'y.
UKIAH GRANGE, Ukiah City, Mendocino Co.: W. D. WHITE, Master; A. O. CARPENTER, Sec'y.

MERCED COUNTY.

BADGER FLAT GRANGE, Kreyenhagen's P. O., Merced Co., via Gilroy; W. W. PARLIN, Master; ALFRED P. MERRITT, Sec'y. Agent, W. F. CLARE.
HOPKIN GRANGE, Hopeton, Merced Co.: JOHN RUNDLE, Master; T. EAGLESON, Sec'y.
LOS ANOS GRANGE, Kreyenhagen's P. O., Merced Co., via Gilroy; WM. M. VINEY, Master; A. MCCLELLAN, Sec'y.
MERCED GRANGE, Merced, Merced Co.: W. E. ELLIOT, Master; F. TADLOCK, Sec'y. Agent, W. P. FOWLER.
SNELLING GRANGE, Snelling, Merced Co.: DANIEL YEIZER, Master; W. L. HANLIN, Sec'y.

MONTEREY COUNTY.

HOLLISTER GRANGE, Hollister, Monterey Co.: J. D. FOWLER, Master; S. F. COWAN, Sec'y. Agent, J. D. FOWLER.
SALINAS GRANGE, Salinas, Monterey Co.: N. L. ALLEN, Master; SAMUEL CASSIDY, Sec'y. Agent, W. L. CANTER.

NAPA COUNTY.

CALISTOGA GRANGE, Calistoga, J. N. BENNETT, Master; L. HOPKINS, Sec'y.
NAPA GRANGE, Napa City, Napa Co.: JAMES M. THOMPSON, Master; J. WALTER WARD, Sec'y. Agent, W. A. FISHER.
ST. HELENA GRANGE, St. Helena, Napa Co.: J. H. ALLISON, Master; J. L. EDWARDS, Sec'y.
YOUNTVILLE GRANGE, Yountville, Napa Co.: J. M. MAYFIELD, Master; FRANK CRIPPIN, Sec'y. Agent, J. M. MAYFIELD.

SACRAMENTO COUNTY.

ELK GROVE GRANGE, Elk Grove, Sacramento Co.: CHADWICK S. FREEMAN, Master; DELOS GAGE, Sec'y.
ENTERPRISE GRANGE, P. O. Brighton, Sacramento Co.: J. M. BELL, Master; MORRIS TOOMEY, Sec'y.
FLORIN GRANGE, San Joaquin Township, Sacramento Co.: CALVE ARNOLD, Master; WM. SCHOLEFIELD, Sec'y.
FRANKLIN GRANGE, G. Oregon, Sacramento Co.: AMOS ADAMS, Master; P. K. BECKLEY, Sec'y.
SACRAMENTO GRANGE, No. 12, Sacramento, Sacramento Co.: W. S. MANLOVE, Master; A. S. GREENLAW, Sec'y.

SAN BERNARDINO COUNTY.

RIVERSIDE GRANGE, Riverside, San Bernardino Co.: E. G. BROWN, Master; W. W. KIMBALL, Sec'y.
SAN BERNARDINO GRANGE, P. O. San Bernardino, San Bernardino Co.: ————, Master; J. F. GOULD, Sec'y., San Bernardino.

SAN JOAQUIN COUNTY.

ATLANTA GRANGE, Morano, San Joaquin Co.: W. J. CAMPBELL, Master; PUTMAN VISHES, Sec'y. P. O., Morano, San Joaquin Co.
CASTORIA GRANGE, Lathrop, San Joaquin Co.: SEWALL GOWER, Master; J. STABHAN, Sec'y.
GRAYSON GRANGE, Grayson, San Joaquin Co.: I. G. GARDNER, Master; GEO. H. COPELAND, Sec'y.
LIBERTY GRANGE, Acampo, San Joaquin Co.: JUSTUS SCHOMB, Master; J. E. LEE, Sec'y.
LINDEN GRANGE, Linden, San Joaquin Co.: JOHN WASLEY, Master; JAMES WASLEY, Sec'y.
LOCKFORD GRANGE, Lockford, San Joaquin Co.: G. O. HOLMAN, Master; SOL. S. STEWART, Sec'y.
LODI GRANGE, Lodi, San Joaquin Co.: J. W. KEARNEY, Master; MRS. NELLIE CROUCH, Sec'y.
RUSTIC GRANGE, Lathrop, San Joaquin Co.: J. A. SHEPHERD, Master; HENRY MOORE, Sec'y.
STOCKTON GRANGE, Stockton, San Joaquin Co.: WM. L. OYSTER, Master; G. E. PIERCE, Sec'y.
WEST SAN JOAQUIN GRANGE, Ellis, San Joaquin Co.: M. LAMMERS, Master; GEO. E. MCSTAY, Sec'y.
WILDWOOD GRANGE, Wildwood School House, San Joaquin Co.: JUS. LEIGHTON, Master; A. B. MUMSON, Sec'y.
WOODBIDGE GRANGE, Woodbridge, San Joaquin Co.: J. L. HUTTON, Master; A. S. THOMAS, Sec'y.

SAN LUIS OBISPO COUNTY.

ARROYO GRANDE GRANGE, Arroyo Grande, San Luis Obispo Co.: W. H. NELSON, Master; D. F. NEWSON, Sec'y.
CAMBRIA GRANGE, Cambria, San Luis Obispo Co.: O. H. IVINS, Master; HERBERT OLINSTEAD, Sec'y.
MORO CITY GRANGE, Moro, San Luis Obispo Co.: A. J. MOTHERHEAD, Master; H. Y. STANLEY, Sec'y. Agent, A. J. MOTHERHEAD.
OLD CREEK GRANGE, Old Creek, San Luis Obispo Co.: ISAAC FLOOD, Master; M. M. PRESTON, Sec'y.
SAN LUIS OBISPO GRANGE, San Luis Obispo, San Luis Obispo Co.: WM. JACKSON, Master; E. L. REED, Sec'y.
SANTA MARIA GRANGE, Sney Station, San Luis Obispo Co.: JOEL MILLER, Master; M. D. MILLER, Sec'y.

SAN MATEO COUNTY.

OCEAN VIEW GRANGE, Ocean View, San Mateo Co.: I. G. KNOWLES, Master; EDWARD ROBSON, Sec'y.
PESCADERO GRANGE, Pescadero, San Mateo Co.: B. V. WEEKS, Master; H. B. SPRAGUE, Sec'y.

SANTA BARBARA COUNTY.

CARPENTERIA GRANGE, Carpinteria, Santa Barbara Co.: O. N. CADWELL, Master; GEORGE THUMANN, Sec'y.
CONFIDENCE GRANGE, Guadalupe, Santa Barbara Co.: A. COPELAND, Master; J. T. AUSTIN, Sec'y.
SANTA BARBARA GRANGE, Santa Barbara, S. B. Co.: O. L. ABBOTT, Master; O. KENNEY, Sec'y.

SANTA CLARA COUNTY.

MAYFIELD GRANGE, Mayfield, Santa Clara Co.: F. W. WEISHAAR, Master; JAS. M. PITMAN, Sec'y.
SAN JOSE GRANGE, No. 10, San Jose, Santa Clara Co.: G. W. HENNING, Master; MISS JEFFERSON WATKINS, Sec'y.
SANTA CLARA GRANGE, Santa Clara, P. O., Santa Clara Co.: H. M. LEONARD, Master; I. A. WILCOX, Sec'y.
SARATOGA GRANGE, Saratoga, Santa Clara Co.: FRANCIS DRESSED, Master; MISS JENNIE FARWELL, Sec'y.

SANTA CRUZ COUNTY.

PAJARO GRANGE, Pajaro, Santa Cruz Co.: D. M. CLOUGH, Master; O. W. ROADHOUSE, Sec'y and Agent.
SANTA CRUZ GRANGE, Santa Cruz: G. C. WARDWELL, Master; J. W. MORGAN, Sec'y.
WATSONVILLE GRANGE, Watsonville, J. McOALLAM, Master; A. F. RICHARDSON, Sec'y.

SOLANO COUNTY.

DENVERTON GRANGE, Denverton, Solano Co.: J. B. CARRINGTON, Master; G. O. ARNOLD, Sec'y.
DIXON GRANGE, Dixon, Solano Co.: J. C. MERRYFIELD, Master; JAMES A. ELLIS, Sec'y.
ELMIRA GRANGE, Vacaville, Solano Co.: J. A. CLARK, Master; M. D. COOPER, Sec'y.
GEORGIANA GRANGE, Rio Vista, Solano Co.: F. M. KITTRELL, Master; GEO. A. KNOTT, Sec'y.
MONTEZUMA GRANGE, Coltonville, Solano Co.: THOS. T. HOOPER, Master; C. KNOX MARSHALL, Sec'y.
RIO VISTA GRANGE, Rio Vista, Solano Co.: A. B. ALSIP, Master; J. H. GARNER, Sec'y.
ROCKVILLE GRANGE, Cordelia, Solano Co.: W. A. LATTIN, Master; J. R. MORRIS, Sec'y.
SUISUN VALLEY GRANGE, Suisun, Solano Co.: J. M. LEMMON, Master; A. T. HATCH, Sec'y.
VACAVILLE GRANGE, Vacaville, Solano Co.: E. R. THURBER, Master; OSCAR DOBBINS, Sec'y.
VALLEJO GRANGE, Vallejo, Solano Co.: G. C. PEARSON, Master; CHAS. B. DEMINO, Sec'y.

SONOMA COUNTY.

BENNETT VALLEY GRANGE, Santa Rosa, Sonoma Co.: J. DE TURK, Master; J. H. PLANK, Sec'y.
BLOOMFIELD GRANGE, Bloomfield, Sonoma Co.: WM. H. WHITE, Master; J. H. FREEMAN, Sec'y.
BODEGA GRANGE, Bodega, Sonoma Co.: J. H. HEGLER, Master; W. SMITH, Sec'y.
CLOVERDALE GRANGE, Cloverdale, Sonoma Co.: CHAS. H. COOLEY, Master; J. B. COOLEY, Sec'y.
GEYSERVILLE GRANGE, Geyserville, Sonoma Co.: CALVIN W. BOWWORTH, Master; R. R. LEIGH, Sec'y.
HEADSBORO GRANGE, Headsboro, Sonoma Co.: CHARLES ALEXANDER, Master; MRS. S. A. PECK, Sec'y. Agent, P. S. PECK.
PETALUMA GRANGE, Petaluma, Sonoma Co.: L. W. WALKER, Master; D. G. HEALD, Sec'y. Agent, W. M. HILL.
SANTA ROSA GRANGE, Santa Rosa, Sonoma Co.: GEO. W. DAVIS, Master; J. A. O'BRIEN, Sec'y.
SEBASTOPOL GRANGE, Sebastopol, Sonoma Co.: M. G. HICKS, Master; JOSEPH PURRINGTON, Sec'y.
SONOMA GRANGE, Sonoma Co.: P. O., Sonoma, Sonoma Co.: WM. MCP. HILL, Master; W. A. BERRY, Sec'y.
TWO ROCK GRANGE, Two Rock, Sonoma Co.: JOHN R. DOSS, Master; JOHN H. FREEMAN, Sec'y.
WINDSOR GRANGE, Windsor, Sonoma Co.: A. B. NALTEY, Master; J. H. MCCLELLAND, Sec'y.

STANISLAUS COUNTY.

BONITA GRANGE, Crow's Landing, Stanislaus Co.: J. W. TREADWELL, Master; A. B. CROOK, Sec'y.
CERES GRANGE, Westport Precinct, Stanislaus Co.: W. B. HARP, Master; C. N. WHITMORE, Sec'y.
COTTONWOOD GRANGE, Hill's Ferry, Stanislaus Co.: J. L. CRITTENDEN, Master; J. J. TOYLE, Sec'y.
OAK DALE GRANGE, Oak Dale, Stanislaus Co.: A. S. ENEMY, Master; C. B. INOALLS, Sec'y.
ORISTIMBA GRANGE, Hill's Ferry, Stanislaus Co.: W. J. MILLER, Master; THOS. A. CHAPMAN, Sec'y.
SALIDA GRANGE, No. 8, Modesto, P. O., Stanislaus Co.: B. F. PARKER, Master; A. H. ELLER, Sec'y.
STANISLAUS GRANGE, Modesto, Stanislaus Co.: J. D. SPENCER, Master; VITAL E. BANGS, Sec'y.
TURLOCK GRANGE, Turlock, Stanislaus Co.: A. S. FULKERTH, Master; JOHN A. HENDERSON, Sec'y.
WATERFORD GRANGE, Waterford, Stanislaus Co.: R. R. WARNER, Master; W. C. COLLINS, Sec'y.

SUTTER COUNTY.

SUTTER GRANGE, Meridian, Sutter Co.: W. C. SMITH, Master; M. C. HUNTERFORD, Sec'y.
YUBA CITY GRANGE, Yuba City, Sutter Co.: GEO. OHLEVEN, Master; S. R. CHANDLER, Sec'y.

TEHAMA COUNTY.

RED BLUFF GRANGE, Red Bluff, R. H. Blossom, Master; JOHN CURTIS, Sec'y.

TULARE COUNTY.

CHRISTMAS GRANGE, P. O. Visalia, Tulare Co.: A. B. COREY, Master; W. H. STUART, Sec'y.
DEEP CREEK GRANGE, Farmersville, W. G. PENNEBAKER, Master; P. J. JEFFERDS, Sec'y.
FRANKLIN GRANGE, Kingston, F. WYRUCK, Master; A. B. CROWELL, Sec'y.
LAKE GRANGE, Kingston: M. S. BABCOCK, Master; J. E. J. BENEDICT, Sec'y.
TULE RIVER GRANGE, Porterville, Tulare Co.: G. A. WILLIAMSON, Master; N. T. BLAIR, Sec'y.
VISALIA GRANGE, Visalia, Tulare Co.: WILEY WATSON, Master; H. G. HODGE, Sec'y.

VENTURA COUNTY.

PLEASANT VALLEY GRANGE, Pleasant Valley, Ventura Co.: D. R. DONDERUSH, Master; B. BROWNING, Sec'y.
SATICOY GRANGE, P. O. San Buenaventura, Ventura Co.: MILTON WASSON, Master; E. A. DUVAL, Sec'y.

YOLO COUNTY.

ANTELOPE GRANGE, W. J. OLARK, Master; O. L. N. VAUGHN, Sec'y. P. O. Antelope, Yolo Co.
BUCKEYE GRANGE, Yolo Co.: P. O., Buckeye, Yolo Co.: WM. SIMS, Master; L. MOONY, Sec'y.
CACHE CREEK GRANGE, Cache Creek, Yolo Co.: D. B. HEDBURN, Master; L. D. STEPHENS, Sec'y.
CAGAY VALLEY GRANGE, Cagay, Yolo Co.: R. R. DARTBY, Master; P. M. SAVAGE, Sec'y.
DAVISVILLE GRANGE, Davisville, Yolo Co.: OHAS. E. GREEN, Master; JOHN KRIMER, Sec'y.
HULLY HILL GRANGE, P. O., Yolo, Yolo Co.: G. L. PARKER, Master; C. O. PEARSON, Sec'y.
WEST GRAFTON GRANGE, Yolo, Yolo Co.: A. W. MORRIS, Master; GEO. W. PARKS, Sec'y.
YOLO GRANGE, Woodland, Yolo Co.: W. M. JACKSON, Master; D. SCHINDLER, Sec'y. Agent, W. M. JACKSON.

YUBA COUNTY.

MARYSVILLE GRANGE, Marysville, Yuba Co.: C. G. BOCKUS, Master; JAS. M. CUTTS, Sec'y.

Deputies who organize new Granges are requested to send the list of officers, and the names of all charter members, with other facts of interest, for free publication in the RURAL PRESS, as early as possible.

Endorsement.

The following resolutions, passed by the Grayson Grange, endorsing Bro. J. G. Gardiner, our present efficient State agent, have been forwarded to us with a request for their publication in the RURAL PRESS. We cheerfully comply:

The officers and members of Grayson Grange No. 31, P. of H., do resolve as follows:

1st. That we, as a Grange, do cordially endorse the appointment of J. G. Gardiner, our late Master, as State Agent of the Order, to reside in San Francisco, and that we tender him any addition to his bonds that he may require.

2nd. That we tender him our thanks for his past exertions for our interests, and for the general welfare and usefulness of the Order throughout the State. Hoping that happiness and prosperity will ever follow him, we bid him God-speed.

GEO. H. COPELAND, Sec'y, Grayson Grange.

Throwing off Partisan Influence.

The people of Oregon are evidently ripe for political independence, and are already moving to effect a result which shall leave old political ideas and prejudices out of sight. They hold that it is mainly through political leaders and partisan rings that the agricultural, mechanical and laboring interests of that State have been criminally neglected and outrageously taxed, and the will of the people, through petitions and otherwise expressed, shamefully disregarded, while just and reasonable economy in the administration of public affairs has been openly set at naught.

The movement in this direction has been earnestly initiated in Douglass county. A large number of the prominent citizens of that county signed and published a call for a County Convention which was to have met at Roseburg on Saturday last. The signers of this call, at an informal meeting, passed, among other resolutions, the following, setting forth their views and intentions:

Resolved, That, as Farmers, Mechanics and Laboring Men, we cut ourselves loose from all party obligations in local affairs, and rally under the banner broad enough to embrace all who favor just laws and oppose cliques, rings, combinations of monopolies, extravagance, and disregard of economy in County, State and Nation.

Resolved, That we look upon the present mode of choosing candidates through the nominating conventions, each party acting separately, managed and controlled as they are by cliques and rings, as the foundation and cause of our political corruption; and are convinced that it is this buying, bartering and selling system, which forces honest men to the rear, while members of rings and unscrupulous politicians are pushed directly to the front.

THE "INDEPENDENT GRANGERS."—It appears by telegraphic dispatches that the Boston Grange, which was declared not to be in good standing by the National Grange, has declared itself independent of the national Order, adopted declarations of principles, and invited other organizations to unite with them, as Independent Granges. Further dispatches state that they have gone into the Albany movement of "Independent Grangers," as noticed in these columns two weeks ago, and that a general meeting has been called at Springfield, on Friday evening, (yesterday) to perfect a national organization. They invited the citizens of other States sympathizing with the movements of the delegation from Boston, to be present at the meeting. This movement shows the great importance of Deputies and Granges everywhere, being especially mindful of the injunction against the admission of any but farmers, and even then, those only whose interests are most intimately identified with the actual farm, and its products and sale, at first hands. Those who buy farm produce to sell over again, are in no manner identified in interest with the farmer, and should not be admitted to the Grange. The instance of the Boston Grange should be a perpetual warning for all future time.

The People's Army.

A noble army is that which is organized under the banners of the Patrons of Husbandry. A vast army, too—numbering not less than one million! thoroughly drilled and disciplined—not to kill and destroy, but to save and build up. The emblems of this great army are the pruning hook, and other tools connected with work on a farm, together with the leading products of the soil. Its mission is to cultivate the arts of peace; to promote love and good feeling, not only among its members, but throughout the community, and to disseminate knowledge, and refine and elevate the race. Since the world began, no movement has been initiated by man having so wide a scope for good, or so well designed to carry out the great work for which it has been designed. From the earliest history till now, the farmer, in furnishing food for himself and others, has done more to create actual wealth, than all other industries combined; indeed, his avocation—the only God-ordained industry on earth—is at the bottom, and furnishes the foundation of all other industries. Take away the products of the farms, and where would be the values that have been created in this great city of San Francisco? Her wharves would be deserted, grass would grow in her streets, and her population would dwindle to one-third of its present number.

Till now, the farmer has toiled on in isolation and neglect; his children following in the beaten track of their fathers. Neglected as a class, and ignorant or unmindful of his power and numbers, he has suffered under the rule of a reckless minority, and has been subjected to all manner of extortion, retaining for his labor a bare support, while his legitimate winnings have built cities, initiated and extended railroads, covered the ocean with ships, and enriched nations. But under the new order of things the farmers propose to reap the full, legitimate reward of their labors, and take the influential part in the management of public affairs to which their industry and numbers entitle them.

Two years ago their pretensions in this direction were scouted, and ridicule and contempt was heaped upon a delegation which was sent to represent their interests at the legislature of the largest farming State in the Union.

To-day they hold within their grasp the political power of that very State, and the farmer, from his field and by the side of his plow, dictates terms of compromise to those who so lately held him in scorn. His influence is felt and respected in every State in the Union, and politicians, from the President down, are humbly bidding for his favor. A year ago the wealthy capitalist and the lordly railroad magnate sneered at the idea that farmers could ever accomplish anything by combination, or otherwise, which would reach them in their state of fancied security. To-day both capitalist and railroad magnate are at the feet of the farmer.

But, however powerful and overwhelming has, or may, become the great movement which has been set on foot by the tillers of the soil, they will prove a magnanimous foe. They have no enemies to punish, no friends to reward. All they ask is their just rights in the great battle of life—a fair distribution of the winnings of labor and capital. They demand that a given amount of labor and capital in the valley of the San Joaquin shall earn just as much and no more than the same amount of labor and capital on Montgomery or Front street in San Francisco. That and nothing more.

RECONSIDERING IN CASE OF ELECTING CANDIDATES.—A brother submits the following: I see by the RURAL it is ruled that after a candidate is elected to take the first degree, he is entitled to the second, third and fourth without ballot; if so, should we do away with the ballot after election to the first degree? I take it, according to the above ruling, that we cannot reject a candidate by ballot after being elected to take the first degree; therefore I wish to ask this question:

Would it be in order, or could we by any means reconsider a vote by which a candidate has been elected to take the first degree, and is not yet initiated; or must charges be preferred against him after initiated if we wish to get rid of him?

[We see no reason why a vote to reconsider should not be in order at any time before initiation. Reconsidering is a privilege inherent to every voting body. In the case cited, if the vote to reconsider would prevent the very unpleasant matter of preferring charges, we should most assuredly save the feelings of all parties by the more simple and milder act of reconsideration. Of course this is a matter which should be referred to the Master of the State Grange. But as that officer is now absent in the Eastern States, and cannot be readily reached, we would venture the above opinion—mindful of the fact that decisions can be made only by the Master.—EDS. PRESS.]

PATRONS APPRECIATED.—An exchange says that the Patrons of Iowa have been requested by the Senate of that State to put into the shape of a bill the regulations to which they would like to have the railroads submit. The Senate of Iowa appears to hold the Grangers of that State in higher esteem than does the Senate of California the Grangers of this State. But then it will differ after the next election, you know. We can wait.

From the Granges.

FRUITLAND GRANGE, LOS ANGELES Co.—Secretary E. R. Nicles writes to the *Granger* as follows: "Fruitland Grange is situated in the eastern portion of Los Angeles county, in the valley of the Santa Ana river. It embraces the towns of Santa Ana and Tustin, and their surrounding settlements. It lies wholly on the south-eastern side of the Santa Ana river, and mostly south of the Santiago, the main tributary of said river. Its available area of land is about forty square miles. Our Grange numbers about forty substantial farmers and their families. So you perceive that we are not crowded, only about one family to the square mile, but then all have not joined the Grange yet; in fact, I think less than half of the farmers have come in, but they keep coming about as fast as we can receive them. Many new settlers are coming in here, and we want a great many more, and can accommodate all with homes where they can have a soil that will produce in abundance as great a variety as any in the world, and a climate unexcelled by any known—in fact, this comes as near being the 'summer land' as any imagination could conceive."

SANTA CLARA GRANGE turned out *en masse* today (last Saturday), leading 27 new members to their Harvest Feast. Fortunately we found an empty store, 70 feet long, in the Brick Block beneath our rooms, which served as a capital banquet hall for the occasion. Refreshed and invigorated, the procession was re-formed, and all returned to their allotted stations in the Hall, and proceeded to business, which was dispatched in a way to show that the Grange is in good working order.

The Constitution of the County Council, adopted at San José, last Monday, was read and ratified; and delegates were elected to represent this Grange in that body for the coming year.

Some animated discussion was called out by important questions under consideration; much earnestness and zeal were displayed, but the usual union and harmony prevailed. Twenty new applications were read from the Secretary's desk; and all went to their homes well pleased with each other, with themselves, and with their day's work. I. A. WILCOX, Sec'y.

DANVILLE GRANGE, CONTRA COSTA Co.—Noticing that you devote a portion of your very excellent paper each week to the use of the Granges, I have concluded to remind you that we have a large one at Danville, numbering some 68 members, and all of the best material, with the prospect of a large addition as soon as the mud dries up. We held an election last November, and all of the officers were re-elected. They are Chas. Wood, M.; J. J. Kerr, O.; D. A. Sherburne, S.; Jonathan Hoag, L.; R. B. Love, C.; D. A. Caldwell, A. S.; R. O. Baldwin, T.; J. B. Sydnor, Sec'y; William Bell, G. K.; Mrs. Sallie Boone, Ceres; Miss Libbie Labarce, Pomona; Miss Emma Hayes, Flora; Mrs. Rice, L. A. S. We as yet have been unable to install, owing to the inclemency of the weather and condition of the roads. The attendance generally is very good, particularly of the officers, with the exception, I am sorry to say, of our worthy Secretary. Though they do say that you can always find him on hand at every Harvest Feast. Fraternally yours, ANON.

SANTA ROSA GRANGE, SONOMA COUNTY.—J. A. O'Brien, Secretary writes: "The Santa Rosa Grange is in a flourishing condition. Since its organization, just nine months ago, we have held a meeting every week and always had a fair attendance. The number of members has increased to 46 males and 23 females, and new applications come in every week. Among the subjects lately under discussion, are the erection of a warehouse and the building of a hall for our meetings. At our previous meeting, Bros. S. T. Coulter, A. J. Mills and Geo. W. Davis were elected members of the Board of Trustees. It may be said that the Santa Rosa Grange, however relatively small in number of members, will not be behind any other Grange in the State, but will surely effect much for the good of the farmers in this part of Sonoma county and of the Order in general."

UKIAH GRANGE, MENDOCINO Co.—Bro. Carpenter writes: "The Granges are doing well here. We initiated four last Saturday, and now number 40. On Saturday the 7th, the Potter Valley Grange initiated 43 new members. All report that the meeting for social enjoyment and interchange of ideas are more than sufficient to compensate the time and pecuniary expense of the organization. [Our brother will find the names of the missing Granges all right in our Directory as published to-day.]

MAYFIELD GRANGE, SANTA CLARA Co.—James M. Pitman, Secretary of this Grange, which was organized on the last day of January, writes to the *Granger*, as follows: "The Grange is doing nicely here at present. We hope in a few weeks to be in good running order, and to have a large addition to our members."

FRESNO CITY GRANGE.—Will the Secretary of this Grange forward us the name of its present Master, so that the next publication of our 'Grange Directory' may be complete in this particular?

OCEAN VIEW GRANGE.—Bro. Baxter visited his newly organized Grange on Tuesday last. They had a full meeting and a very interesting session.

New Granges.

OAK DALE GRANGE.—Deputy Master J. D. Spencer, of Stanislaus county, on Saturday, Feb. 21st, organized a Grange of twenty charter members at Oak Dale, Stanislaus county. The following named members were elected as officers: A. S. Emery, M.; David Monroe, O.; J. C. Booth, L.; Frank Henderson, S.; C. R. Callender, A. S.; F. G. Whitley, Chaplain; Wm. W. Rutherford, Treasurer; C. B. Ingalls, Secretary; S. Callender, G. K.; Mrs. Mary Crow, Ceres; Mrs. E. V. Ingalls, Pomona; Mrs. A. Emery, Flora; Mrs. E. Lowell, Stewardess.

OCEAN VIEW GRANGE.—State Secretary Wm. H. Baxter, organized a Grange with 28 charter members at School House Station, San Mateo county, on February 20th. J. G. Knowles was elected Master, and Edward Robson, Secretary.

County Council Organized at Suisun.

EDITORS PRESS:—A County Council of Patrons of Husbandry for Solano county, was organized here to-day, which elected the following officers to serve for the term of one year. J. B. Carrington, Master; G. C. McMullin, Overseer; O. Bingham, chaplain; J. M. Dudley, Lecturer; J. M. Jones, Secretary; S. G. Little, Treasurer; W. A. Lattin, Steward; J. A. Clark, Asst. Steward and K. M'Pherson, Gate Keeper. The following were elected Trustees of the Council: H. T. Pringle, J. A. Clark, A. B. Alsip, S. G. McMahon and J. P. Jones.

W. H. Baxter, Sec'y State Grange, was present and, by request, addressed the council at some length upon matters of interest to the Order.

L. C. HAWLEY, Acting Sec'y.
Suisun, Feb. 27, 1874.

Council for Santa Barbara and San Luis Obispo.

Secretary D. J. Nawsome, of Arroyo Grande Grange, writes as follows:

There will be a meeting of delegates from the Granges of this county, and Santa Maria and Confidence Granges, of Santa Barbara county, at the town of San Luis Obispo on Tuesday, March 17, for the purpose of organizing a District Council. Our crops are looking well and I think we will have a large amount of farm produce to dispose of this year if the grasshoppers will let us alone. I have been visited by them for three years, in which time they have damaged me several thousand dollars. My wife and myself are preparing to meet them this year with an army of turkeys, ducks and chickens.

ALAMEDA COUNTY COUNCIL.—A preliminary meeting for organizing this Council was held at Livermore, Feb. 27th, and a second meeting at Haywards, March 3d. Daniel Inman, Master of Livermore Grange, was elected President of the meeting, and Thos. Hellar, Master of Hayward Grange, Secretary. Several committees were appointed. Each Grange in the county is requested to elect Delegates for one year, in the ratio of one delegate to every fifteen members, and any fraction of not less than ten members. The meeting for final organization is called at Centerville, next week.

THE "PATRONS" ON HORSE-RACING.—The Masters of all the Granges in Los Angeles and San Bernardino counties—seventeen in number—have united in a petition to the Legislature, asking for an appropriation to the "Agricultural and Mechanical Exposition of Southern California," to aid in fitting up its grounds to hold its first annual Exposition, the coming fall. This association has recently been organized, for the reason that the old organization, known as the "Southern California District Agricultural Association," has so far degenerated from its proper sphere as to become a mere cloak for horse-racing, not so much for the trial of speed as for the purpose of affording facilities for pool-selling—as is shown from the fact that the amount thus sold during the week of their last fair reached a total of \$24,500. Moreover, it is shown that at the same fair, where \$3,650 were paid as premiums on horse-racing, only \$843 were paid on all other articles. The Patrons of that county say that they can see no "reason why the State of California should thus encourage public gambling under the guise of fostering agricultural interests," and therefore "most respectfully protest, in the names of the farmers of Southern California, against extending further aid to that association."

We see no reason why the prayer of the petitioners should not be granted.

GRANGE BULLETIN.—The Secretary of the Santa Clara Grange has conceived and executed an excellent idea. It is simply a bulletin board, whereon he tacks every communication to the Grange, so that those who may not happen to be present at the reading, may nevertheless see. He also writes thereon anything he may have to say in the way of announcements, etc. The board is put up just inside the door, during the sessions of the Grange. A good suggestion to other secretaries.—*Granger.*

The Sewing Machine Agencies and the Patrons.

It is well known to the Patrons of Husbandry in this State, that an organization has existed for sometime past between that body and the sewing machine agencies of this city by which these agencies agreed to furnish sewing machines to Patrons, through the State Agency at wholesale prices. A short time since however, a portion of these companies saw fit to cancel this agreement, and did so by the following circular, signed as below and forwarded to the State agency in this city, and, we presume to the local Granges throughout the State:

DEAR SIR:—It having become manifest that the future interests of our business, as well as satisfactory results to purchasers of our sewing machines will be seriously impaired by a concession in prices being made to Granges or individual members thereof, we would respectfully announce that from and after this date no deviation from our regular retail prices will be made under any circumstances to retail purchasers, and our agents are instructed to that effect. You will oblige by communicating the above to the members of your Grange.

Very respectfully, Wheeler & Wilson, M'fg Co., E. W. Harral, agent; Grover & Baker, S. M. Co., R. G. Brown, agent; Howe Machine Co., H. A. Deming, agent; Singer Manufacturing Co., R. H. Yates, agent; Weed Sewing Machine Co., Albert Mead & Co., agents; Wilson Sewing Machine Co., G. A. Norton & Co. agents; Domestic Sewing Machine Co., N. A. Handy, agent.

One of these circulars, having reached Dixon Grange, Solano county, has called forth the following letter in relation thereto, from the Secretary, J. A. Ellis, of that Grange, with a request for its publication in the *RURAL PRESS*:

Now, Mr. Editor, from the foregoing, it is plain to be seen, there is a combination among these "very respectable gentlemen;" and, their asking me to communicate the result of their alliance to the members of my Grange, appears as a slap in the face, as to our endeavor to do what is right, without wronging any one. The members of our Grange were very much surprised when I read the foregoing to them; for it is our endeavor to equalize the profits with all manufacturers; and, we desire to receive, as well as pay, full compensation to all classes of trade. The signers of the above document have, perhaps ignorantly, mistaken our aims; or, it may be, they have willfully undertaken to thwart our success, by throwing this obstacle in our way; but, let me assure them that they have only increased our efforts to accomplish our desires; that is, to try to secure the greatest good to the greatest number. I did not intend, in the outset, to be as vindictive as their organized monopoly combination communication seemed to be to us; but I wish to inform those manufacturers that the members of Dixon Grange can do without their sewing-machines; and, as an evidence of that fact, the following resolution was passed unanimously:

Resolved.—That we will not purchase any sewing machines of the manufacturers, or their Agents, who have signed the foregoing communication; and we will use our endeavors to prevent any of our sister Granges from purchasing any of the signers of that article.

Resolved.—Further that a copy of this resolution be published in the *RURAL PRESS* for the benefit of the above Sewing Machine companies.

JAMES A. ELLIS, Sec'y, Dixon Grange.

[It will be observed by a careful examination of the signatures to the circular of the Sewing Machine companies, that all the companies have not signed that document; so that the Patrons of Husbandry are not thereby entirely cut off from this needed supply, even on the terms which they have heretofore obtained. And while we have no fear that those who still hold out will, either from choice or compulsion, go back upon their agreement at any day in the near future, we may remark that in case such a thing should happen, sewing machines can easily be obtained from the East, by the State Agency, through the same channels by which the Granges there have been supplied, in cases where local agencies have there refused to supply them at liberal wholesale rates.]

OUR GRANGE DIRECTORY, for March, will be found in its appropriate place in the present issue. It presents quite a formidable array, and numbers one hundred and sixty-three Granges. The severe weather of the past few months and the necessity for close attention to farm work, when anything could be done, has greatly retarded both the formation of new Granges, and the filling up of those already in existence. Yet, with all this disadvantage, the Order has made a most remarkable progress in this State, and the work of filling up the ranks is equally satisfactory. The Grange is now a power in this State which cannot be ignored. We trust and fully believe it will be also a power for good.

THE ORDER IN OREGON.—A correspondent of the *Willamette Farmer* says that there are now considerably over 100 Granges in Oregon. This is a most remarkable progress for a State of such small population to make in less than ten months.

TO BE ORGANIZED.—Bro. Baxter, State Secretary, will organize a new Grange at Sunol, a point between Haywards and Livermore, this (Saturday) afternoon.

Business Relations of the Granges.

In that carefully written and able document, the declaration of purposes, set forth by the National Grange at its late meeting at St. Louis, and understood to have been drafted by Bro. J. W. A. Wright of this State, may be found the following clear and comprehensible statement under the head of "Business Relations of the Granges." It should be read by every one, in or out of the order, who desires to form a correct and intelligent idea of what the Patrons of Husbandry propose to do, as a business organization.

For our business interests, we desire to bring producers and consumers, farmers and manufacturers, into the most direct and friendly relations possible. Hence we must dispense with a surplus of middle-men; not that we are unfriendly to them, but we do not need them.

Their surplus and their exactions diminish our profits.

We wage no aggressive warfare against any other interests whatever. On the contrary, all our acts and all our efforts, so far as business is concerned, are not only for the benefit of the producer and consumer, but also for all other interests that tend to bring these two parties into speedy and economical contact. Hence we hold that transportation companies of every kind are necessary to our success, that their interests are intimately connected with our interests and harmonious action is mutually advantageous.

Keeping in view the first sentence of our declaration of principles of action, that "Individual happiness depends upon general prosperity," we shall, therefore, advocate for every State the increase in every practicable way of all facilities for transporting to the sea-board, or between home producers and consumers, all the productions of our country. We adopt it as our fixed purpose to "open out the channels in nature's great arteries that the life-blood of commerce may flow freely."

We are not enemies of railroads, navigable and irrigating canals, nor of any corporations that will advance our industrial interests, nor of any laboring classes.

In our noble Order, there is no communism, no agrarianism.

We are opposed to such spirit and management of any corporation, or enterprise, as tends to oppress the people and rob them of their just profits.

We are not enemies to capital; but we oppose the tyranny of monopolies.

We long to see the antagonism between capital and labor removed by common consent, and by an enlightened statesmanship, worthy of the nineteenth century.

We desire only self-protection, and the protection of every true interest of our land by legitimate transactions, legitimate trade and legitimate profits.

Not Up to Their Pledges.

The Napa Grange is of the opinion that some of their county officers are displaying such masterly inactivity in carrying out their pledges before the people as to merit the serious notice of the electors of the county. Senator Pendergast appears to be particularly offending in this particular, and especially with reference to the Salary Bill; which he desires should be made to take effect at a long distance in the future. Immediate reform, is the motto of the Grange which passed the following resolutions at one of their late meetings:

Resolved. That the action of our Hon. Senator in opposition to the spirit of the public meetings of the citizens, called by himself on several occasions, and notably so on the occasion of the public meeting of the citizens of the county, which called the Committee of Eleven into being.

Resolved. That the proposition of the Hon. Senator in making the proposed new Salary Bill take effect only two years hence is in the strictest violation of the instructions given by the people previous to the late elections, the candidates of all the political parties having pledged themselves to resolutions seeking a reduction of salaries of officers; and it is notorious that the effect of the passage of the Bill, as amended by our Senator, would increase doubly, in some cases, the salaries of our county officers.

Resolved. That the reasons given by the Senator in his aforesaid letter are not good, nor in accordance with facts, and we most respectfully ask our Senator to reflect.

Resolved. That we think the county officers elect are displaying such "masterly inactivity" in carrying out their pledges before the people as to merit the serious notice of the electors of the county.

Resolved. That our sister Granges of the county be furnished with a copy of these resolutions.

The Independent Granges, a society which oppose the farmers' Granges, met to perfect their organization at Albany, February 17th. Thus we have the parasite following the beetle.—*Germantown Telegraph.*

Yes, but a good distance in the rear, friend *Telegraph*; and we accept the comparison with thanks. The beetle is a steady-going respectable sort of a chap and has always been held up to our admiration, by the philosophers, as the highest example of strength and determination.

CONSTITUTION AND BY-LAWS ADOPTED.—Funk Slough Grange, No. 99 Colusa, has adopted the code recommended by the State Grange. Monthly dues 25 cts. St. Helena Grange, has adopted largely an original code. Monthly dues 25 cts.



OLD FARMER JOHN.

Old Farmer John is more perplexed—
Nay, Farmer John is sorely vexed;
He labors early, labors late,
Yet ever finds an adverse fate;
For all his toiling scarce suffice
Of needed clothes to pay the price.

The summers come, the summers go.
The spring showers waste the winter's snow—
The while, from dawn to close of day,
Receiving naught but smiles for pay,
His good wife toils; and anxious care
Has faded lip and cheek and hair.

Acres on acres stretch away,
Of woodland, corn, of wheat and hay;
His cattle roam o'er many a hill,
His brooklet turns the groning mill;
Yet this abundance nothing yields,
To pay the mortgage on his fields.

Four sturdy sons, four daughters fair,
Claimed at his hands a father's care.
He gave them labor without end,
And strove their souls like his to bend
Into the narrow groove of thought;
Interest to be earned, clothes to be bought.

No books; no pictures on the wall;
Carpetless rooms, and dreary hall.
Why think it strange such farmer's boys
Should seek the city's pomp and noise?
Should learn to loathe the sight of home,
Where naught or grace or joy may come?

Yes, Farmer John is growing poor!
You feel it as you pass his door.
His old brown house is small and mean;
The roof is warped by crack and seam;
The leaning bars, the half-binged door,
Proclaim old John is very poor.

Why think it strange his poor old wife,
Who coined for him her very life,
Should pause at last 'neath fortune's frown,
And lay her weary burden down
In joy, to walk the streets of Heaven,
Where naught is sold, but all is given?

Old Farmer John still tills the soil,
Gains bare subsistence by his toil,
While railway Kings in wealth may roll
From Transportation's heavy toll;
But, with the Grange, a ray of light
Is dawning on the farmer's night.

—Industrial Age.

More About Hired Help.

HEALDSBURG, Feb. 21st.

EDITORS PRESS:—I am thinking that you will become tired of this subject, but you invite all to write for the PRESS, and when you think this train has run far enough please put down the breaks, and I will not complain.

I know by experience, and observation that many who hire help are imposed upon in a shameful manner; but this does not prove that all are mean, and low, who "earn their bread by the sweat of their brow" on the farm. I think there are far too many in the various callings in life, who "walk disorderly, and obey not the truth."

For example: look at some of the Lawyers, (and who are they but hired men?) they do some very dirty work too, for cash. They would not steel a pair of blankets, not they; but they strip the widow and fatherless of that which would buy many blankets, and have made the farmers of California more trouble than all the hired help put together.

And yet as they pass by in style, men bow very low, and say: "smart fellows; getting rich too."

But if honest poor men pass by, they stand erect and think, at least, "God I thank thee that I am not as other men are."

I have often noticed that men, and women who have worked out, are the hardest to please; not that working out necessarily makes them disagreeable, but it seems natural for some to show their authority when they can.

While this is true, it is also a fact that many of the best men in our land began poor.

In families where there are several boys, and the farm does not afford employment and support for all, some of the sons, go out to work until they get a start in life. Then again misfortunes fall very heavily upon many, and it becomes needful, for a time at least, that they should work wherever they can find an opening.

"Peasants oft are fit for Princes
And Princes fit for something less."

I think every person should be prized according to their intrinsic worth. There is no other true standard. I like the sentiment of the "Grangers wife" in your last issue, but as I have read "Ranchero's" article, I thought I would like to add my humble opinion to hers.

R—would have every one around him, feel inferior. Is this the best way to elevate man? Does it help them to live better lives?

"Man's inhumanity to man
Makes countless thousands mourn."

I wonder if R— ever learned the "golden rule"?

If all employers should follow his advice, it would not be long until every young man of intelligence would seek some other occupation, where he would be received as "a man among men." This would leave none but the poorest help. The same is true indoors; it is nearly impossible to get a good girl. And why? be-

cause girls who have education enough to obtain a third grade certificate, go to teaching school; then they mingle in the best society, and somehow the public does not see that they are "hired."

I beg pardon for writing so long an article, but the interest I feel in the moral, social, and financial prosperity of our land, is the only excuse I have to offer for writing at all.

S.

[We have already given a large space to this subject, and will conclude with the following extracts from other correspondence.—EDITORS PRESS.]

SAN JOSE, Feb. 10, 1874.

EDITORS PRESS:—"Ranchero" in the PRESS of the 7th inst. in indorsing the views of "A Granger's wife" in a former number, rather, in my humble opinion, goes beneath the well known hospitable characteristic of California farmers, when they thus tightly and unhumorously (pardon the word) draw the lines of demarcation between employer and employee.

It is reasonable to presume that labor and capital are absolutely essential to each others existence, and in order to develop to the fullest extent the complete capacities of both, they must harmonize and not clash. There should be no such thing as oppression or proscription of the part of either towards the other. What employers want is intelligent laborers. Now, how can you think of ever increasing the knowledge of the individual who gives you a fair equivalent for your money, with his services, if you deny him the small but blessed privilege, after his days toil is accomplished, of improving his mind from the perusal of books from your shelves, or elevating his moral temperament by listening at least, to intelligent conversation from your family circle? What interest do you suppose a hired man can take in your affairs if he is continually reminded by you of his menial condition? Do you see nothing human nor intellectual in your hired man.

It is to your interest, and should be your office to elevate, not trample upon those less fortunate than yourself.

The most successful farmer I ever knew was one who associated with his workmen, who did not seem to consider himself any better than they. His men liked him, and his interests were completely subserved. His was a model farm, and he often remarked as his years ripened, that he owed it all to the industrious hand of the common laborer, and felt proud to have them sit by his fireside and enjoy themselves in his company.

I would that there were more like him, and that our friend Ranchero would copy him, and take a deeper and more earnest look down into the great well of human nature.

AEMILIUS KAMP.

ELMIRA, Solano Co.

EDITORS PRESS:—I as a farm laborer, would like to give my ideas concerning the treatment that is due to a "hired" man. Why is not a man that is good enough to work for you not good enough for your family circle, table and house?

Now I contend that your hired man should be treated with kindness. He should be allowed the privilege, after his day's work is done, to seek what little recreation your family circle may offer. If he be ever so wicked elsewhere, the society of ladies will always be a means of restoring him to a sense of honor and respect.

You hire him at so much per month and board. You should give him good board, as that is part of his salary. If you deprive him of good, substantial food, you rob him of his salary. You should not put him out in the barn to sleep, or any place where you would not willingly go yourself. You must not give him to eat scraps from your table, and coffee that looks as if some dirty sock had been washed in warm water, and given to men to drink. Your hired man should have free access to books and papers, whereby to cultivate his mind. He should in all cases be treated with respect; for he is a man, as good as you, for has not God created all alike?

A FARM LABORER.

UKIAH VALLEY, Feb. 12, 1874.

EDITORS PRESS:—Hired men are not the only class to which tyrants belong. We find those who owe to tyrannize over their fellows in every class, from the prince to the beggar. In our own experience, we have known hired men who were scholars and gentlemen in every respect. Then why, I ask, exclude them from our tables and our firesides; for no other reason than that they are hired to labor?

I think that it is this very same aristocratic idea which makes it so difficult to get a girl to do housework. I imagine that there are plenty of girls who would be glad to earn their own living, if it were not for the fear of being looked down upon.

In my opinion it is far more respectable for man or woman to go out to work than to spend their time in idleness, depending upon their relatives for support.

BERTHA.

TOMALES, Feb. 22d.

It is not our province as Grangers to endeavor to create an aristocracy, as we see its bad effects all over the world; but we should, to the utmost of our abilities, strive not only to elevate ourselves socially, morally and politically, but we should also assist our fellow

man. The time is fast approaching when we shall need the assistance of our hired help to fight the great battle of reform; and their influence can now be either gained or lost, according to the treatment they receive. Kindness begets love, respect and a cheerful, honest performance of duty.

A TOMALES GRANGER'S WIFE.

Man—His Past and Future, and the House Wherein he Dwelleth.

BY ERIKONA.

ARE ALL MANKIND OF THE SAME ORIGIN?—Can the Caucasian race have given birth to all the others? The answer to this by any one who had not reflected on the subject, and who had nothing but his own limited experience, would be invariably "no!" That is, if he had not learned from the Bible that God made all men that dwell on the earth of one blood. Universal experience would be against it. But universal experience can not here be taken as a safe guide; for it does not know of the changes that may be produced by removal from one country to another. All it proves is that the same race, in the same country, preserves the same characteristics, unvaried from age to age, and from century to century. Thus, the Caucasian of Europe is the same to-day that he was in the days of Solomon; and the negro still preserves the same color, and the same lineaments which were given to him three thousand years ago, by the artists of the Pharaohs, on the rock-hewn tombs of Egypt.

Experience shows that removal from one country to another is attended by a change in physical characteristics. In all European colonies, in hot countries, there is a marked difference observable between the new comer and the one who has dwelt 'neath the rays of a tropical or semi-tropical sun for a number of years. Thus, the Australian and African colonists are bronzed looking; many shades removed from the fresh, fair color of their kindred in Europe. The change becomes more marked in their children; and, in New South Wales, in Australia, and in Natal, in Africa, a sallow color is prevalent, and those who are obliged to work under the sun, have a Mongolian, and, in some instances, a mulatto tint. English officers, who have seen hard service in India, come back all with darker complexions; some not to be distinguished from Hindoos, or mulattoes. The sallow, Chinese color of the so-called white people, of the Spanish-American countries of Cuba, Jamaica, and Brazil is well known. There are hundreds of Chinese in San Francisco fairer than the Creole inhabitants of these countries. There is a marked difference between the Canadian and the Lonsianan, between the New Englander and the Texan.

Some, however, think inhabitants of Brazil, or tropical Africa, do not become absolutely black like the negro inhabitants of those countries; the theory that the black race is descended from the Caucasian is untenable. And so it might well be held to be if these children lived as the colored natives of these regions live. Place a pair of white people, male and female, in Brazil or tropical Africa without clothes to shelter their bodies from the rays of the burning sun; let them live by the chase or by a precarious agriculture; let their children run about naked, and let this continue for two or three centuries—and is there anyone who believes that they would preserve their original color and conformation? They could not. They would either die away or their physical constitution would change to suit the physical conditions surrounding them. They would most infallibly become black, and the color would become hereditary after a few generations. There are many circumstances that tend to show the probability of this. We have mentioned some already. It is well known that there exist black Jews in Cochín, India, who claim to be of pure Hebrew blood and to have settled there ten centuries ago. In form and feature they are like all other Jews, the national character is plainly stamped on their physiognomy, but they are black. Have they been intermixed with the natives? They may have, but owing to the rarity of marriages of Hebrews outside of their own people and owing to the strong caste system of India, there is room for doubt. But the same difference is observable amongst these remarkable people, even where there can be no suspicion of marriage outside of their own race, at least not to any appreciable extent. What a difference there is between the light hair, blue eyes, and fair skin of an English Jew, and the black hair, black eyes, and olive complexion of a Spanish Jew, and the Mulatto complexion of a Morocco Jew. The Arabs are another widely distributed race. Some are fair as Spaniards; others are darker even than Negroes. But they are not Negroes. Every thing, features, build, hair, speech is Arab, all but the color. The fair Arabs dwell in the northern part of Arabia in Palestine, Persia, and northern Africa. The colored live in southern Arabia, the black in the upper valley of the Nile. The Abyssinians are coal-black Caucasians. They speak a language akin to the Arabic. Are they of mixed negro blood? It is not likely. A Mulatto shows Negro features and characteristics an Abyssinian or a black Arab does not. All black people are not Negroes.

The fact that climate changes color may be seen by an inspection of a world map, to be a

universal law, not only in man but in the beasts; even in the vegetable kingdom. The nearer you approach the Equator the darker the people become; the further you recede from it the lighter. And there are no startling transitions, but the shades of color merge into one another by almost imperceptible gradations. The fair Englishman, German and Scandinavian give place to the olive Spaniard and Italian; these are succeeded by the Mulatto, colored Moors and Kabyles, the latter by the yet darker Tibboos and Tuaricks, inhabiting the wide deserts of the Sahara; then come the Fellatahs, darker yet, and last of all the black Negroes of the coast of Guinea. South of the Equator the skin again grows lighter until we find the Bechuanas and the Hottentots, in South Africa, with complexions which are only sallow, resembling those of the Mongols. Here again we find, as in Abyssinia, Caucasians with dark skins—the Kaffirs of the South. Here we find five shades of color between the white and the black skinned people. The shades are not the same all through. The northern Spaniard is fairer than the southern, the northern Moor than the southern, and each shade of color passes into the other at its geographical limits, without any sensible gradation. Through fifty degrees of latitude, all the shades between the extremely fair and extremely dark complexion are found. It is the same among the aboriginal inhabitants of America, although here the dark color of Africa or Southern Asia is never approached—circumstances not favoring it. Amongst the Mongol nations the same changes are noticed. The Mongol proper is no darker than a Spaniard or a Texan, and the northern Chinese has red cheeks and skin as fair as the Italian. But proceeding from north to south the natives of the province of Quang Tong, though indisputably Chinese, are almost Negro in features and complexion. So also in India. The natives of Northern India and the hill country are fair, those of the South though Caucasian in form and features, excel some of them, the Negro in darkness of skin.

WAYS OF CARRYING BABIES.—In the Vienna exposition are a number of models illustrating the style in which women of different nations carry their babies. The Asiatic Indian woman carries hers in a blanket hanging in front somewhat below the waist; the Bengalese woman, with the child astride low down upon her left hip, and her left arm supporting its back. The figure seems quite indifferent as to the difficulties in this style of carrying, which must be a highly artistic performance if does cleverly in reality. The Egyptian woman carries hers in a stately manner, the child sitting astride her shoulder with its hands upon her head, and without any clothing to speak of. The Brazilian woman carries hers in a somewhat similar manner, also in full undress, it sitting astride her neck. The Chinese baby is carried upright upon the back in a blanket, and the South African in a bag in front, formed by a blanket about the hips of the mother. The lower Austrian woman carries hers by swinging it in a blanket over one shoulder upon her back, while the northern Austrian carries hers bound upon a board, after the styles of candy-models in confectionery stores. The Lapland baby is carried in a sledge-shaped cot, made of leather. It seems to have been chucked in, feet foremost, and then a frame tied over the opening for its face, whether to prevent it from crawling out or to keep the dogs from kissing it, is more than can be imagined. The most unique style of all is that of the Esquimaux women, who wears wide, high-top boots, and puts the baby, right-end foremost, down in the outside of one of them, and doubtless, according to Dr. Kane's description of her style, carrying her cooking and heating utensils in the other. The North American woman carries her papoose strapped to a board, and that strapped upon her back a band over the forehead.

DISAPPOINTED MEN.—It is a sad and dreary thing to trace the history of the public men of this nation, and our best public men. They have chased after vain show, most of them. I think some of the greatest men that have died in my day died disappointed in the best end and ambition of their life. And young men who are growing up, and may be called to public trust, ought to look upon these things and see what men sow and reap. They who build their lives on virtue and truth and the higher elements of manhood, are strong and indestructible; but they who do not build their lives on these things are, as a class, weak and easily destroyed. There are men who practice upon appearances, and whose success is surreptitious; and in the end they come back to disaster. There are honorable exceptions, and they are noticeable because they are exceptions.—Beecher.

THREE questions to be put to ourselves before speaking evil of any man:—First, is it true? Second, is it kind? Third, is it necessary?

Precocious Children.

The Lyons (New York) Press says: "At the annual election of officers of the Presbyterian Sunday-school one year ago, the superintendent, Colonel Kreutzer, offered three prizes to the scholars who would commit to memory the greatest number of verses from the Bible, and recite them in the school. The prizes were \$5, \$3, \$2. At the expiration of the year the prizes were awarded as follows:

"First—Willie Young, who repeated 4,600 verses.

"Second—Thaddeus W. Collins, Jr., 3,620 verses.

"Third—Willie Collins, 2,927 verses."

To which the New York Observer administers the following mild and sensible rebuke:

"It is very well to encourage children to commit to memory portions of Holy Scripture, but there is danger of overdoing the matter, and injuring the child by such rivalry: We would not give premiums to the one who would learn the most; we would recommend to all to learn a moderate portion weekly, but we would not have them attempt to beat one another in Bible lessons."

We would follow up those bright children, to see what they amount to; how much good that straining of such young minds may have done. Will they live and mature, or will they die young? Would it not be more sensible to offer a prize to one who flies the highest kite? or to the boy who climbs the highest greased pole? We believe in committing matter to memory, as a discipline and for future use; but we do not believe in even permitting a child to commit four thousand verses of the Bible, or of any other book, to memory. Look out for brain fever, diptheria, curved spines, or insanity in the case of precocious children. Dr. Holland is right in terming such incitements to juvenile mental effort, "Prizes for Suicide."—*Phrenological Jour.*

CHARMING CANDOUR.—Not long ago the youthful Mr. C—was engaged to manipulate the ivory on a church organ not far from the Hub. At the same church and upon the same occasion a Unitarian clergyman was engaged to officiate in the pulpit. Both of these gentlemen left town the following morning by the same train, and both occupied the same seat, the young organist recognizing the clergyman, but himself unknown to the cloth. Passing the compliments of the morning, the cloth queried whether the young man attended the Unitarian Church on the preceding day. Organ said he had the pleasure, and asked Pulpit how he liked the music. Pulpit said the music would have been excellent if the organ had not been played in so loud and boisterous a manner. Then old Pulpit asked young Organ how he liked the preaching. Organ said, "Not at all; the preacher was too loud and ranting." A gentleman in the next seat who had listened to the conversation, and knew both parties, turned about and kindly introduced the clergyman to the organist.

THE BEAUTY OF HEALTH.—How cheering and charming is the young girl, full of life and energy, with rosy cheek, pearly teeth and sparkling eye. It does not lay her upon the sofa for a day to take a morning's ramble. Her complexion tells of wholesome, nutritious food, and you know by the rosy redness of her lips that her breath is as sweet as the new mown hay. That invalid wives very often lose all influence with their husbands is a notorious, yet not a singular fact, much as it is to be regretted. Nothing will so soon outwear patience or cool the warmth of affection, as the complainings and disagreeable accompaniments of ill health. Girls, if you would be valued, cherished, beloved, attractive and useful wives, cherish good health.

CLEANLINESS.—A neat, clean, fresh-aided, sweet, cheerful, well arranged house, exerts a moral influence over its inmates, and makes the members of a family peaceable and considerate of each other's feelings and happiness. The connection is obvious between the state of mind produced, and respect for others, and for those higher duties and obligations which no laws can enforce. On the contrary, a filthy, squalid noxious dwelling in which none of the decencies of life are observed, contributes to make the inhabitants selfish, sensual, and regardless of the feelings of others; and the constant indulgence of such passions renders them reckless and brutal.—*Saturday Evening Post.*

Young Folks' Column.

Country Children.

Little fresh violets,
Born in the wildwood,
Sweetly illustrating
Innocent childhood;
Shy as the antelope—
Brown as a berry—
Free as the mountain air,
Romping and merry.

Blue eyes and hazel eyes
Peep from the hedges,
Shaded by sunbonnets,
Frayed at the edges;
Up in the apple trees,
Heedless of danger,
Manhood in embryo
Stares at the stranger.

Out in the hilly patch,
Seeking the berries—
Under the orchard trees,
Feasting on cherries;
Trampling the blossoms,
Down among the grasses,
No voice to hinder them,
Dear lads and lasses.

No grim propriety—
No interdiction;
Free as the birdlings
From city restriction!
Cohing the purest blood,
Strengthening each muscle,
Donning health armor
'Gainst life's coming bustle.

Dear little innocents?
Born in the wildwood;
Oh, that all little ones
Had such a childhood!
God's blue spread over them,
God's garden beneath them;
No sweeter heritage
Could we bequeath them!

STRENGTH OF SMALL THINGS.—Among curious experiments recorded, are some trials of the strength of beetles. A dark tube is made of card, closed with glass at one end. This glass is hung on a pivot, like the swinging glass in a church window. The beetle makes for the light, and pushing to get out, lifts from four to ninety times his own weight. The smaller the creature, the greater his power. The mole, or the rabbit makes burrows in which the little ant would be lost, yet the ant's strength is relatively much greater than that of the mole. The excavating power of the latter is, however, most wonderful. We once saw a mole turned out of his track with a spade. The little creature fell upon a gravel walk, and in less time than it takes to write down the fact, the four-footed engineer was out of sight again. An African ant-hill is thousands upon thousands of times larger than the builders. The pyramid of Cheops is but ninety times the height of a man. If a lion had the power of a grasshopper he could leap over a mile; and it has been asserted that if a man could leap like a flea, the misstatements of the celebrated "Moon Hoax" might be corrected by notes taken on the spot.

A BIRD that spends much of his time on factory roofs tells us that folks are beginning to make buttons, combs, door knobs, cups, canes and all sorts of things out of leather. They chemicalize it, he says, chip it up and dissolve it in certain fluids till it is a pulp. Then they make it into useful articles by pressing it into moulds of the required shape. When they take it out of the moulds it is hard and tough. Then they polish its surface in some way and the articles are ready for sale.

So, my dears, you may yet comb your hair with your skate-straps, button your clothes with your boots, drink out of old pocket books and use a worn-out harness for your walking stick.—*St. Nicholas.*

TROUBLES FOR THE TANTALIZER.—Repeat the following half-a-dozen times quickly without stopping:—

Gig-whip.
She sells sea-shells.
Billy Button ate a buttered bisquit.
Did Billy Button ate a buttered bisquit.
If Billy Button ate a buttered bisquit,
where's the buttered bisquit Billy Button ate?

"INVISIBLE" writing.—A solution of cobalt nitrate may be used to write with upon unglazed paper, and the characters will be invisible. Hold it before a fire, and the characters will be distinct. A solution of sulphate of copper will also be invisible, if weak enough, and may be plainly seen if washed with a little ammonia.

GAMES AND TIMES.—The dancing bear.—The lady must tie a piece of ribbon or string around the gentleman's neck, lead him into the center of the room; bid him laugh, sing, dance, and go through any dancing-bear performance for five minutes.

Good Health.

Moisture the Cause of Periodic Fevers.

Dr. A. J. Squire advances, in the *Herald of Health*, a theory which has been before maintained as to the origin of periodic fevers; namely, that these are due, not to vegetable or animal decomposition, nor to hypothesized malarial germs, but simply to moisture. In defense of this supposition, Dr. Squire makes some very good points, and we reprint the more important paragraphs from his article, as containing some interesting observations:

There is no class of diseases more prevalent than periodic fevers. The annual number of deaths from them, as shown by the United States census for 1870, is 11,423, although an important item in our mortality list, conveys but a feeble idea of the amount of sickness, suffering, loss of time, of the impairment of health of body, of the enfeeblement of intellect produced by them.

Of the cause of periodic fevers we have had at different periods several given, to which my limits will hardly allow to allude. But in general terms, when the cause has been claimed to be gas, the objection of the law of gaseous diffusion has destroyed the claim. When it has been claimed to be produced by decomposition of animal matter, the extensive prevalence where there was no animal matter has destroyed the theory of animal decomposition. The theory of vegetable decomposition has shared nearly the same fate. The severe intermittents on the rocky shores of the Mediterranean, and on the sandy plains of Holland, have been cited as conclusive proof against it. In the more recent theories, the poison consists of low animal or vegetable organisms, a constant and indispensable condition for the growth of these organisms is moisture.

The supporters of these theories all tell us these organisms float, and are rapidly produced only "in moist air." To this theory is opposed several facts. Thus, Parks says: "It has generally been supposed that wearing flannel next the skin lessens the risk of malaria. As it is generally believed the poison of malaria enters either by the lungs or stomach, it is difficult to see how flannel next the skin can prevent its action, except indirectly, by preventing the chill in persons who have already suffered from ague. But the very great authority, Andrew Combe, drawn from experience at Rome, is in favor of its having some influence; and it has been used on the west coast of Africa with success."

Having given careful study and attention to this subject for more than thirty years, with constant association with many persons carrying so much fever tendency as to be good misanthropes, and having taken their testimony as to the pernicious effects of moisture, I have been led to question all of the theories heretofore given us. I have noticed the beneficial effects of buffalo robes and overcoats during long night rides in ague districts. I have observed the occurrence of ague in fall and spring, in rooms without fires, while other inmates in other rooms of the same house, with fires, remain free; the fever only ceasing to recur on returning the stoves and warming the rooms. I have observed, too, many cases of fever caused by the dampness of newly-plastered walls, the lime and recent state of surroundings seeming to negative the supposition of either animal or vegetable production. These facts, and many more which might be cited, lead me to believe the disease dependent on moisture.

At the same time there is every reason to believe that animal or vegetable impurities in air or water are liable to undergo changes when combined with heat and moisture, and to become productive of many diseases, and to aggravate all others. It is equally probable that disintegrated tissue contained in the "twenty-eight miles" of tubing of the "seven million" sudoriferous glands, and walled in by moisture, would produce specific poison in those glands—a poison capable of producing ague, or any form of malarious fever. These fevers might be modified, like other diseases, by the quantity of the poison, by the constitution, and many other causes.

Draper cites authority for believing that a person may sleep with perfect safety in the center of the Pontine marshes, by having his room kept well heated by fire during the night. These, and other reasons to be hereafter cited, lead to the conclusion that it is not what we drink nor what we inspire that produces fevers, but that it is what we do not perspire. To illustrate: Let ordinary insensible perspiration equal "thirty-two ounces per day in dry air," and equal "three and one-half ounces in moist air." Then the difference—twenty-eight and one-half ounces—gives us a cause more real and tangible, by twenty-eight and one-half ounces, than any of the heretofore supposed malarious causes. For the most minute microscopic examination has failed to find any of the heretofore supposed causes in the system.

The more carefully one will study the causes heretofore given, the more fully will he be satisfied that their beginning, middle and end is essentially moisture. They all require moisture and the necessary conditions of evaporation. Thus large bodies of water, that absorb the heat, prevent these diseases. Forests, the leaves of which detain and absorb the moisture, prevent them; while marshes, and all other

places holding moisture in the most favorable conditions for evaporation, produce them.

In conclusion, a belief in this theory would lead to improved hygiene and improved health, diminish the severity of periodic diseases, and the frequency of relapses. For when our whole force was properly directed and concentrated, we would accomplish more against moisture, considered as the cause, than when considered only as one of the conditions.

Glue as a Healing Remedy.

T. A. Field writes to the *Scientific American*: "For the last twelve or fourteen years I have been employed in a shop where there are over three hundred men at work, and, as is the case in all shops of this kind, hardly a day passes but one or more of us cut or bruise our limbs. At first there were but few that found their way to my department to have their wounds bound up; but after a while it became generally known that a rag glued on a flesh wound was not only a speedy curative, but a formidable protection against further injury. I was soon obliged to keep a supply of rags on hand, to be ready for any emergency. I will here cite one among many of the cases cured with glue."

A man was running a boring machine, with an inch and a-quarter auger attached; by some means, the sleeve of his shirt caught in the auger, bringing his wrist in contact with the bit, tearing the flesh among the muscles in a frightful manner. He was conducted to my department (the pattern shop), and I washed the wound in warm water, and glued around it a cloth, which, when dry, shrunk into a rounded shape, holding the wound tight and firm. Once or twice a week, for three or four weeks, I dressed the wound afresh, and it was well. The man never lost an hour's time in consequence. The truth of this statement hundreds can testify to. I use, of course, the best quality of glue.

SALT IN SICKNESS.—Dr. Scudder remarks: "I am satisfied that I have seen patients die from deprivation of common salt during a protracted illness. It is a common impression that the food for the sick should not be seasoned, and whatever slop may be given, it is almost innocent of this essential of life. In the milk diet that I recommend in sickness, common salt is used freely, the milk being boiled and given hot. And if the patient cannot take the usual quantity in his food, I have it given in his drink. This matter is so important that it cannot be repeated too often, or dwelt upon too long. The most marked example of this want of common salt I have ever noticed has been in surgical disease, especially in open wounds. Without a supply of salt the tongue would become broad, pallid, puffy, with a tenacious pasty coat, the secretions arrested, the circulation feeble, the effusion at the point of injury serous, with an unpleasant watery pus, which at last becomes a mere sanies or ichor. A few days of a free allowance would change all this, and the patient get along well."

A LECTURE was recently delivered before the society of Arts in London, by Mr. W. E. Newton, in which he attributed various virtues to peat and other vegetable charcoal. He stated that in the form of powder put upon poultices, peat charcoal had been most beneficially employed in some of the London hospitals, especially in cases of offensive sores. It absorbed the putrid effluvia and was of great benefit in cancers, etc. In many cases when taken internally it was productive of good effects in disease of heart and giddiness. In all diseases of the chest, sore throat, diptheria or bronchial affections peat charcoal has been found very useful. In France a scientific commission appointed by the government to investigate this subject has reported very favorably in regard to the usefulness of this substance for a great number of purposes.

STILL another mode of curing corns is offered. If a single one, of the thousands suggested, were really effective, we could dispense with the rest. But, so far as we know, giving barefoot is the only sure cure. Dr. Barbiere, says the Lyons *Medical Journal*, reports the cure of the most refractory corns by the morning and evening application, with a brush, of a drop of a solution of the per-chloride of iron. After a fortnight's continued application, without pain, a patient who had suffered martyrdom for nearly forty years from a most painful corn on the inner side of each little toe, was entirely relieved. Pressure was no longer painful, and Dr. B. believed the cure radical. Two other similar cases were equally successful.

CAMEL-HAIR BRUSHES FOR THE CLEANSING OF WOUNDS.—At a recent meeting of the Clinical Society of London, Mr. Callender brought to the notice of the society the methods he had adopted in his wards at St. Bartholomew's for the dressing of wounds. By the use of brushes, the cleansing of a wound is not a painful process. A further recommendation is that the employment of sponges and other materials commonly used for cleansing wounds, and which some surgeons believe to be a frequent cause of the passage of infectious material from one patient to another, is thus done away with.

TO CURE neuralgia, take the bark of the peach tree, pound it and steep in water. Hold the face over it, so as to thoroughly bathe it in the ascending steam. It is a certain cure.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, Mar. 7, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Beach Mining; Un-estimated; Workmanlike Habits, 145. State Legislature; Agricultural Chemistry; Fruit Packages, 152. Reconstruction of Agricultural Fairs; An Improved Mill Pick; Gas Bracket Match Safe; The California Acclimatizing Society, 153. Patents and Inventions, 156.

ILLUSTRATIONS.—Beach Mining, 145. Gas Bracket Match Safe; Cumming's Mill Pick, 153.

CORRESPONDENCE.—Tap-roots—Italian Rye Grass—Grange Sisters and Dram Drinkers; Notes of Travel—San Joaquin County; Native California Coffee; The Proposed Squirrel Law—Pay of Inspectors, Etc.; Information Wanted; Rural Homes Among the Foothills; Graham Bread Without Yeast; More About Boiling Potatoes, 146-47.

POULTRY YARD.—Poultry Show in Western New York, 147.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 148-9.

HOME CIRCLE.—Old Farmer John (Poetry); More About Hired Help; Man—His Past and Future, and the House Wherein he Dwelleth; Ways of Carrying Babies; Disappointed Men; Precocious Children; Charming Candor; The Beauty of Health; Cleanliness, 151.

YOUNG FOLKS' COLUMN.—Country Children (Poetry); Strength of Small Things; Troubles for the Tantalizer; "Invisible" Writing; Games and Times, 151.

GOOD HEALTH.—Moisture the Cause of Periodic Fevers; Glue as a Healing Remedy; Salt in Sickness; Camel-Hair Brushes for the Cleansing of Wounds, 151.

USEFUL INFORMATION.—Marbled Paper; Tests for Alkaloids; Treatment of New Dwelling Rooms; Solvent Powers of Water; Molding Sawdust; Testing for Copper and Tin; Tragacanth Mucilage; Bursting of Trees and Objects Struck by Lightning; Birds and Cholera; Life Buoys; Sensitive Plants; Improved Manufacture of Artificial Fuel; Improved Button Holder, 154.

THE DAIRY.—Fancy Butter, how Made and Sold; The Situation; Making Butter with Ice; Petaluma Cheese Factory, 155.

AGRICULTURAL NOTES from various counties in California and Oregon, 156.

MISCELLANEOUS.—New and Important Uses of the Orange; Red Top Grass; A Monster Ditching Plow; A Big Story about a Little Pig; Vessel for Transporting Grain in Bulk; Safety Attachment for Car Trucks, 147. San Jose Farmers' Club, 156.

THE PROPOSED SANTA CLARA JUTE FACTORY.—The stockholders and others interested in the projected jute factory at San Jose, held a meeting at Santa Clara on Wednesday of last week, at which several stirring speeches were made and considerable enthusiasm demonstrated. Mr. H. Shartzer subscribed \$1,000 toward the capital stock of the company, and agreed to give another \$1,000 for the first thousandsacks turned out. A committee was appointed to locate a site for the factory. J. M. Swinford was chosen a Director, vice Mr. Moffitt, resigned. On motion, five per cent of the stock taken was directed to be paid at once to the Treasurer, J. M. Swinford. The cost of the enterprise is estimated at \$300,000.

CROSS-CUT SAWS.—In answer to E. F. S., in regard to cross-cut saws, a San Pablo reader of the PRESS says: Tell E. F. S. to put a crooked shaft in the jack-frame of any kind of horse-power; put a balance wheel on where the band wheel usually is; take a four-by-six Oregon stick, nine feet long; slit one end; put the saw in and bolt with three bolts; put a box on the other end, and start the team gently. The crook of the crank will give the desired motion. Two scantling frames are needed to slide the logs on.

SPARE THE BIRDS.—Don't shoot the meadow larks, robins and the turtle doves. The quails should also be protected by law. They all destroy insects, as well as cheer us with songs.

THE Sutter Banner denies the freely circulated reports that the summer fallow and early sown grain of Sutter county is all drowned out. Only a small portion has suffered in that respect.

THE Tulare Times says there are near 500,000 acres of land in Tulare county susceptible of cultivation.

State Legislature.

Some idea of the manner in which business must either be hurried through near the close of the session or be altogether neglected, may be inferred from the fact that on Saturday last there were not less than 150 bills on file, and about 200 more in the hands of the various committees. Of course one month must be too short a time for the proper consideration of any such number of bills—even if a ten-minute rule was enforced on all speakers. It is true much preparatory work has been done, which will greatly facilitate that which yet remains to attend to.

WELL, SO FAR, IN THE ASSEMBLY.—The Assembly has now passed three important measures, viz.—That for the Regulation of Fares and Freight, that for the Reduction of Salaries, and the bill for a proper Apportionment of Representation. It is also well along with the great mass of work before it. The Assembly has thus far represented popular sentiment, and, if it goes through the balance of the session as well as it has progressed thus far, it will meet with the fullest approbation of the people.

THE APPORTIONMENT BILL has gone to the Senate; it is an important measure, and the action of members upon it is being closely scanned. It is not a measure on which members need have much difference of opinion, or one on which it is difficult to come to a conclusion. It passed the Assembly by the decisive vote of 52 to 25. Those who voted in the negative were all representatives of mining counties, save Simpson, of Colusa and Tehama, and Northcutt, of Sonoma. Their reasons for opposing a measure not only required by the Constitution, but demanded by their constituents, are not explained.

THE SALARY BILL, which still reposes in the Senate, should become a law by speedy action. It is estimated that it will save the State over \$80,000 annually, should it pass. The bill is warmly espoused by the independent members.

THE REVENUE BILL hangs fire in the Senate, with many other measures of greater or less importance.

THE IRRIGATION BILLS are still under consideration, in the Assembly. Several modifications made to Mr. Venable's bill, since its introduction, have had the effect of rendering it less objectionable to the mining counties. The *Placerville Democrat*, which led off in opposing the bill, thinks that with the right kind of commissioners to carry its provisions into effect, it could be made a blessing to the State—otherwise it might prove an injury. The Assembly is evidently earnestly at work to devise the best possible plan for a general system of irrigation.

FARES AND FREIGHTS.—The "Farley Committee" of the Senate, which has this bill under consideration, seems to be actively to work at the bill; but manifests very little disposition to make any real progress. It looks very much as though it intended that the "work" upon the bill should continue until the close of the session without any intent of final action. We shall see what we shall see. Several Assemblymen who voted for the bill, have since taken it all back, and are now urging Senators to oppose it. This action appears to have been induced by discovery, that the bill, in arriving at a general adjustment, actually increases the cost at some localities, as in Shasta and El Dorado counties. The people are watching closely the action of Senators in this matter.

The No-fence law, already passed, applies to more than a fifth of the State, and as extensive districts had been covered by previous acts of similar character, nearly half of the tillable land of the State is now relieved from the burdens of fencing against the cattle of outsiders. On the 20th of February the new rule took effect in Santa Barbara, Ventura, and portions of Tulare and Kern counties, and on the 25th of June it will take effect in other portions of Kern and Tulare, and in Monterey and San Luis Obispo. The statute allows any owner or occupant of land—the boundaries of which are distinctly marked—to take up trespassing cattle, charge five cents per day for keeping each hog, sheep or goat, and twenty cents for each animal of the horse or cow kind, and have the animal sold to pay expenses if the owner should not redeem them. The settler who is occupying one hundred and sixty acres of land, without having applied to the Government for privilege, is allowed the same protection as the owner, even if the occupation be only temporary. Thus the dairyman who drives his cows into the Sierra in the summer may squat on a quarter section of land, mark it off, give notice of his occupancy, and thus acquire an exclusive title to all its grass for the season.

A SUPPLEMENTAL FENCE ACT has been introduced into the Senate, extending the time for the operation of the act on uncultivated lands in that part of Fresno south of King's River and east of the railroad, from the twenty-ninth of February to the twenty-fifth of June. An amendment was introduced that the passage of this supplemental bill should not affect any right of action which might have occurred since the twenty-ninth of February. Lindsey strongly opposed the passage of the bill, even as amended, but the bill was passed on call of the ayes and noes, by 19 to 12.

A CONSTITUTIONAL CONVENTION.—It seems difficult to understand why so much interest should be manifested in the Legisla-

ture in favor of a convention to revise the constitution of the State, unless it arises from a desire on the part of the old line politicians and railroad men to run up a fearful bill of expenses the coming year to be made chargeable to the Independent or Reform party in the present Legislature. There is no earthly need of such a convention, and it is to be hoped that the friends of reform and retrenchment in both houses, will, by their votes, wash their hands of any responsibility in the matter, should the measure succeed. It is just as well and much less expensive for amendments to be submitted in the manner prescribed by the constitution itself to two consecutive Legislatures, and afterward be submitted to the people for ratification. There can be no doubt but the people are decidedly opposed to any Constitutional Convention.

THE FIRST VETO of the session was sent to the Senate on Saturday last, and was directed against a bill to increase the salary of the Superintendent of Public Instruction of Los Angeles county, and was thus in favor of retrenchment.

Agricultural Chemistry.

What is agricultural chemistry, and what is its practical use? These are questions naturally suggested to the minds of thoughtful men, and frequently uttered. To describe the nature of agricultural chemistry with any degree of accuracy would necessitate writing a book which should include all of its salient points, a course which would appear hardly necessary, in view of the mass of printed matter already issued upon the subject.

It is certainly true that we have had altogether too much of the vague, unsatisfactory, sensational kind of talk which is prevalent. Agricultural chemistry is made a quasi figure-head by many writers, who confound verbiage with eloquence, and ranting with progressiveness. And it is noticeable that those who are loudest in praise of what is called scientific farming, are usually those who least appreciate the meaning of the term.

While we admit the impossibility of giving a comprehensive description, it may be well to consider briefly the more prominent features of the science. Agricultural chemistry is one of the very youngest of the sciences. Theoretical or abstract chemistry is comparatively new, as it is now understood, and is making such rapid strides forward that the text books of one year must be discarded the next, if one would keep up with the steady march. Some thirty or forty years ago, only, the distinction was accepted between theoretical and technical chemistry. The latter expression was intended to cover all cases where the general science is applied to common things. But as the field broadened and avenues opened out, a still more minute subdivision became necessary. One of the new branches was termed agricultural chemistry, and its real founder and chief exemplar was Baron Liebig. In his studies on the nature and composition of organic bodies, he became interested in the influence of soil upon growth, in a chemical sense, and was led to trace roughly, at first, their minute relations.

It was found that the constituents of vegetable compounds varied much more widely than had been supposed. The proportions of water, fibrin, gluten, alkaline salts, phosphates, etc., were discovered to be entirely different in various plants, and sometimes in the same plant when subjected to dissimilar conditions. Thus the reason why certain plants grew best on certain soils became evident on comparing the analyses of each. True, there are other influences besides chemical combination, which must be considered, such as the capability of retaining moisture and heat, or the contrary, which may be called the mechanical agencies. But, other things being equal, a given plant would require a soil made up of peculiar elements, existing within a fixed limit of quantity; and after long experience it was found practicable for a scientist, who might be really ignorant of actual farming, to pronounce judgment upon soils submitted to him for examination. If the science had stopped here, its benefits would have been large and apparent.

But the next great step was the successful attempt to reproduce good land in poor, by substituting one element for another, by adding or neutralizing, until the composition of a normal soil for the growth of any plant should be approximated. This is done by using fertilizers. These fertilizers are either direct in their action, that is, they enter immediately into the growth of the plant, or they are indirect aids, being employed to counteract or remove injurious elements. Thus many new fertilizers have been added to the list; and many artificial ones, which are now in common use, were invented. Well, the reader may ask, wouldn't we use manures without agricultural chemistry; what has it to do with the question? Much. And to prove the assertion we will cite a single instance, to show that science here is truly practical.

Not many years ago, observers engaged in the geological surveys of the different States, noticed that all along the Atlantic seaboard, from New Jersey to Florida, there existed a great belt of phosphatic deposits. These were petrified, silicified and fossil remains of vast beds of bones and shells, of animals extinct and now existing; the deposits were certainly very curious and interesting to scientific men, but of no particular use, that any one could see. The fossils were entirely distinct from marl, which is phosphatic remains partially decomposed and mellow, and which had previously

been applied with good results to exhausted lands. But the raw, stony looking masses of sharks' teeth, whales' vertebrae, mollusca' shells, what were they good for, except to be put away in geological cabinets? And a small portion would fill all the museums of the world. It was owing to the recommendation of the State Geologist of New Jersey, Professor Cook, that a fair trial of the unpromising material was made. Without the suggestion the treasure might have been spurned by the feet of men for centuries.

And now for the result. The lands of older States when first settled were in a virgin condition, and yielded to the hardy immigrants wonderful returns, of which we have traditions. After centuries of constant cropping, these fields, just as rich originally as the black prairie loam of the Mississippi Valley or the wheat lands of our own California, became worn out, and could produce only a tithe of their pristine crops. The particular substance most needed and most wanting, was a soluble alkaline phosphate. And this is just what can be taken from the bone fossils.

So to-day, especially in South Carolina, the whole region within the great belt is being systematically mined for the valuable matter. Cropping out at the surface in spots, and lying beneath the surface only a few feet, in most places, the extraction is simple enough. Trenches are dug, and as soon as cleared are moved sideways, the fresh refuse being thrown into the useless hole. Movable wooden railways connect the diggings with central depots, where, by ingenious machines and processes, the raw material is sorted and prepared for market. Even along the shores of the famed Sea-island cotton strips, and in the beds of rivers, the search and extraction is constantly going on. Thus far the application of this new fertilizer to the old lands has proved highly beneficial, and without it, or some equivalent substitute, many farms would now be considered worthless.

We have given but a single example; the choice is almost unlimited.

Fruit Packages.

It is important to the producer that he be well informed as to the merits of the different kinds of boxes, baskets and crates for packing and conveying fresh fruit. To this end we propose calling attention to some of the best styles of packages in the market. In determining the question of which is the best, there are various points to be considered, such as first cost, cost of transportation, value of the package to the consumer after once used, or for being returned to the fruit raiser, its security for carrying the fruit safely without injury, and its durability.

Mr. C. D. Weston, a gentleman connected long and actively with the fruit trade of San Francisco, has for years been perfecting several inventions which he has patented for the manufacture of "free packages" for small fruits. He fully believes there has never before been offered to the public so, cheap, complete and desirable arrangements for the transportation and marketing of small fruits as the free packages manufactured by I. K. C. Hobbs & Co., 309 Washington street, under his patents. The packages are formed of one piece of veneer stamped in such form that when folded together the box is complete without the use of tacks, tin, wire, glue or any fastening material whatever.

Hobbs & Co. manufacture six kinds, a list of which, with the prices, we give below:

No. 24—4-lb. strawberry-box.....price, \$30.00 1,000
No. 48—2-lb. strawberry-box.....price, \$17.50 1,000
No. 72—1-lb. strawberry-box.....price, \$10.00 1,000
No. 96—1-lb. strawberry-box.....price, \$10.00 1,000
No. 32—3-lb. blackberry-box.....price, \$25.00 1,000
No. 120—1-lb. raspberry-box.....price, \$10.00 1,000
4-doz crates.....price, 35 cents each.

Two dollars per thousand will be deducted from the price as given above when ordered in sheets. Mr. Weston claims that he not only secures all the essential features of all the free boxes heretofore in use,—such as strength, convenience, ventilation, etc.,—but overcomes serious objections made to the others in the following particulars, viz: The open corners, which creates a liability to crush and damage the fruit; the form, which makes the others incapable of adaptation to the methods of transportation now in use, and which cannot be changed without serious loss, the chests now in use being of such form that they will contain only seventy-two pounds, whereas the same chest will contain ninety-six, as manufactured under Mr. Weston's patent, thus economizing both in number of packages required to ship a crop as well as in cost of freight, also in the matter of strength, as all the methods of fastening with tacks, tin, etc., are liable to give way, and thus a considerable percentage of the boxes are lost. Aside from the objections overcome as above referred to, he claims superiority in the following particulars. First, general appearance, being the most presentable and neat in appearance. Second, adaptability to the wants of the community as regards variety in size and form. Third, convenience and economy to parties desiring to transport long distances. As no tacks, tin, glue, or any fastening material is required, the putting together is so simple a matter that they may be shipped in sheets in very compact form, and put up at the point of destination by children, or other cheap labor; thus making a material saving in first cost as well as transportation.

Further information can be had by applying to Hobbs & Co., named above.

Reconstruction of Agricultural Fairs.

The Patrons of Los Angeles have undertaken a good thing in the reconstruction of the Agricultural Fair of that district. It has long been apparent that many of our agricultural fairs have been far from what such exhibitions should be. Instead of being devoted to competitive exhibitions of agricultural products, and the exchange of intelligent ideas on farming, they have degenerated, so far as their main feature is concerned, into trials of speed for fancy horses. Speed is an excellent quality in a horse, and trials, within reasonable limits, are proper and right. But when owners of race-horses go from district to district, with the view of making money by betting, the business descends to a point not recognizable in any legitimate agricultural enterprise, and should be left severely alone.

The object of agricultural fairs should be the illustration and exhibition of all that is best in agriculture—the best seeds, the best samples of products, the best methods of culture, the best implements to be employed, the best stock of various kinds and a proper show of their qualities. Fleetness in trotting and running horses, should, of course, be shown and emulated, but speed in working, and capacity for draught are far more important qualities to be studied and cultivated; yet how little attention is paid to the two latter, while the former is too often made the chief attraction of the entire exhibition, and calls for the chief outlay of money from both the Association and State. The reformation of this abuse should, and will be, made one of the matters to which the Patrons of Husbandry will devote their especial attention. The work commenced in Los Angeles should be taken up in every district where the above has been introduced, and the management of the State fair in this connection should also receive their special attention. The Patrons have it in their power to reconstruct these fairs, purge them of all such abuses, whenever they exist, and restore them to the legislative scope and purposes for which such exhibitions were originated. In so doing we feel confident that the great mass of the people will sustain them; and when a proper standard is set up and maintained, we believe there will be no difficulty in making most, if not all our fairs,—state, district and county, self-sustaining and productive of far more good to the agricultural and mechanical interests of the State, than they have ever been in the past.

The State Board of Agriculture has issued a call for a convention of agriculturalists, to represent the several district and other agricultural societies throughout the State to meet at the rooms of the State Society on Tuesday next, March 3d, to consult as to the best means to assist in the development of the agriculture of the State generally, and especially to agree upon such legislation as will best promote the interests of agriculture. The Vinicultural Societies are also invited to a representation in this convention.

The move is a good one, and reformation in the particular, alluded to above, should form one of its leading features of favorable action, we think that alone will amply repay all the trouble and expense of holding such a convention. The *Sacramento Record*, in calling attention to the convention says, in this relation: "We have no doubt that the general management of our agricultural fairs, the selling of pools on the grounds, and the proper rules for the divisions of premiums offered, between the different interests, will be discussed, and perhaps the matter of appropriations to agricultural societies will be considered."

Since the above was in type we have received the resolutions upon this subject passed by the Healdsburg Grange, which were published in our last issue. We have no doubt but those resolutions would be endorsed by every Grange in the State, were they presented for action.

RESTORATION AND RENOVATION OF SOILS.—In concluding an interesting paper on this subject, before the Wisconsin State Agricultural Convention, says the *Western Farmer*, Secretary Field gave the following summary of his advice to farmers:

1st. Make all the manure you can, and apply all you make in a condition best suited for food for plants and where most needed.

2nd. Cultivate thoroughly, stirring the earth to a great depth; plough, barrow, roll, cultivate, subject the soil to repeated changes, so that, aided by the action of frost and rains, it may be so reduced and refined as to be compelled to yield its supply of food in such abundance that the annual crops may feed and fatten upon it like the stall fed ox.

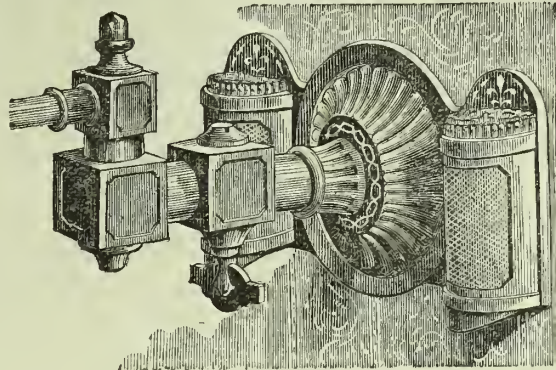
3rd. Renovate with clover. From observation and experience I am convinced that by an occasional seeding to clover, say once to five or eight years, as circumstances seem to require, with a rotation of crops, using all the manure made, with thorough culture, the most of the lands of Wisconsin should be in a healthy and highly productive condition generations hence.

4th. If your lands are still being reduced in fertility, apply the best commercial manures you can obtain. Buy in limited quantities and experiment fully, and if found successful, purchase again the same brand, and of the same party, if he stands high in commercial circles as a man of honesty and fair dealing.

The apricot trees in Sacramento are in bloom.

An Improved Mill Pick.

The accompanying engraving represents an improved mill pick, the invention of Jotham Cummings, of West Charleston, Vermont. The improvement relates mainly to such a construction of the pick as will relieve the strain upon the pick blade, and lessen liability of breakage of the same; and also to obtain greater strength in the head of the pick without increasing its weight, and enable it to deliver a more effective and well-directed blow than heretofore. The nature of this improvement consists in dividing the pick head into two parts, one stationary and bearing the handle, and the other detachable, and formed upon its inner face, with a series of teeth to engage the blade and prevent its being driven upward into the head. The parts are so arranged that the sharp end of the blade tends to settle the parts together, and firmly clamp



GAS BRACKET MATCH SAFE.

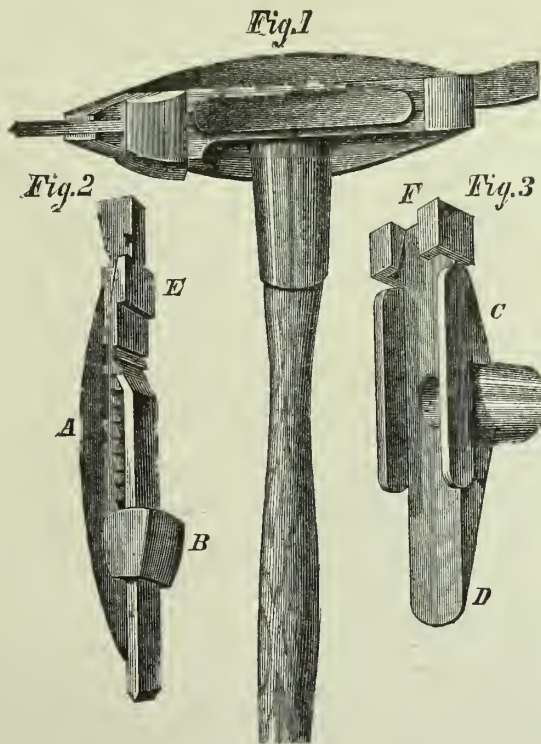
the blade between the two. The great difficulty in getting picks drawn and tempered by blacksmiths, so that they will cut burr-stones, renders this invention valuable; for strong, fine cutting blades can be made without difficulty by experienced steel-workers, which require no blacksmithing, as they are tempered the entire length. The facility with which the blades can be changed is an important feature, as it is often necessary to remove blades for sharpening as many as one or two hundred times in dressing a mill or run of stones. Two sizes of

out. They are tempered the entire length and only require grinding to sharpen.

Gas Bracket Match Safe.

Everybody has experienced the annoyance of searching for matches in a dark room, doubtless to no small detriment of temper as well as such projecting portions of the body as are brought in sudden contact with vagrant rockers or sharp corners of tables and bureaus. Match safes, in fact, have the unpleasant peculiarity of apparently remaining in the spot where last placed, because every one using the contents leaves the box wherever about the room he may happen to be, so that the next person is obliged to hunt for it. Moreover, about nine-tenths of the common match receptacles upset on the slightest provocation, strewn the floor with inflammable material, ready to take fire and burn holes in the carpet,

and sometimes set dresses on fire, whenever accidentally stepped upon. We illustrate herewith a new form of safe, the invention of Mr. M. L. Orum, which can neither upset nor wander about a room, because it is fastened immovably to the wall by screwing the gas bracket against it. The fixture is first removed, the hole in the device slipped over the pipe, and the bracket replaced, the whole being the work of a moment. Thus located, the box is always at hand when and where wanted, and, besides, is situated at the point where matches are usu-



CUMMING'S MILL PICK.

the implement are made, one for furrowing, and the other for cracking.

Fig. 1 represents the entire pick, ready for use. Fig. 2 is a stationary stock bearing the handle, and Fig. 3 is a detachable clamp plate. The latter is a thin metallic plate, having a ratchet on its under surface, a convex rib, A, on its rear side, and a loop or socket, B. The pick or blade is a thin blade of even thickness, with its upper end bent to fit the notches in the clamp plate. In adjusting for use, the blade is placed upon the clamp plate, its sloping end entering one of the notches, when both are applied to the stock, C. The lower wedge-shaped end, D, of the stock, enters the loop or socket, B, of the clamp plate and the wedge-shaped lips of the clamp plate fit into corresponding channels formed in the ears, F, of the stock. It will be seen that a blow upon the cutting edge of the blade will force the clamp plate and blade upwards and cause them to embrace the stock with great power. The more powerful the blows upon the stone, the more firmly is the blade confined in its place. To remove the blade, the tool is reversed and the opposite end of the clamp plate struck on any solid substance, when both clamp plate and blade will be released. As the blades are abraded by use, they can be let down in the ratchet until worn

ally scraped upon the wall, thus preventing injury to the paper or paint. It can be made with either one or two receptacles for matches, two being preferable, as one of the boxes may be employed to receive burnt sticks. In material, style, and design, the attachment may correspond to the bracket to which it is screwed.

For hotels, where lodgers are apt to carry off the match boxes, the invention is excellently adapted, while its convenient and ornamental form will doubtless commend it as a necessary appendage to the gas fixture of every room. Patented Nov. 4th, 1873. For further particulars address Orum & Mellor, sole manufacturers, 448 North Twelfth st., Philadelphia, Pa.

RECLAMATION.—The *Banner* gives Sutter county the following advice: "What is wanted is a scheme of reclamation and protection throughout, from the bay up the Sacramento and Feather rivers and their tributaries. Local schemes of reclamation rarely provide a remedy, and only complicate the matter, besides entailing a never-ending expense and creating dissatisfaction."

Mr. CHAINE, of San Bernardino, has set out 1,500 orange and lemon trees this season.

The California Acclimatizing Society.

This Society, which has now been permanently established has in the short time it has been in operation been productive of many benefits to the State of California.

In January, 1870, there was organized the "Ornithological and Piscatorial Acclimation Society of California," which had for its object the introduction and acclimation of game birds and fishes, on the Pacific slope. The original plan contemplated its support to be derived from contributions of the members, but it soon became apparent that the amount that would be so received would be inadequate to accomplish the desired results; the Society was therefore re-organized as a joint stock company, and incorporated under its present name. Commencing operations under this new arrangement, the Society entered into communication with kindred institutions in the Eastern States and elsewhere, and started a system of purchase and exchanges, from which signal benefits have since been derived.

In January, 1872, the first installment of Eastern trout ova were received from Seth Green, for which batching troughs were constructed at Hayes' Park. The ova were hatched with a loss of about 50 per cent. The results of this first experiment induced the Trustees to locate their subsequent operations at San Pedro ranch, where are now contained in the nine separate ponds, (since constructed,) Eastern, Native and Tahoe trouts, and Lake Ontario salmon trout, and a few black and rock bass. At San Pedro there will in a few days be constructed an enclosure, wherein the wild turkeys, received from Judge Caton, of Illinois, will be kept for breeding purposes.

The operations of the society having assumed greater proportions, they are now conducted with a certainty of success; the dams, ponds, batching houses, cages, and other improvements have attained a fixed value. During the past year the most cheering results have been realized. The society is now able to supply any amount of ova or young fishes that may be called for; it has demonstrated that the hatching process can be carried on in California every day in the year, by exchange of eggs from different parts of the world; and that while the period of incubation in this State is shorter, our fish are larger and come to maturity sooner than they do in the Eastern States.

The financial aspects of the Society are no less flattering; while its assets, including stock, fish, ponds, houses, fixtures and utensils, are estimated to be worth \$20,000, its liabilities amount to only \$1,500.

An assessment has recently been levied in order to expunge this indebtedness, and to make further improvements in and about Lake Merced, (now under lease to the society,) which has been stocked with 300,000 fish. It is proposed to throw open this lake during the coming fishing season to the public, and to charge such a fee to anglers as to make it a source of income. This, with the proceeds of a sale of 50,000 young fishes, shortly due, and such other receipts which the past justifies them in anticipating, will enable them to conduct future operations without requiring further assessments from the stockholders.

It will thus be seen that the Association is conferring an absolute benefit, not merely to those who may go in search of a few weeks' enjoyment during the season, but to society at large, for in propagating fish and birds, and keeping our streams and woods inhabited by them, they are ministering both to the pleasure and wants of the people. Many streams within the vicinity of San Francisco, which once contained large numbers of fish, and the shooting grounds which were alive with game, are now unproductive; and the process of gradual destruction would still go on until all game would be exterminated, unless some such conservative organization as is here represented took active measures to prevent this unfortunate result.

SEAMLESS GRAIN BAGS.—We called attention some time since to an improved loom for weaving seamless grain bags, which had just then been introduced by Wm. Laird & Co., of Forfar, Scotland. The machinery by which such bags had previously been made was far from perfect, and did not turn out an article any stronger than sewed bags; but the new loom comprised some essential improvements by which much additional strength was secured; in fact, the seamless bag, made by this loom, when filled with wheat and dropped from a given height would stand perfect, without a tear, while it is claimed that ordinary sewed bags, made of the same material and dropped from the same height, would burst nearly or quite every time. The advantage of this additional strength is very important to both the producer and shipper. The extreme liability of the sewn bag to burst and to spill a large portion of its contents when in the field, on the wharf, or in the ship's hold, is well known to the farmer and the shipper.

Samples of this improved bag have recently been received in this city and may be seen by calling upon Mr. Ellis Read, 304 California street. It will be seen by reference to our advertising columns that Mr. Read has been appointed sole agent for the sale of these bags on this coast, and that some forty bales of them are now on their way to this port for samples.

FANCY POULTRY.—A. E. Burbank, 43 and 44 California market, has just received a splendid lot of Silver-spangled Hamburgs from New York.

USEFUL INFORMATION.

Marbled Paper.

This, much used by bookbinders, is produced in a very curious way. The name is not exactly suitable, seeing that few of the specimens are imitations of real marble; but it has gradually become applied to sheets of paper of which one surface is made to imitate any kind of stone or wood. Small brown spots on a light ground, marble veining on a shaded ground, curled patterns and wavy patterns, all are produced in great diversity. The colors are of the usual kind, such as Naples yellow, yellow lake, orpiment, verigris, rose, pink, red lead, carmine, terra di sienna, Dutch pink, indigo, Prussian blue, verditer, umber, ivory black, etc.; they are ground up very fine with prepared wax and water and a few drops of alcohol. A solution of gum is made of gum tragacanth, alum, gall, and water, and placed in a trough or shallow flat vessel. Color is thrown on the surface of this gum water, usually by striking a brush against a stick, so as to produce a shower of sprinkles. Pigments of different tints and different thicknesses or degrees of consistency are thrown on; some spread more than others, and thus a diversity of patterns is produced. Sometimes the color is thrown on by means of a pencil of very long bristles; it is diversified by means of a rod, held upright and carried along amongst the colors in a wavy or spiral course; and it is further cut up into tortuous lines by passing a kind of comb along it. All this takes place on the surface of the gum solution in the vat. When the vat is prepared, a sheet of paper is laid down flat on the solution, care being taken that every part of the surface shall be wetted; the paper takes up a layer of paint, fancifully disposed in a pattern or device, and is hung up to dry. In order that one color may not be blended or confused with another, they are ground up with different liquids, some watery, some gummy, some oily. The imitations of marble, gray and red granite, and fancy woods, are certainly not very faithful; but the paper is lively in appearance, and remains clean and bright a long time when polished. This polishing is effected by moistening the colored surface of the paper with a little soap, and rubbing it with a piece of smooth marble, an ivory knob, a glass ball, or an agate burnisher. Beautiful products have been produced within the last few years under the name of iridescent and opalescent paper. Like the commoner kinds, these receive colored devices on one surface; but great delicacy and care are called for in the processes to produce the exquisite play of light and shade which suggests the names given to these varieties.—*Practical Magazine.*

TESTS FOR ALKALOIDS.—Phosphomolybdic acid has long been used as a test for alkalis. Phosphotungstic acid has also been recommended for the same purpose, and recently Scheibler has called attention to two new acids prepared by him, the formulae of which seem somewhat doubtful, but which are excellent tests for alkalis. The writer has made a few experiments with a solution prepared very easily, by boiling, for a few minutes, common tungstate of soda with half its weight of syrupy phosphoric acid. Quinine gives a distinct milkiness almost immediately in 10,000th dilution, and after 24 hours in 100,000th dilution. Morphine gives the reaction plainly enough in 10,000th dilution, but not in 100,000th. Strychnine gives it quite plainly in 200,000th dilution, as stated by Scheibler. This strychnine precipitate may be used for the chromic acid test, and the morphine and quinine compounds for the ordinary tests for those alkalis. Bromine water, which can be prepared in a minute, is more handy than chlorine water, and answers just as well, or better, in conjunction with ammonia in the test for quinine; also in the ferrocyanide test. Flückiger has found that it will detect one part of genuine in 20,000 of water. The ferrocyanide test (Vogel's) is not so delicate, detecting the alkaloid in 2,500 parts of water.—*Canad. Phar. Jour.*

TREATMENT OF NEW DWELLING ROOMS.—The dampness of newly-finished rooms is not due so much to the water used in mixing the plaster, as to the water of hydration of the lime, liberated by the action of carbonic acid. The action of the small quantity present in the normal atmosphere, would, however, be so slow and the water be liberated so gradually, that no injurious effect could result. But as soon as the rooms had become tenanted the large amount of carbonic acid given off in respiration causes such rapid displacement of water, and with it other matters indicated by the peculiar odor, that unpleasant and injurious results may follow. Treatment of the rooms with carbonic acid, before occupying them, suggests itself at once, as a means of rendering them rapidly tenatable. Although, by calculation, it would require the carbonic acid from the combustion of about 320 pounds of coal, to displace the hydrate in water in the walls of a room of about 1,500 square feet of surface, in practice, the consumption, in a suitable way, of about five pounds of charcoal per day, for five days, in the room, would answer, because the interior portions are protected from rapid action of carbonic acid, as soon as a layer of about one-tenth of an inch has been acted on. This is proved by the fact that Professor Fuchs has detected caustic lime in walls centuries old.—*Ex.*

Solvent Powers of Water.

Water is a physical rather than a chemical agent in bleaching and dyeing; it is the vehicle which carries the chemical substance to the cloth to be operated upon, or which removes the matters necessary to be removed from it. When a substance is mixed with water, it may either be dissolved by it, and disappear, as salt does; or, it may remain in suspension, as chalk does. Nothing is considered to be actually dissolved in water if it can settle out again, or if it will not pass with the water through a filter made of paper or calico; thus, to talk of dissolving ground chalk in water, is incorrect; for, if allowed to stand, it would settle out; or, if the mixture were filtered, the water would pass clear, while the chalk would remain upon the calico; but blue vitriol, (sulphate of copper), for example, does really dissolve in water, and the liquor all filters through together; to deprive the water of the blue vitriol would require chemical means different in kind from filtration. Water, therefore, dissolves some substances and not others. Water does not dissolve the same quantity of all soluble substances; of some it can dissolve its own weight, and more; of others a small portion; and of some, extremely little. As a rule, hot water dissolves more than cold; but, upon cooling, the excess mostly falls out as crystals. This point deserves notice; for a liquor, which is of right strength when a little warm, may be too weak when it becomes cold; left in a carboy, for example, in a cold place, because the salt crystallizes out; this is the case only with those salts that are but sparingly soluble, as chlorate of potash, cream of tartar, sulphate of potash, etc. The crystallizing is sometimes troublesome in steam colors; which, right enough when freshly made, become filled with small crystals, and rough on the machine; it is felt in the case of an ageing liquor, which contains chlorate of potash as an active agent; which, crystallizing out, leaves the liquor weak and not able to do its work. As a usual thing, the drug room upon a printing or dyeing works should be cool, but there are some liquors better in a moderately warm place; brown vitriol, for example, in winter time, is apt to go solid in the carboys, if kept in an exposed place.—*Am. Tex. Manuf.*

MOLDING SAWDUST.—The cement is nothing but glue dissolved in water. In order to prepare the material the sawdust is put in an earthen vessel, boiling water poured on it, stirred up, and left to soak for about a week, and again stirring from time to time; then it is boiled until it has attained the consistency of a paste, after which it is put in a coarse cloth and the excess of moisture well squeezed out. This material is then kept ready for use; when wanted a sufficient quantity of thin glue-water is added so as to obtain a paste, which may be pressed into molds, or rubbed into cracks or holes to disguise flaws or other defects in woodwork. When the sawdust of the same wood is used, the work carefully done, well dried and cleaned, the imperfections repaired in this way can scarcely be detected; while the ornaments made differ only in one respect from those made by carving—in not showing the grain of the wood.—*Ex.*

Some one has patented an arrangement of appliances for cleansing metallic plates covered with tin and other metals; the plate is cased by series of rollers, to pass through a casing containing bran or sawdust, on issuing from which any absorbent material which may have adhered is removed by means of brushes suitably arranged. Another gentleman claims improvements in the method of cleaning and polishing tin and other plates. After the plates have been immersed in oil, they are dipped in a hot alkaline water bath, and subsequently passed through a polishing machine, which, by means of rollers supplied with bran, or some other suitable polishing substance, imparts a brilliant finish to the surface.

TESTING FOR COPPER AND TIN.—The German Pharmacopoeia demands that medicinal extracts must be free from the presence of copper and tin. Dissolve the suspected extract in five times its volume of water, or weak alcohol, and, after adding a drop of dilute chlorhydric acid, to set in the solution a rod of clean metallic zinc. Copper will be of course indicated in a half hour by the usual color. If copper and tin be present, the rod will have a brownish tint, and if tin alone, a white color. These precipitates may be scraped off with a knife and examined after re-solution.

As a simple method of detecting adulteration of wine, into a small quantity of the wine to be tested, says *Le Temps*, drop a piece of potash. If no deposit is formed, and the wine assumes a greenish tint, it has not been artificially colored. If, however, a violet deposit appears, elder or mulberries have been used. If the deposit be red, the adulteration is sugar beet; if violet red, campeachy wood; if violet blue, privet berries; if clear blue, coloring matter obtained from sunflowers.

TRAGACANTH MUCILAGE.—The Boston *Journal of Chemistry* adds the following to the many receipts for making mucilage: Take of powdered tragacanth, 1 drachm; glycerine, 6 drachms; water, enough to make in all 10 ounces. Rub the tragacanth in a mortar with the glycerine and then add the water. This will produce a mucilage at once of excellent quality.

Bursting of Trees and Objects Struck by Lightning.

At a recent meeting of the Manchester Literary and Philosophical Society, Mr. Baxendell suggested that the explosive effect of lightning might be due to the conversion of moisture into steam. At the meeting of that society, Nov. 4th, 1873, Professor Osborne Reynolds, A. M., stated that this suggestion seemed to him so very probable, that he had been induced to try if he could not produce a similar effect experimentally. We give the account of these experiments in his own language.

I first of all tried to burst a thin slip of wood by discharging a jar through it, taking care so to arrange the wood that the discharge should be of the nature of a spark, and not a continuous discharge. This was done by making the wood to form part of a discharging rod, with balls on the ends. This experiment was successful in the first attempt, although the results were on a small scale. It should be mentioned that the wood had been damped with water. This experiment was repeated with larger pieces of wood with various results.

It then occurred to me to try with a glass tube. This I did at first with a very small tube, passing wires from the ends of the tube until they were within half an inch of each other. The small tubes burst both with and without water.

I then used a larger tube (about one-tenth inch bore), using it in a similar manner. The discharge without water produced no effect on this, even when repeated several times, but when the tube was full of water (with the ends open) the first discharge shattered that part of the tube opposite the gap in the wire. This tube was bent in the form of a syphon, and the water stood about one inch beyond the gap in the wire on each side of it.

I then tried a stronger tube which I had been using for insulation. It had a bore of one-eighth of an inch, and was three-eighths of an inch in external diameter. It was capable of sustaining a pressure of probably 10,000, and certainly 5,000 pounds on the square inch; that is to say, a pressure of from two to five tons per square inch. It was about fourteen inches long, and bent in the form of a square-ended syphon. The gap in the wire was about half an inch, and the water extended about one and a half inches on each side of the gap. The ends of the pipe were open, and the jar charged in the same manner as before with about 100 turns of a twelve-inch plate machine. The surface of the jar is about half a square foot, and the discharge, when effected with the common rod, took place through about two inches of air.

This tube was shattered at the first discharge. That part opposite the gap and for some way beyond, is completely broken up into fragments, which present more the appearance of having been crushed by a hammer than of being the fragments of a pipe burst under pressure. Some of the fragments show that the interior of the pipe has been reduced to powder. These fragments were scattered to some feet on all sides, but there was nothing like an explosion. I held the pipe in my hand at the time of the discharges, and the sensation was that of a dead blow. There was no noise beyond the ordinary crack of the discharge.

The manner in which this pipe was destroyed clearly showed that a larger one might have been broken. But as it was two o'clock and my fire was out, I did not continue the experiments. It is not easy to conceive the precise way in which a pressure of probably more than 1,000 atmospheres could be produced, and transmitted in a pipe of water, the ends of which were open. It might have been caused by the sudden formation of a very minute quantity of steam, or by the expansion of the water; but which ever way it was, its effect was due to its instantaneous character, otherwise there would have been an explosion. When we consider the great strength of this pipe (which might have been used for a gun without bursting), and when we see that it was not only burst, but that the interior of the glass was actually crushed by the pressure, and all this by the discharge of an small jar, we must cease to wonder at the bursting power of a discharge from the clouds.

BIRDS AND CHOLERA.—Can birds scent the cholera infection in the air? Certain well authenticated facts render it not improbable that they can. Recent European journals state that at Munich, where several cases of cholera have occurred, the rooks and crows, which before flew about the steeples and through the trees of the public promenades, have all emigrated; and the same thing happened during the cholera seasons of 1836 and 1854. According to Sir Samuel W. Baker, the same phenomena occurred at Mauritius, where the martins, which exist in immense numbers the year round, wholly disappeared during the prevalence of the cholera.

LIFE BOOYS.—English papers describe an invention which substantially consists in grinding or cutting cork shavings small, and roasting or burning them to a dark brown elastic char, which causes it to swell and to be more buoyant and impervious to water, and then in filling the said ground burnt cork into small bags made of oil or other waterproof fabric, and sewing these into canvas life-belts or other shaped buoys for the purpose of floating bodies in deep water, and thus saving life and property.

Sensitive Plants.

A curious action of the leaves of certain plants was first discovered in 1779 by Roth, in Germany, namely, that they behave as if attempting to catch insects by bending over their bodies. Darwin, with his well-known sagacity in taking hold of any fact assisting in establishing the development theory founded by him, makes use of this peculiarity as an argument in favor of the idea that passive plants which have to wait for their food, may have developed into active animals with prehensile mouths, and of which this purely vegetable action is a first attempt of nature in the direction of producing an organism which attempts to eat. After Darwin has enriched our knowledge in this line with many valuable new observations of his own, Bennett comes with new facts, and proves that many plants show this daily while growing in wet moss in our rooms in the summer. But the most important and surprising discovery is that made by Darwin and Bennett both, namely that the leaves of the common round-leaved sundew act differently when different objects are placed upon them. For instance, if a small piece of raw meat be placed upon them in place of a living fly, it will close upon it in the same manner as upon the insect, while in regard to a particle of chalk, or wood, or wool, it will remain motionless, or at least nearly indifferent.

Prof. Asa Gray, while commenting in *Silliman's Journal* upon the paper read by Mr. Bennett before the Bradford meeting of the British Association, says that with us the leaves do much more than curve around the insect or piece of meat; that as well in the *Drosera rotundifolia* as in the *Drosera longifolia* the end of the leaf folds over upon the base, and like a shut hand fairly incloses the captured insect or piece of meat.

In order to account for many unexplained habits of supposed unreasonable animals, the word "instinct" was invented, which in fact explains absolutely nothing. Now we see that this so-called instinct is shared by some plants; or have the leaves the organ of taste, so that they can distinguish between the piece of meat and wood? Is there also a consciousness in vegetable organism? or is all matter conscious?—*Manufacturer and Builder.*

Improved Manufacture of Artificial Fuel.

The *Scientific American* says: "The visitor to the coal regions of Pennsylvania, and indeed to all other localities where coal-mining operations are in active and continual progress, will not fail to remark the vast heaps of waste or slack piled in the neighborhood of the mines. It is estimated that, on an average, from forty to fifty per cent. of the entire yield, both of anthracite and bituminous coal, is, through the medium of mining, breaking, screening, and handling, reduced to this remarkable condition, causing loss to the producer and increasing the cost of the staple to the public."

Mr. E. F. Loiseau, of Mauch Chunk, Penn., has recently patented a process by which this waste or slack may be made available for fuel. "The composition of the fuel is coal-slack and common yellow clay free from sand, moistened with milk of lime. The manufacture is carried on automatically, the crude materials entering the apparatus at one end and emerging finished and ready for shipment at the other. No labor during the progress of the operation is therefore required, nor does the machine, we are informed, need any attention except to replenish its supply and remove its completed product."

At a recent trial of the fuel under one of the boilers, at the present Fair of the American Institute, we were afforded an opportunity to examine its cohesive quality. The pieces were thrown into a furnace, where very active combustion was in progress; and although allowed to remain there for a considerable period of time, they did not lose their shape or run together. As regards heating power, the inventor considers the same to be equal to the best coal. No unpleasant odor is given off; there is, of course, no slate, and we are assured that clinkering does not take place. The ash, being mixed with clay, is heavy; and hence, where the fuel is used for domestic purposes, does not rise in light clouds, covering carpets, furniture, &c., with dust. The oval shape of the lumps is designed to insure a free draft through the interstices. As to cost, the inventor demonstrates that the material can be supplied at about \$1 per ton."

IMPROVED BUTTON HOLDER.—The holder consists of two plates of metal which are forked at one end, the space between the prongs being V-shaped. One of these plates has grooves on the inner edges of the prongs, which grooves receive the buttons. This V-shape of the opening adapts the holder for buttons of different diameters. The cloth passes in between the two plates, and is pressed upon the buttons by the prongs of back plate as the two plates are pressed together or toward each other, when the holder is in use, by the fingers of the operator. The button is then sewn on with a needle and thread, in the usual manner. The advantages claimed are that the fingers are not exposed to the needle, and the sewing on is performed with much greater ease.

A REAMING DRILL has been tested in several of the Leavenworth mountain mines of Colorado. The device consists of an ordinary steel bar, with a hinged tongue at one end, which cuts out at the bottom of a blast hole a spherical chamber for the powder. The drill will work excellently in all but the very hard rocks.

The Dairy.

Conducted by J. H. HEGLER, Manager of the Dairy Department of California Granges.

Reports of Experiments, Communications, Hints, Suggestions and all Facts that will be of interest to Dairy-men are particularly solicited for this Department.

Fancy Butter, How Made and Sold.

At a meeting of the Vermont Dairymen's association, held at Essex Junction, Jan. 21, 22 and 23, a variety of exceedingly interesting discussions was held on the manufacture and management of dairy produce; from among them we present the following as worthy the attention of California dairymen.

Mr. Bliss asked Mr. Cheever, of the *New England Farmer*, in regard to the fancy butter which he had on exhibition. The answers were that the cows were a cross of no-horns and Jerseys—mainly the latter; the manner of feeding is hay twice a day the year round—mostly orchard grass, cut before July 4th, and 4 qts. bran and 2 qts. seed meal cotton. Milk is set in 10 qt. pans on rack shelves, with curtains and blinds, and stove in adjoining room to govern temperature and light; no very particular about temperature; the cream is skimmed after from 24 to 46 hours; sell skimmilk for 5 cts. a qt.; churns either once or twice a week—but since he commenced scalding milk as soon as it comes from the stables, churns only once a week; temperature of cream about 60°; uses a very little annattoine and formerly put it into the cream, but as he sells buttermilk he found that colored buttermilk didn't take. Now lays the salt on the butter, and sprinkles on it a few spoonfuls of annattoine; this colors the salt; it mixes the color evenly through the butter; uses a three-cornered, lever butter worker; he worked butter twice, about 12 hours between, but latterly lets only 2 or 3 hours intervene; washes butter in churn after drawing off the buttermilk; throws on a little water during working; uses Onondaga F. F. salt and adapts quantity to taste of consumer—one batch with an ounce, one with a half, and one with three-fourths; sells at North Attleboro, a jewelry town, where the workmen are clean, of high character and particular in taste; has sold from 10 to 12 years there and for the last six years has had the same price summer and winter—55 cents. He lately raised it to 60 cents, and Mr. Hovey, the fancy butter dealer in Boston, had sold some for him this winter for 70 cents; some of Hovey's customers found a little fault because the quality varied (owing to his experiments in scalding) so his market was not yet made in Boston. Average annual quantity per cow about 200 lbs. each, besides selling considerable milk.

Mr. Arnold said there is a flavor in unwashed butter different from washed. Many people like it when new, but washed butter keeps better.

Mr. Wetherell related an experience of Mr. Ellsworth with some Vermont butter, which brought 5 cents a pound more in Boston for being unwashed, but had tried with some of his own butter and did not succeed as well. He considered the question still open.

Mr. Arnold said that the prevailing opinion is in favor of washing.

Complaints of the Farmers.

Dr. Geo. F. Cole, of Potsdam, Vt., read an interesting paper on the "Complaints of the Farmers." The farmers are oppressed by speculators, political wire pullers, and by heavy taxes and high labor. Other classes in society protected their interests by union. This should be the practice among the farmers, and he strongly urged them to form clubs and unions for their own protection.

Dr. Lewis Sturtevant, of Farmington, Mass., was introduced, who read a very carefully prepared and instructive paper on

Milk, Its Typical Relations, Etc.

It received the closest attention, and was pronounced one of the most valuable papers ever read before the association.

At the close of the Doctor's paper, he was questioned in relation to many points that he had advanced.

Mr. Safford, of Conn., asked if he got more butter from churning milk or cream?

The Doctor replied that he obtained more butter from cream than from milk, though this differed with different breeds of cattle.

Mr. Arnold, of Rochester, asked if he churned sweet or sour cream?

The Doctor replied that he churned sweet cream at a temperature of 60°, and his experiments were made with milk taken from three of four different herds. In examining buttermilk under the microscope, he had found the globules quite large and broken. Under a microscope of low power they looked like hay seed. If the cream is a little acid, it churns quicker, but there is more sediment or nitrogenous matter remaining in the buttermilk. Jersey milk, after churning, contains more sediment than the milk of the Ayrshire.

Mr. Douglas, of Whiting, Vt., said he had found that when the milk was a little acid the separation of the butter was more perfect. In speaking of milk, as when it is taken to market, Dr. Sturtevant had found no difference in the percentage of cream rising on milk shaken for five or ten minutes, or that rising on milk allowed to stand still, clearly showing that it does not injure milk for butter making to cart it about.

The Situation.

In reviewing the situation for the incoming year at the present time it is hard to predict what may or may not be. At no time for years past have cows been in a poorer condition than this. In many instances ranchers had laid up the usual amount of feed for stock, but the feed finally gave out, and the rains continuing and still no grass—the cows, many of them giving milk—became very poor and many have died; while many that will "live through" will not give the usual amount of milk during the season, but certainly the prospect for dairy now is far better than it was a month ago.

The long continued rains will at least have the effect of causing a very plentiful crop of grass. Butter has retained a very good price and will probably not go so far to the bottom as was expected earlier in the winter.

The supply of firkin and pickled roll is pretty well worked off and cannot very materially injure the market for fresh.

One of the greatest evils of our people is to over-do everything and dairying has not been an exception to this rule. Everybody who had or could rent a cow "dairied it" and the result was cheap butter. The prices paid for cows to dairy have been very high, which was all well enough while butter was high, but when the prices of butter went down, rents did not go down in a corresponding proportion.

This year several of our butter dairymen are turning their ranches into cheese dairies which will have the effect to a small extent of relieving the butter market. Persons living in those localities not particularly adapted to butter making, should look well to this subject. In a few days the cheese of the Petaluma Factory will be on the market which will be a new feature and a very important addition to California cheese and will probably compete successfully with the best Eastern.

Making Butter with Ice.

While organizing Granges in Marin county, we had occasion to visit Point Reyes to organize the Grange at that place. We made our headquarters for the time with our friend Henry Clausen, who has a different way of making butter from anything we ever saw, and on principles that we supposed would never work satisfactorily. But on the contrary, seems to work not only well but really better than by the common process. Our friend Clausen is a Swede, (not Swiss), and his process is the Swedish process for making butter, and is substantially as follows:

After milking, the milk is placed in large cans holding probably 15 gallons each, these cans are placed in vats somewhat resembling vats of a tannery, and ice cold water turned on, till the water in the tank is even with the milk in the cans. At about 30 hours the cream is skimmed off; the milk and cream both being perfectly sweet, strange enough the cream rises in the cans, in a quantity equal to the milk in pans, and of course the butter is the very best possible to make, being rich and perfectly sweet.

The milk in turn is made into

Skimmed Milk Cheese,

Which we sampled and found to be a very palatable article. The presses are of Mr. Clausen's getting up; quite simple and yet perfectly complete and answering every purpose, these cheese find a ready market in this city; at prices not very much lower than the current price of cheese. The whey is also used and by mixing a little brand into it, is good food for hogs. Mr. Clausen informed me that if ice could be had to pack around the cans, it would be better than water.

Petaluma Cheese Factory.

The factory is situated on the S. F. and N. P. R. R., and will have a convenient market in this city, where the arrangements are already made for the dairy department of the California Granges, to dispose of the cheese. The morning trains could convey milk to the factory, and thus the dairies for many miles on the road could find a market at the factory.

The Petaluma cheese factory, is situated at Newtown, about one mile and a half from Petaluma. The proprietors are James Payne and Amos F. Killam, recently from Canada. The building, which will soon be completed, is to be three stories high, and 20x40 feet on the ground. The business of cheese-making will be conducted on

The Eastern Plan.

And this will be the only factory of the kind in California. The proprietors have had considerable experience in the business, and are confident of success. The building when completed will cost, with the necessary fixtures, about \$3,000, and the establishment will be enlarged whenever the business justifies. Fifty screw presses are being made in this city, and it is expected that the factory will be in running order in two or three weeks. It will have a capacity for making

15,000 Pounds of Cheese per Day,

And, if the expected success is realized, five persons will be employed and 90 cheeses,

varying in size from eight to 40 pounds, will be made daily. The proprietors state that at the price which they will offer for milk dairymen will realize an amount equal to 31 cents per pound for butter, all the cost of manufacture being saved. Three and a-half gallons of milk, of ordinary richness, will yield one pound of butter, and one gallon of milk one pound of cheese.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS.

PIECE MILK-PANS.

STRAINER PAILS,

CREAM PAILS,

MILK PAILS.

ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m

SAN FRANCISCO.

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, at \$5.00 per dozen; White Leghorns, Game Bantams, Creve Coeurs, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, (first premium at Buffalo, 1873), Silver Spangled Bantams, Poland, Golden Bearded Poland, Black Poland, White Crests, Brown Leghorns, White Sulitans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland, at \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Bird of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 44 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C. O. D. 6v1-tf

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100,000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - - SAN FRANCISCO.

SEND FOR CATALOGUE.

21v6-tf

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F. de27-tf

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission

St., S. F. C. H. Gruenhagen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San

Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of

Bed Springs, including the Oermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warre 1 street, New York. Refer to Anthony Halsey, Cashier, Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court, San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$5,000,000,

Subscribed, \$3,000,000. Paid in, \$1,500,000. Remainder subject to call.

DIRECTORS IN LONDON—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Scholfield, Isaac Seligman, Julius Sington.

MANAGERS:

R. G. SNEATH and IGNATZ STEINHART, SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v27-cowbp

SAN JOSE INSTITUTE

—AND—

Business College.

A Day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department

Is under the supervision of James Vinsonholler, who for many years was at the head of Business Colleges of San Francisco.

The Twenty-fourth Session commences January 19th, 1874.

For circulars address

3v7-2m JAMES VINSONHALLER.



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,

2v6-tf President Business College, San Francisco.

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,

OIL Cakes and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.

Office, 3 and 5 Front Street.

Works, King street, bet. Second and Third. fe15-cow

McLAREN, BRYDGES & CO.,

DEALERS, MANUFACTURERS AND INTRODUCERS OF NEW INVENTIONS FOR THE PACIFIC COAST.

Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.

—ALSO—

Real Estate and General Business Agency.

NO. 605 CLAY STREET, SAN FRANCISCO, CAL.

ja10-hp-3m

OUR SPECIALTY: "BEYOND THE MISSISSIPPI." GO WEST, YOUNG MAN! GO WEST! Gold by the Bushel! Silver by the Ton! Capital required: Nerve and Honest Industry. THE FAR WEST, The Great Treasure Chamber of America. All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in CROFUTT'S WESTERN WORLD, for \$1.50 a year. With \$10 Premium Chromo, "AMERICAN PROGRESS," free to each subscriber. Two sample WORLDS sent for 10 cents. Agents wanted.

GEO. A. CROFUTT, Pub'r, P. O. Box 343, San Francisco; P. O. Box 376, New York.

- 429 Montgomery street, San Francisco, 247-62

AGRICULTURAL ARTICLES.

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m MATTESON & WILLIAMSON, Stockton, Cal.

O. CREGO. S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkeys, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:
C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,
24v5-3m San Francisco.

Pacific Coast Agency for Patent Rights.

WM. SMALL & CO.,

331 Kearny Street, San Francisco, Cal.

We offer for sale the right to manufacture and sell in the Pacific States and Territories the following new and valuable inventions:

Dahl's Improved Plow.
Pooley's Miter Machine.
Muntzberger's Barrel Washer.
Kaestner's Wire Coal Scoop.
House's Wire Fence Stretcher.
Ramsdell's Adjustable Plasterers' Float Handle.
Weiss' Improved Egg Carrier.
Buckner's Seat-Spring for Vehicles.
Campbell's Ice Cream Freezer.
Corliss' Clothes Line Reel.
Davis' Hand Corn Planter.
Riviere's Improved Plow.
Mendenhall's Spark Extinguisher and Rotary Engine.
Philo Marsh's Defecated (lubricating) Oil.
Macks' Garden Cultivator and Lawn Mower.
Kiblinger's Improved Eaves Trough.

Call and examine samples and specifications. No unreasonable terms demanded.

WM. SMALL & CO.,
331 Kearny street, up stairs.

A. K. Dahls' Patent Cast Steel Plow.—We have been appointed agents for the right of the above valuable patent, to which we would respectfully call the attention of manufacturers. Strong and durable, easily repaired, light draught, warranted to scour in any soil.

WM. SMALL & CO., 331 Kearny St.

Pooley's Improved Index Miter Machine.—This machine is calculated to cut miters by index of any size desired. Can be gotten up at low cost. The right for this coast for sale by WM. SMALL & CO., 331 Kearny St.

House's Patent Stretcher for Wire Fences.—Invaluable for the construction and adjustment of wire fencing. Gives uniform and constant tightness, prevents breakage and pulling over of fence posts. For further particulars apply to Pacific Coast Agency for Patent Rights. WM. SMALL & CO., 331 Kearny St.

Wood's Spiral Spring False Bottom for Water Coolers.—A sample of this important improvement for Refrigerators and Water Coolers can be seen as below. Effects a saving of thirty-five per cent. in ice and adds greatly to the durability of the cooler. Agents for right for Pacific Coast. WM. SMALL & CO., 331 Kearny St.

Muntzberger's Patent Barrel Washer.—This machine is calculated to clean ten or twenty barrels at a time, by hand or other power, at a great saving of labor. The right for Pacific States and Territories on reasonable terms. For sale by WM. SMALL & CO., 331 Kearny St.

Kaestner's Wire Coal Scoop and Sifter.—The right of this handy article for housekeepers' use, for sale. A large size for furnace use can be manufactured. For right to manufacture and sell on this coast, apply to WM. SMALL & CO., 331 Kearny St.

Ramsdell's Adjustable Handle for Plasterers' Float.—Manufacturers of mechanics' implements would do well to examine this improvement, which can be made to supercede all others. For right, apply to WM. SMALL & CO., 331 Kearny St.

Tull & Weston's Improved Tub Washing Machine.—The latest invention in this valuable article of domestic machinery. Can be used in any ordinary sized wash tub. The right for Pacific States and Territories on reasonable terms. For sale by WM. SMALL & CO., 331 Kearny St.

PUBLISHERS please say advertised in Pacific Rural Press.



The attention of Wool Growers is continually invited to the
Thoroughbred Stock Bred and Kept upon the
MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the

THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

10v7-eow

SEVERANCE & PEET,
Importers and Breeders of Spanish Merino Sheep.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,
152 New Montgomery Street, SAN FRANCISCO. 2v7-6m

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere

GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado county,
California. 11v6-eow

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull,
"DANDY JIM,"

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Bull took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Bull, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured. 4v7-3m

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,255. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 8v7-3m

CYRUS JONES. GEN. GILES A. SMITH. L. H. HICKS.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Duchesnes, Rose of Sharon, Booths, Miss Wileys, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara av nue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO.,

2v7-3m San Jose, Cal.

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, imported last year, and bought of Hammond.

J. H. DODGE.

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal. ja24-tf

WAKELEE'S

SQUIRREL EXTERMINATOR.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. It is convenient and cheap. There is no danger from fire in using it. It will kill every time. The squirrels die in their holes from its effects.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is so good that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger of fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed. 3v7-3m

H. K. CUMMINGS.
1858.

H. H. EALSTON.
1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1v

SANTA BARBARA COLLEGE,
SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to
2v6-1v ELWOOD COOPER,
President Board of Directors.

NURSERY NOTICES.

ESTABLISHED 1853.

Stock for Nurserymen and Florists.

TERMS CASH.

Cherry Seedlings—Mazzard.....	\$12 per 1000
" "—Mahaleb.....	20 per 1000
Apple Seedlings.....	12 per 1000
Pear Seedlings.....	15 per 1000
Walnuts, English, 4 to 6 ft.....	15 per 100
" " California bl'k, 4 to 6 ft.....	15 per 100
Spanish Chestnuts, 6 to 12 in.....	15 per 100
Cork Elm, 4 to 6 ft.....	15 per 100
" " 6 to 8 ft.....	20 per 100
Blue Gums, or Eucalyptus, in variety.....	\$3 to 10 per 100
Magnolia, Grandiflora, 3 to 5 in.....	3 per doz.
" " 6 to 12 in.....	12 per doz.
" " 12 to 18 in.....	6 per doz.
Golden Arborvitae.....	8 to 12 in..... 6 per doz.
" " 12 to 18 in.....	6 per doz.
Heath-leaved Arborvitae, 12 to 18 in.....	6 per doz.
Crataegus Arborescens, 12 to 18 in.....	2.50 per doz.
" " 2 to 4 ft.....	6.00 per doz.
Enonymus Reptans, Variegata.....	2.50 per doz.
" " Puicheia.....	2.50 per doz.
" " Argentea Marginata.....	3.00 per doz.
" " Japonica.....	3.00 per doz.
" " Aurea.....	3.00 per doz.
Swedish Juniper, 12 to 18 in.....	3.00 per doz.
Heath, Mediterranean "Hardy".....	2.50 per doz.

Will only sell in quantity specified at these prices. If less, 10 per cent. added; if more, 10 per cent. discount.

BERNARD S. FOX,
13v6-1f San Jose, Cal.

Fruit Trees! Fruit Trees!

AND WHERE TO PURCHASE THEM.

The Santa Clara Valley Agricultural Society has awarded:

Largest collection of Pears, first premium... B. S. Fox.
Best twelve varieties of Pears... B. S. Fox.
Largest collection of Apples... B. S. Fox.
Best twelve varieties of Apples... B. S. Fox.
Best collection of Plums... B. S. Fox.
Largest collection of Nuts... B. S. Fox.
Best soft-shelled Almonds (Languedoc)... B. S. Fox.

Forest Trees, Shade Trees, large and small, in quantity.

BERNARD S. FOX, San Jose, Cal.

Agent, Mr. THOS. MEHERIN, Battery street, San Francisco. oc18

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.

Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address **THOMAS MEHERIN,**

516 Battery Street,
SAN FRANCISCO.
P. O. Box 722. 24v6-3m

NEW PEACHES, ETC.

Having a large stock on hand of Rivers' and new Southern Peaches, which I think will be great acquisitions to California, I have concluded, in order to introduce them, to reduce the prices as follows: Beatrice, St. Johns, Plowden, 1 yr old, 50c ea; in buds, 25c ea. Freeman, Van Buren, Golden Dwarf, Italian Dwarf, 1 yr old ea; buds, 25c ea; 2 yr old bearing trees, \$1 ea. Utah Hybrid Cherry, Wild Goose, and Miner Plums, 1 yr old ea; \$1 ea; buds 25c ea. Louise, Albert, Early Rivers, Lord and Lady Palmerston, and others from Rivers, and Picquet's Late, Blood Leaved, Lady Parham, Paces, Amelia, Julia, Darby and other choice Southern Peaches, all in dormant bud, 25c ea; also Selway, Smock, Hale's Early and other well-known leading kinds, at low prices. 1 yr old and in bud. Beatrice has been well tested in the East and proved to be the very best and earliest variety. St. Johns, in the South, is their best early kind and beats all others. Freeman, Picquet's Late and Lady Parham are noted as the best of their season, and all will no doubt prove superior for orchard culture to the more common fruit heretofore grown in California. My trees I warrant always to be true to label. Also, a general assortment of fruit trees including Cherries, Plums, for drying, and Almonds, all for sale at reduced prices, with a liberal discount by the quantity. Terms cash with the order, and all orders promptly filled.

6v7-1f **D. E. HOUGH, Vacaville, Cal.**

SUPERIOR
FRUIT TREES,
TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSERYMAN.

T. CORLEY,
4v7-3m No. 315 Washington st., S. F.

MULBERRY TREES,

(JAPONICA AND GRAFTED ROSE-LEAVED.)

For Sale at Felix Gillet's, Nevada City, Cal.

Japonica, 2 and 3 year old trees at \$10, \$8 and \$6 per hundred; cuttings at \$2 per hundred; grafted rose-leaved, standard trees, with heads at six feet from the ground, \$1.50 per tree; \$10 per ton; scions, for budding and grafting, \$1 per dozen. Small packages of Japonica (3d-class trees) and cuttings, and rose-leaved scions, may be sent by mail in four pound packages, or by express; larger invoices with common freight. Send for more particulars. Also Bionda and Bionda Silk Worm Eggs. 6v7-6t

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of
NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A
CHOICE COLLECTION OFFLOWERING BULBS AND SEEDS,
(Native and foreign.)Our catalogue is now ready, and is the most extensive
ever published on this Coast; we will forward it free to
all applicants.Nurseries on Lombard and Chestnut streets, near
Larkin street, at the terminus of the new Clay street
railroad. Floral and seed depot, No. 27 Post street, San
Francisco.

Letters by Mail or express will reach us.

Jalio MILLER & SIEVERS.

TREES, TREES, TREES
—AND—
PLANTS.In any quantity from one tree to 100,000, both whole-
sale and retail, at lowest market rates. Fruits guaran-
teed true to name. I have many new varieties of fruit
in my collection which are far superior to the old stand-
ard varieties. Among them is the celebrated Beatrice
Peach, guaranteed true; this Peach is 20 days earlier
than the Hale's Early, and in every respect a fine peach.
My stock of Shade Trees and Grape Vines is the
largest in the State, and a fine assortment. Have also
small fruits, hedge plants and hop roots.Send stamp for printed Catalogue, Price List and
directions for planting and training, or come and see
the stock, at the CAPITAL NURSERIES. Office and
tree depot U street, between 15th and 16th streets, Sacra-
mento, Cal.ROBT. WILLIAMSON, Prop'r.
Special rates to Patrons of Husbandry. 24v6-3m

KING'S NURSERY,

ELM Street, between Telegraph Avenue and Broadway,
Oakland, Cal.GREEN HOUSE PLANTS,
EVERGREEN TREES,
SHRUBS, ROSES, ETC.
100,000 MONTEREY
CYPRESS TREES.A superior stock of large sized AUSTRALIAN GUM
TREES, including:—EUCALYPTUS GLOBULUS (Blue
Gum)—extra fine street and shade trees. EUCALYPTUS
VIMENALIS—both sorts very popular. ACACIAS in
variety. Monterey Pines, Lawson's Cypress, etc., etc.
Orders attended to. Address:M. KING, Nurseryman,
23v6-3m OAKLAND, CAL.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of
trees, adapted to the climate of California.ORANGE TREES, BUDDED AND GRAFTED;
ORANGE TREES, SEEDLINGS;
LEMON TREES,
LIME TREES,
CITRUS,
SHADDOCK,
POMEGRANATE.ITALIAN CHESTNUT—This tree is unsurpassed for
beauty, and very prolific. The Chestnuts are delicate
in flavor and very large, and an almost endless variety
of rare, useful and ornamental trees.
Send for priced Catalogue. 24v6-6m

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph
Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental
Trees, Shrubs, Roses, GREEN HOUSE
PLANTS, ETC.We are constantly adding to our varied stock the NEW-
EST AND RAREST PLANTS on this Coast, and invite
all who are laying out grounds and planting to give us
a call.

LANDSCAPE GARDENING attended to. ja24tf

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Finley Peach,
Georgia Freestone Seedling, the first offered in the State.
Its flavor being richer and superior to the finest of the old
varieties; it is the best for canning and shipping, and brings
double the price of any other Peach in market. Orders
promptly filled fresh from the Nursery.BRYAN & DOMINGOS,
4v7-2m P. O. Box 157, Sacramento, Cal.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and
Plants, and permanently located our Greenhouses and
Tree Depot corner Washington and Liberty streets, we
are prepared to furnish Fruit and Shade Trees, Small
Fruits, Evergreen Trees and Shrubs, Flowering Shrubs,
Greenhouse and Bedding Plants, etc. Send for Des-
criptive Catalogue and list of prices.Address, W. H. & G. B. PEPPER,
21v6-1y Petaluma, Sonoma Co., Cal.

Brooklyn Nursery,

13TH AVENUE, OPPOSITE BROOKLYN P. O.

This Nursery has for sale at low prices about 20,000 Cy-
press, (\$3 to \$15 per hundred), 10,000 Australian Blue Gums,
and about 5,000 assorted Roses. Also a choice selection of
the various kinds of ornamental shrubbery, etc. Special
attention given to the laying out of landscape Gardens.
Orders received at the Nursery, or at the office of J. P.
WERNY & CO., Seedmen, Nos. 409 and 411 Davis St., S. F.
24v6-3m JOHN CAREY, Proprietor.

BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESALE AND RETAIL,
an immense stock of Evergreen Trees, Ornamental
Shrubs and Flowering Plants, suitable for the conserva-
tory, parlor window, flower garden, lawn, vases, rock-
eries, hanging baskets, ferneries, etc. Comprising in
part, Camellias, Magnolias, Daphnes, Araucarias, Yuccas,
Variegated Agaves, Roses, Fuchsias, Carnations, Eucal-
yptus Acacias, Peppers, Cypress, Pines, Junipers,
Cedar of Lebanon, etc. New and rare plants a special-
ty. Dealers and nurserymen supplied at low rates.
Hyacinths, Tube Roses, Tulips and other Bulbs. Choice
Flower Seed, Garden and Lawn Seed, fresh and genuine.
2v7-3m

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN
Trees, Shrubs and Plants, with all other general pro-
ductions of the Nursery and Garden. First-class two
year old Apple Trees at \$20 per 100, and all other Trees
and Plants at corresponding low rates. Fine Evergreens
grown in boxes and pots, warranted in any locality.
All Trees and Plants warranted true to name. Cash or
good reference must accompany all orders. Lombardy
Poplars, 1½ to 2 inch trees, 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists,

K street, between 8th and 9th, SACRAMENTO, CAL.
4v7-3m

FOR SALE!

Valuable Fruit Orchard and Garden

Of ninety-two acres choice land, one mile from Rail-
road Depot; 10,000 fruit trees, grafted, best sorts, in
full bearing; five acres vineyard, half foreign table;
two acres best blackberries.Three Artesian Wells supply an abundance of water.
Seven room Dwelling, hard-finished; barns, sheds,
vinegar house, fruit-drying house, steam engine, boiler,
saw for box making, and every requisite for raising,
curing and shipping fruit on an extensive scale.
This property will be sold as a whole, or in two sub-
divisions of forty-six acres each, on easy terms. Title
perfect.

For particulars, apply to

YOUNG & PAXSON,

No. 424 Montgomery St.,
21-4 San Francisco, Cal.

RAMIE PLANTS AND HOP ROOTS.

100,000 Cuttings (Roots and Layers),

For sale in quantities to suit, at prices that will justifi-
ably parties in planting them out. Send for Circular and
Price List. Apply, or send orders to,

P. H. BOGGS, Emmatton, Sacramento Co.

Or to R. WILLIAMSON, Capital Nursery, Sacramento,
Cal. feb14-1mOrnamental and Evergreen Trees for Sale
at the Old Maple Leaf Nursery.I have now on hand the largest and best varieties of or-
namental Evergreen Trees, Fruit Trees of all kinds, also a
large lot of the Blue Gums, from six inches to 12 feet high,
at from \$4 to \$100 per hundred. A large lot of Cypressess,
Vines and Junipers of every kind. Green House Plants
and a large quantity of Roses. Maple and Laburnum
Trees for street planting. I would call the attention of
the trade to a large quantity of Australian and African
Timber Seeds, and especially Cedron Decidare, or Dea-
vine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tuh's Hotel.
Send for Catalogue. jalio

BEATRICE PEACH TREES,

AT GLEN GARDENS.

To close out my stock of new Peaches, one year old
from bud, such as Beatrice, Louise, Foster, Freemason,
Glen Garden Seedling No. 1, Stanwix Early York, etc.,
I have reduced the price to 25 cents each, where 50 trees
are ordered. Beatrice, in dormant bud, 15 cents each.
E. F. AIKEN, Sacramento, Cal.

P. O. Box 212.

f21-1m

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT
TREES for sale, from three to five years old. The
five-year-old Orange Trees are the largest ever offered for
sale in this county. For Price, address,

MILTON THOMAS,

6v7-2m P. O. Box 304, Los Angeles, Cal.

THOS. A. GAREY'S

Semi-Tropical Nurseries,

San Pedro street, two miles below the Court House,
LOS ANGELES, CAL.The Largest Stock of Semi-Tropical and Northern Fruit
Trees in Southern California.

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

AUSTRALIAN
GUM TREES.250,000 on hand for this season, at rates to encourage
forest culture. Also, 50,000 Cypress, in shipping order.
Nursery on 12th street, one block north of Tuh's
Hotel, East Oakland, Cal. Or address, Box 80, Oak-
land.BAILEY & CO., Proprietors.
Beautiful fresh Cypress Seed, \$4 per pound, sent by
mail, warranted pure and of the finest quality.
25v6-3m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy
BLACKBERRY SETS, for sale at LOWEST RATES.
Orders may be addressed through DEWEY & CO., of the
Rural Press, San Francisco; ROBT. WILLIAMSON, Capital
Nurseries, Sacramento; or to me,CALVERT T. BIRD,
25v6-3m San Jose, Cal.

THE FINEST COLLECTION OF PINES,

Cypress, Australian Eucalyptus,

EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices.

Send for priced Catalogue to

8v7-3m A. D. PRYAL, Oakland, Cal.

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF
EVERY VARIETY,And raised by the most experienced and reliable grow-
ers of Europe, Eastern States and California.My stock is complete; quality unsurpassed; prices as
low as from the best Eastern houses; embracing Vegeta-
ble, Flower and Agricultural, Fruit, Shade, Ornamental
and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick,
(Rochester) and Monnice & Co., (France.)NOW READY FOR THE TRADE, 100,000 POUNDS
EXTRA QUALITYCalifornia Alfalfa, Kentucky Blue Grass,
Red Clover, White Clover,

Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,

Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the
Pacific States and the interior.All the better grades forwarded by mail (post-paid),
at catalogue rates. Money forwarded in postal orders,
registered letters or express, at my risk.My Agricultural Almanac and Price Catalogue is
ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a
rates that, with proper cultivation on suitable land,
will make them among the most profitable crops grown.
For further particulars address

PACIFIC OIL AND LEAD WORKS,

12v6-3m 3 and 5 Front street, San Francisco.
P. O. Box 1443.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.
19v6-1f

SEED FOR GRANGES!

I offer Seed to my fellow Grangers at a liberal dis-
count. Special rates sent to all Granges that apply
through their Secretaries.

JAMES H. GREGORY,

f28-2t Marblehead, Mass.

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

Is intended to sail with dispatch. To be fol-
lowed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,
San Francisco.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and
Kearny, SAN FRANCISCO.

21v2-1y

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which
it is recommended. All Lameness, Spavins, Callous
Lumps and Blisters of all kinds are speedily removed
by it.WILLIAMS & MOORE, Prop'rs,
3v7-3m Stockton, Cal.

LANDS & HOMES FOR SALE

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of
the Santa Ana River, between Anaheim (Los Angeles
county) and the town of San Bernardino, containing
35,717 acres, of which a large proportion is level and
adapted to grain, general agriculture, grapes, semi-
tropical fruits, etc. The famous "Riverside Colony,"
founded by Judge North, embraces a portion of the
east end of this Rancho.Also, for sale, the Rancho "LA SIERRA SEPTU-
VIDA," adjoining on the southeast, and containing
17,769 acres.The Southern Overland Railroad will necessarily pass
through or very near the Jurupa Rancho.

Apply to

ALFRED ROBINSON, Trustee.

542 MARKET STREET,

N. E. corner of Montgomery.

VALUABLE FARM FOR SALE.

The well known farm of Tower & Bisbee, Salt Spring
Valley, Calaveras County, is offered for sale. The farm
drew the premium as second best grain farm at the San
Joaquin Valley Fair, and the premium as the best im-
proved farm. The diplomas they now have. The farm
contains 800 acres of land, with perfect title, and four-
hundred with title secured. Mr. Bisbee, one of the
proprietors, wishes to go East to live with his aged
parents, and rather than sell an undivided half, they offer
the whole ranch for sale at a bargain, including team,
wagons and farming tools, of which there is a large
supply and of the most improved kinds. Also fifty
head of cattle, besides other stock necessary on a farm.
The farm is eight miles from Milton on the stage road
to Murphy's and Big Trees, and is a desirable location
to keep public house, and now has a good custom.
Last year, as dry as the season was, there were over 300
tons of hay raised on the farm, with good market at the
door for everything raised on the farm. The land is all
enclosed with good and substantial fences, and suitably
divided. Four large and substantial barns, that will hold
600 tons of hay, large store-house for tools, house for
hired men, granary and blacksmith shop. Also large two-
story house, hard finished throughout and built in the
most substantial manner, with a good garden attached
and a never-failing stream of water running in the house
and yard. The farm contains about 400 acres of land
suitable for alfalfa or any other kind of deep-rooted grass.
The farm to be appreciated must be seen, and will be
sold at a good bargain to any one wishing to purchase
a valuable and perfect home, where the climate is as
good as in any other part of the State. Any one wish-
ing to purchase the property can correspond with the
proprietors by directing to "Milton, Calaveras County,
California, to TOWER & BISBEE." feb14-3t

GRAIN & STOCK FARM FOR SALE.

A FINE FARM OF 140 ACRES;
Good Grain Land; all plowed and ready for seeding and
promising fine crops, and 350 acres of good tule land ad-
joining; excellent pastures; situated in Suisun valley,
within a mile and a half of landing at Suisun City and one
mile of a railroad station. Has a good house, barn, cor-
rals and fences; also, work-horses and a full assortment
of agricultural implements, seed, feed, etc. Price moderate
and terms easy. Apply to BERRY & CAMP, 418 Mont-
gomery street, Real Estate Agents. feb14-4w

TO RENT.

An improved Farm—including a Vineyard—about one
mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad
shipping channel of Islais Creek; will be sold so low as to
make it an inducement to the buyer. Inquire for the
owner, Room 18, No. 338 Montgomery st., S. F. bptf

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily
operated Sewing Machine in the market.

Always in order and ready for work.

In the past ten years ELEVEN THOUSAND Florence
Machines have been sold by me on this Coast, and no
purchaser has paid me anything for repairs. If there
is a Florence Machine within one thousand miles of
San Francisco not working well I will fix it without
any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m

Grand Hotel Building, S. F.

The New Wilson
SEWING MACHINEHas points of superiority over
all others. A reliable war-
ranty is given with each machine
for

FIVE YEARS.

It is unequalled for light and
heavy work. Examine and
compare it with the highest
priced machine in the marketG. A. NORTON, Gen. Ag't
for the Pacific Coast.

337 Kearny St., S. F.

2v27scow-bp-1y



The Pacific Rural Press,

NOW IN ITS FOURTH YEAR.

Is a Large, Handsome, Illustrated, Home Journal. Every Farmer, Gardner, Country Gentleman and Rural Homestead Owner should take it. Every Miner, Mechanic, Manufacturer and Professional man and woman who contemplates agriculture, should read it.

It is worth its price for home reading. Send it abroad and extend a knowledge of our wonderful growing country. Subscription, \$1 a year. One sample copy free. Four copies (postpaid) 25 cts.

DEWEY & CO., Publishers.

No. 338 Montgomery St, S. F.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

L. P. MCCARTY—General Agent.
A. O. KNOX, City Soliciting and Collecting Agent.
W. H. RATTENBERRY—Oklahoma.
J. O. EVING—San Mateo County, Cal.
J. W. RILEY—Monterey County.
CHAS. W. OTIS—Marin and Mendocino Counties.
C. M. DALY—San Joaquin, Stanislaus and Merced Counties.
D. BRUNER—Sonoma County.
CHAS. T. BELL—Alameda, Santa Clara and Santa Cruz Counties.
J. W. ANDERSON—Orange and Santa Ana, Los Angeles County, Cal.

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GEESE,

53 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List. The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address: M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage. 3v7-3m-16p-sp

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure Whitefaced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California

ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS. 7v6-1f-16p2

AXLE GREASE.

To Miners, Millmen and Others.



Your attention is called to the very superior AXLE GREASE manufactured by us for over 18 years. Recent improvements in the chemical arrangement of the lubricants used in its manufacture render its use as serviceable on the lightest buggy as on the heaviest team.

The extensive demand for the H. & L. Axle Grease has enabled the proprietors to reduce its price to as low a rate as any of the inferior compounds, which are continually being forced upon the market.

See that the trade-mark (H. & L.) is on the red cover of the package, and take no other.

HUCKS & LAMBERT,

Manufacturers & Sole Proprietors, SAN FRANCISCO.

Factory.....145 Natoma Street.
Depot.....312 Jackson Street.
10v5-lambp-ly

THE BEST SEEDS

AT WHATEVER COST,

ARE ALWAYS THE CHEAPEST IN THE END.

No person, Gardener, Amateur, or Farmer, can afford to plant any but the BEST. We make a specialty of furnishing, for Market Gardeners' use, choice grown, extra selected seeds, of varieties having their special approval.

Also, for Family Gardens the finest and best varieties introduced up to the present time. With us QUALITY stands first, all other considerations secondary to this.

Our Catalogue, with prices for Spring of 1874, contains full information. We mail it free to all who send for it.

SCHLEGEL, EVERETT & CO.,

BOSTON, MASS.

10v7-3t

W. M. BRANDON,

JACOB W. ROGERS

BRANDON & ROGERS,

California Land Agency,

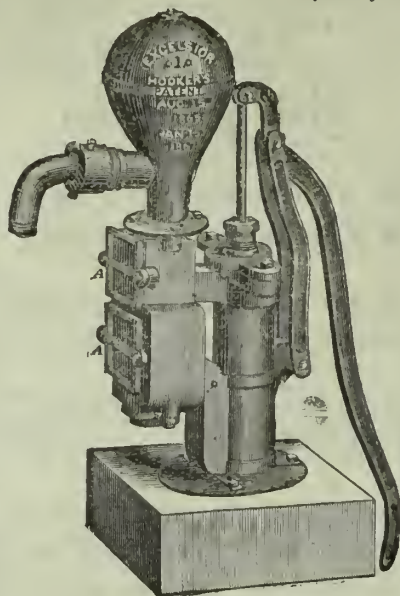
535 CALIFORNIA STREET, SAN FRANCISCO,

Buy and sell unimproved lands, farms and city property throughout the State of California. Faime to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enables us to effect speedy and satisfactory sales and exchanges.

20v6-17-16p

THE "EXCELSIOR" FARMERS' PUMP.

After Seven Years use proving itself the Best Pump on this Coast, and consequently the CHEAPEST.



BASE.

We can advise all parties to buy the Pump to be worked by hand, wind-mill or horse power. All sizes for sale.

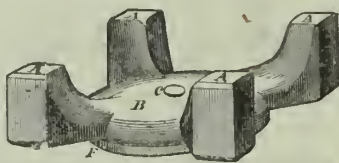
REMEMBER,

Every Pump is tested to 125 lbs. hydraulic pressure per square inch.

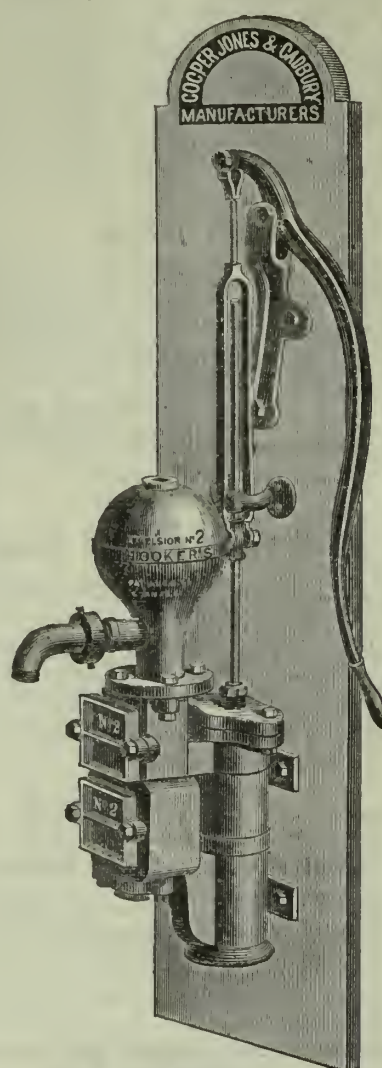
Will pump water 250 feet high.

So simple every Farmer can keep it in order.

EVERY PUMP WARRANTED.



VALVE.



MOUNTED.

BRITTAN, HOLBROOK & CO.,

111 and 113 California street, San Francisco, (and also Sacramento,) General Agents.

Send for Circular.

6v7-cow-3m

U. S. LIVE STOCK EXCHANGE,



S. E. COR. FIFTH AND BRYANT STS., S. F.



CATTLE SOLD ON

COMMISSION,

—OR—



BOUGHT ON FARM FOR CASH.

WANTED—43 MILK COWS, 24 WORK HORSES,
260 BEEVES, 470 HOGS.

Address,



DAWSON & BANCROFT,

512 Fourth street, S. F.



Special Rates to Members of the Grange.

10v7-tf

BEST SHADE IN USE.

—THE—

RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture IS FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE

Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS

Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the Bottom,

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are simple, work to perfection, and never get out of order.

Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.

6v7-16p-3m

TO FARMERS.

WE ARE PREPARED TO CONTRACT FOR NEXT SEASON'S CROP OF

FLAX SEED at 31-4 Cent per Pound,

Delivered at our works in this City. Will also furnish Seed for sowing, to be paid for from the contracted crop. Will also advance

Money Necessary for Harvesting Crop.

required. Farmers can ship direct to us, thereby saving all

EXPENSES OF COMMISSION.

Now is time to sow. For further information apply immediately to

THE PACIFIC OIL & LEAD WORKS,

3 and 5 Front Street, San Francisco.

feb14-16p-1m

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m

304 California Street.

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

Or C. J. CLAYTON,

Clayton, Contra Costa Co., Cal.

PURCHASERS please say advertised in Pacific Rural Press.

THE PACIFIC RURAL PRESS has a larger Circulation than any other Pacific Coast Weekly, independent of a daily issue.

SEEDS!

SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER,
WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p SAN FRANCISCO.

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street,.....San Francisco,
WHOLESALE AND RETAIL DEALER IN

Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE.

BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th.

R. J. TRUMBULL,
15v6-6m-16p 427 Sansome st., San Francisco.

IMPROVE YOUR POULTRY,

It Costs No More to Keep Good Fowls than Poor Ones!

OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.



WHITE LEGHORNS,

Called THE POOR MAN'S FOWL. Eggs, \$6 per doz; Fowls, \$20 to \$30 per trio; Single Cocks, \$10. A new importation of J. Boardman Smith & Pitkin's celebrated strains just received. Stock guaranteed perfect in markings—white ear lobes, etc. No inferior stock sold at the Oakland Poultry Yard for any money.

For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 650, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed.

9v7tf

\$10 PER DAY TO ACTIVE AGENTS IN EVERY town, male or female. Send for particulars.

J. M. HALSTED,

31 Third St., S. F.

More than double the number of Farmers and their families read the PACIFIC RURAL PRESS than any other journal on this Coast.



Volume VII.]

SAN FRANCISCO, SATURDAY, MARCH, 14, 1874.

[Number 11.

How the Eucalyptus Should be Planted.

In answer to many inquiries from all sides concerning the Eucalyptus, in which so much interest is shown at present, Dr. William H. Gibbons, of Alameda, has kindly furnished us with the following hints concerning its growth:

The habits of the trees, like the habits of animals, differ. The full development of any organized structure depends on the being placed under conditions which best coincide with its natural habits. Our common oak (*Quercus Eggylops*), scarcely ever attains a height exceeding fifty feet. It has no central axis, its numerous branches are regularly uniform in size, and singularly erratic in regard to direction. You cannot train one of these trees when a sapling, and make it assume the form of a chestnut, a poplar, or an Eucalyptus. Nor can you trim an Eucalyptus and make it assume the form of an oak. The roots of different trees also vary in direction, in depth and in bifurcation, according to the soil in which they grow. By nature, the relation between the form and mass of a tree and of its roots, as a general rule, is uniform. Should there be deficiency or poverty of soil, neither root nor top is developed. Should the trunk be deprived of its small branches and leaves, there follows a deficiency in the new wood of the tree, which is apt to be brittle and succulent. Again, a young tree has more rapid growth of root, than of top. But the root derives its pabulum from the leaves which prepare, or assimilate the sap. Whatever deprives the young tree of its natural proportions of leaves, interferes not only with the growth of the tree itself, but with the extension of the root. Whatever impairs the growth of the root, impairs the general health and vitality of the tree.

The Eucalyptus, in its natural localities, attains a height of from 300 to 400 feet, with a diameter of 40 feet. Its first two years' growth from the seed is largely occupied in making root. Cut off its side branches; and you cut off the organs which supply the roots with food. Dwarf the root, and you produce a tree, ill-shaped, ungraceful, which having no firm support in the ground is liable to be blown over by any high wind.

There is too much carelessness on the part of some, too much ignorance on the part of others, in transplanting and cultivating trees; our gardeners ball up the roots of our Eucalyptus like a mass of worms, and sell them thus, ready for planting. Many purchasers dig a small, shallow hole and set the trees in just as they bring them from the nurseries and cover them up. They grow, but having no extension of root, and no more depth of soil than the gardener has depth of brain, they grow until a heavy wind comes round and blows them over. They are re-set, their tops are cut off and they grow again, looking as much like an Eucalyptus as a jackass does like a philosopher. The hole for a tree should always be from 18 in. to 2 ft. square and of like depth; it should be filled to within 8 inches of the top with good vegetable mold or compost. The root should be trimmed so as to leave no accumulation of twisted roots, and the tree then planted so as to be about one inch below its earth line. So planted, it cannot fail to grow, and with ordinary care it will never blow over. By reference to the accompanying engraving the reader will be able to see the difference between the growth of a young tree planted properly and left to nature, and one planted according to prevailing custom.

[We think the Doctor is a little too severe on a majority of our nurserymen and gardeners. Many of them are wiser now-a-days.—Eds. PRESS.]

FARMERS AND ROADS.—A local paper in Pennsylvania says: There is no single item in connection with the farmers' business that attracts more of his attention—that more excites his ire, or gives him greater satisfaction than good or bad roads, and yet there is no subject in which he is more persistently perverse and careless. Who ever heard of two farmers agreeing upon the proper time to repair roads, or the best means of doing it? Road mending with us, in most instances, merely a spasmodic outbreak of misdirected labor applied without a definite object, and regardless of all recognized laws of mechanics or nature.

Farming in the Foothills.

We have received several letters endorsing our views with regard to the value of the Foothills for farming; and as further evidence to that already given, we clip the following in relation to the agricultural interests of Mariposa county from the *Alla* of the 9th inst:

Some pears and apples grown in the town of Mariposa, and in excellent condition, after lying in open boxes in a cellar all winter, were brought to this city last week, and they suggest the idea that the 40,000 acres of the Mariposa grant form a magnificent estate for horticultural purposes, and it is time that the owners should do something with it. The elevation of the town of Mariposa is about 1,700 feet, and much of the grant is lower. Not less than 20,000 acres are well adapted for the growth of the olive, orange, fig, grape, prune, pear, apple, peach and apricot, and along the whole range of the Sierra Nevada, it would be difficult to find so large a body of

A Lunch for the Cow.

That the growing of summer fodder for cattle will become a general practice among our farmers we have an unwavering faith. But we would not wish to see them commence on a large scale, even if they could be induced to do so; but those who own a cow or two, with a little land, in farming neighborhoods, in villages, and in the suburbs of cities, will derive much satisfaction for themselves, and more especially for the family cow, by sowing a small portion of their garden with corn for summer fodder. They will be astonished at the enormous amount of this luscious food that a small piece of land will produce, and it will be even a greater and more agreeable surprise to the cows when, during the long season of failing pastures, each has a good armful of sweet, juicy corn stalks thrown to her instead of being turned off to pick up a living where the ground has been thoroughly prospected. Those who are subjected to the task of "going

Hints on Hop Growing.—No. 1.

The increasing importance of the hop crop in California demands even more prominence than we have hitherto given it. As an item to be included in the system of "mixed farming," a system which the true friends of agriculture are evidently desirous of encouraging on this coast, it is worthy our consideration, and will undoubtedly become one of the most profitable of our products.

That we can grow good hops, the reports of the New York Hop Market will prove; where California hops range at higher prices than those of any other State. But, in order to derive due profit from this advantage, we must be able to grow them as cheaply as our neighbors. At the present stage of hop-growing in this State, it is difficult to estimate the cost to the grower, and to fix upon a point at which they would cease to be remunerative. In the great hop-growing district of Wisconsin, farmers were confident of being able to make hops pay even at 15 cents per pound. This estimate was made at the time when growers were receiving 50 cents per pound.

The cost of growing this crop will vary widely in different localities. Hop poles form one of the most prominent items in the bill of expenses. In the district alluded to, Sauk county, Wisconsin, the undergrowth of iron-wood, cotton-wood, and other timber, suitable for poles, was a mere incumbrance on the farms; consequently, cutting and hauling were the only considerations in connection with the cost of this important item. It is only in a few favored districts that poles can be obtained at so slight expense, and this matter should be well considered by those who propose to embark in hop-growing. But the most expensive of the items in the hop-grower's bill of costs is the labor—not skilled labor—but that of boys and girls, women, and, probably, in this country, Chinamen. And, by furnishing light and healthful labor, for those who are incapable of performing other farm work, hop-growing becomes a blessing to its particular neighborhoods; and the evidences of thrift and prosperity to be seen in hop-growing districts are not confined to the homes of the owners of the crop. A large portion of the proceeds of the crop is distributed among the poor women and the boys and girls of the country. They do not have to

"Beg a brother of the earth
To give them leave to toil."

The brother begs them to toil for him; for, in the picking season especially, and to some extent in the tying season, help of this grade is in great demand.

Although the labor which the hop crop requires is very great in amount, and expensive in the aggregate, it does not materially interfere with that of other crops; and, if a new field can be opened which will give remunerative employment in seasons when they are comparatively idle, it deserves the consideration of the farming community.

We have thus thrown out a few hints, and those of a very general character, on the subject of hop-growing. But, if we review the history of the many agricultural enterprises that have proved so disastrous to the great farming community, we shall find that too great a reliance on facts and figures, to the neglect of general reflections on the subjects, has done much toward bringing about these disappointments. Probably in no class of enterprises do we see more instances of "the blind leading the blind," than in those of an agricultural character. As we have no desire to take a part in any such performances, we prefer giving our readers a thorough knowledge of the general outlines of the subject before dealing with its strictly practical points.

BUTTE SLOUGH is the greatest broom-corn producing locality in California. Much of the land heretofore devoted to this article is now sown mostly to barley; however, much of the lower land which was overflowed by the breaking of Park's dam, was to have been turned up and planted to broom-corn.

In the Pajaro valley, young grain is coming forward finely.



PROPER AND IMPROPER CULTURE OF THE EUCALYPTUS.

EXPLANATION OF ENGRAVINGS.—Figure 1 represents the tree which has been raised in a pot or box, with its balled roots thrust in the ground, just as they sometimes come from an inexperienced nurseryman. Figure 2 represents a tree resulting from such improper planting, lop-sided and ill-shapen. Figure 3 shows one properly planted, with suitable excavation filled with mold at the bottom. Figure 4 exhibits the result of proper culture—a symmetrical, shapely tree.

land, as high above the sea, equally favorable to the growth of sub-tropical fruit, and as well situated for irrigation and cultivation. About Mokelumne Hill, Placerville, Auburn and Grass Valley, the cañons are deeper and nearer together, and the ridges between them are narrower and steeper.

For the profit of a horticultural settlement, such as might be made on the Mariposa grant, the extent of tillable land is very important. If the Mariposa Mining company, immediately after purchasing the estate, had planted out 5,000 acres with oranges, olives, figs, prunes and white muscat grapes, and had since carefully cultivated and improved their great orchards and vineyards, they would now have a little paradise as attractive to many tourists as the Great Yosemite itself. The orange groves of San Bernardino, growing about 1,500 feet above the sea, are healthier than those of Los Angeles, being free from the little black insect which abounds on the trees near the level of the sea and threatens to do much damage.

A MINNESOTA farmer is going to put in a few acres of gimlets this year. Some years ago he lost one, and the other day, while cutting down a tree he found a three-quarter-inch auger. He thinks if gimlets grow in that way the business can be made profitable. He will also raise railroad-spikes and crowbars from shingle-nails.—*Pomeroy's Democrat*.

QUITE a business is now being done, in the East, in making barometers for farm use.

after the cow" at milking time, will soon find the cow coming regularly and promptly after them if they will adopt the method here advised; thus saving the wear and tear of patience as well as of shoe leather.

On the scale here recommended broadcast sowing would perhaps be advisable. Only a slight preparation of the soil is requisite, and after the seed is sown no further labor is needed until it is ready to be served to the cow.

When we have been able to obtain the seed of sorghum, we have given it the preference over corn for summer fodder. It retains its freshness later in the season, and the "butt" of the stalks, after being cut, will sprout fresh and luxuriously, (when receiving proper encouragement from the soil and atmosphere,) and the owner will find that when he has arrived at the end of his fodder-patch, the portion first cut is sending forth a vigorous second growth.

Those who judge corn-fodder by their experience in feeding the stalks of matured, ripened corn, do the matter injustice; for these become glazed, hard and dry during the ripening process, and cattle will only eat the leaves and the tops of the stalks; while that which is grown more densely produces stalks that are more slender, and which the cattle eat quite clean.

SONOMA county, says the *Petaluma Argus* will have at least an average harvest. The weather has been so cold that early sown grain and grass are still backward in their growth.

CORRESPONDENCE.

[Written for the RURAL PRESS.]

Rural Homes Amongst the Foothills.

Home is the temple reared to love,
The parents sacred throne;
When wedded peace and love depart,
The heart soon turns to stone.

Volumes have been written on the grandeur and beauty, the divinity and sanctity of "Home;" and still the theme is not exhausted. The very word—home—kindles a fire in the coldest bosom, and lights anew the glassy eyes of the dying stranger. Home is a beacon light to the wayfarer by sea and land. The exile turns his longing eyes towards home, memory's tears fall thick and fast, and a longing comes o'er the spirit of his dreams to visit once more the charmed scenes of his younger years, while he would willingly forego a few years of life to be permitted once more to tread the halls of "the dear old home of boyhood."

Californians know full well what it is to cherish the recollections of home, and well it is for those whose home was a true type of what home should be. In the creating and surroundings of home, there is more responsibility attached, than is generally conceded. The future of the little immortals entrusted to the charge of the parents depends, in a great measure, on the influences of home. We may adorn the surroundings of homes so as to vie with Eden in appearance; but if the affections are wanting, the whole structure is incomplete, and home becomes only a place.

In the construction of rural homes the whole arrangement ought to be in accord with good taste, and in harmony with the laws of architecture, agriculture, morality and intelligence. The presiding genii should be wisdom and love, and the little buds and blossoms will be found to bloom in all the graces which make up pure manhood and womanhood.

With this introduction I will now give some facts regarding homes and home productions among the foothills. In my last article I dwelt on the natural appearances of the different belts ranging from the Sierras to the great plains in the San Joaquin Valley. In this article I shall confine myself mostly to the productions of these diversified belts and the outward of the "rural homes," found in all sorts of angular corners, caused principally by the rugged nature of Sierra's foothills. The first of importance comprises the

"Timber Belt."

Composed principally of sugar pine, cedar, yellow pine, spruce pine, etc. Large saw mills have been erected at different points, especially those easy of access, and by their united efforts, the lower portion of the foot hills and a large proportion of the great valley are supplied with building and fencing material. It would be an endless task to enumerate all the uses which this useful lumber is put to; 'tis a mine of wealth to California, overshadowing, as it were, the richest mineral belt of the world. Rural homes in this belt are sought for, in consequence of its grazing capacity. The valleys are clad with a carpet of rich green grass, throughout most of the year, which makes this belt very desirable for dairy purposes. When the Government parcels out this valuable belt in six or seven hundred acre tracts, to actual settlers, California will have no necessity to import butter, or eat churned beef bones, as at present. Ten miles square is generally claimed by the itinerant stock raiser, and large herds of cattle fatten on the pastures, which ought to be set apart for the production of butter and cheese. Where one home is found among these grand old pines, twenty happy homes ought to send upwards the curling smoke, telling of thrift and rural family altars. The time is not far distant, when the value and health of this almost unexplored belt will be appreciated in accordance with its merit.

The Climate

Is cold enough in the hottest of the summer months for butter making, and by proper care the quality cannot be surpassed. Quartz mining in this belt is still in its infancy; the soil, has so generally and deeply covered the vein that the most of them will remain hidden until some development takes place to unearth them. Still the sound of the quartz mill is heard in many localities, almost buried among the grand old trees of the pine belt; and around them little villages have sprung up, creating rural homes with rare surroundings, bracing atmosphere, cool water and clear skies.

Potatoes

Is one of the productions of this belt, and in most of the mining districts. The mountain potatoes are preferred to any grown elsewhere, owing to their soundness and flavor, and their dryness when cooked. Hay is also cut in many bottoms, but for want of roads it is generally fed to stock, when caught in the first snows. Stock generally leave these ranges in the months of October and November, although some who have an abundance of hay, prefer to feed, until the young grass of the foot hills makes a start. Desolation is the winter garb of the Sierras, in showing some of the grandest, and wildest scenery in the known world, and the inmates of her rural homes must endure a long winter of storm and snows, or descend to the genial climate of the lesser foot hills. My next will be the rural homes of the mining belt. JOHN TAYLOR.

Notes of Travel.

Stanislaus County.

EDITOR'S PRESS:—Continuing our journey from Stockton, the traveler soon reaches Farmington, a small settlement some seventeen miles from Stockton, surrounded by a rich farming country, and settled by thrifty husbandmen. From thence a few hours' ride through beautiful meadows, over rolling and verdant prairies, and past refreshing rivulets, brings you to

Knight's Ferry,

The region of the orange, the lemon, the grape, and the almond, and all delicious fruits. As you approach this village, the scenery becomes more and more beautiful. In the distance the snow-clad peaks of the Sierras rise in majestic grandeur, while nearer are the foot hills with their verdant forests rising in diminutive comparison to the craggy cliffs of the loftier mountains beyond.

In a quiet valley, surrounded by hills, which, from this point, continue to rise gradually toward the mountains, and along the banks of the Stanislaus, the people of Knight's Ferry enjoy a country possessing all the necessities, comforts and luxuries which this life need covet. The noise of the pick may be heard from some 500 miners, who still continue, in this vicinity, the search for the glittering metal, which formerly so abounded here. Quarries of the finest building stone are to be found here in abundance, and water power sufficient to drive all the spindles of Lowell and Manchester combined. This country possesses greater natural facilities for manufactures than any we have heretofore met with in California. It, however, can only boast of one solitary grist mill, but that is a very superior one, and has proved to be a good investment for its owners.

Your correspondent here had the pleasure of beholding, for the first time in his life, the orange and lemon matured upon the tree, and they look beautiful indeed. The principal fruit-raisers and wine-producers of Knight's Ferry are the Pentland Brothers—the first settlers and miners in this vicinity, who located here 25 years ago—Messrs. Schell & Krause, Mr. Stewart, Mr. Winters and Mr. Roberts. These gentlemen have experimented largely in the production of all kinds of fruits. Palmyra figs, several kinds of grapes, such as muscat, black morocco, purple Damasens, flame tokay and black Hamburg. They also raise some twenty other varieties, but those above mentioned receive the chief attention. They also raise large quantities of apricots, nectarines, peaches, apples, pomegranates, pears, plums, oranges, lemons, olives, and are experimenting with the palm date.

Cotton flourishes and yields well here. There is also a large stretch of country here favorable to the growth of the sugar beet, well watered by the Pentland Bros. ditch; a gigantic enterprise for which they deserve commendation. This ditch is about six miles long, with an average of six feet in width by three in depth. It furnishes all the water needed for irrigation and mining purposes. The above named gentlemen have all been successful in their experiments, and are exultant over the rich and luxuriant country which it has fallen to their lot to settle. This may also be called

The Country of the Vine.

Your correspondent had the pleasure of visiting the Red Mountain vineyard of Messrs. Schell & Krause, located in the foothills on Little John's creek. The main building is 80 by 40 feet, of concrete, two stories high, having a cellar which is tunnelled directly into the hill, 100 feet long, 8 feet high, and 16 feet wide. At the end of this excavation it turns at a right angle and proceeds another 100 feet, with the same dimensions. This tunnel or cellar may be entered at either end. Mr. Stewart has also a tunnelled cellar; but on a much smaller scale.

The annual product of wine at the Red Mountain vineyard is about 50,000 gallons, and they have now on hand about 80,000 gallons. Some 1,000 gallons of brandy are also produced. About 20 men are employed on the average. Pentland Bros. produce from three to five thousand gallons yearly, and ship large quantities of fruit to San Francisco. Raisins are prepared and boxed here in enormous quantities by Schell & Krause and the Pentland Bros. Messrs. Dakin, Roberts and Winters, take great delight in their beautiful gardens, ornamented with various kinds of fruits, and the almond, which flourishes finely here. Messrs. Horsely, Meenes, Cooper, Lane, Kappleman & Williams, Booth & Sons, Cook and Carey, are all extensive ranchers here, and, with one accord, agree that the present season is more promising than any they have heretofore experienced. Upon enquiry, I find that

All the Finest Pastures

Of Stanislaus county are situated around Knight's Ferry. We sincerely hope the good and industrious people of this luxurious region may long live to enjoy their blissful homes, and the luxurious fruits with which they abound. May they also continue to enjoy and derive profitable information from the weekly visits of the PACIFIC RURAL PRESS, as in years ago. For they have stated to me that they attribute, in a large measure, their success in their more recent agricultural experiments and pursuits to the instruction and hints which they have gathered from time to time, from its columns. Yours truly, C. M. D.

Knight's Ferry, Feb. 20, 1874.

Conundrums.

EDITORS PRESS:—Please oblige an old subscriber—one who has taken the press ever since the issue of its first number, and who expects to take it as long as he lives—the following questions:

1st. Will water-melons and squashes mix?
2nd. Is a windy night favorable or unfavorable for frost and why?
3rd. Is there any plant food in cold, hard well water?

4th. Is it possible to injure sandy soil by irrigating abundantly?

I ask this latter question because I have a piece of sandy soil, 25 or 30 feet above water, and in order to raise good crops, I am compelled to irrigate it copiously. I have succeeded for five years in raising better crops than my neighbors; but they tell me, that I irrigate so much it will wash all the food in the surface soil down out of reach of the plants, and in consequence, by and by my soil will be of no account. I tell them that there is a fertilizing element in hard water (lime in great quantity) that is a constant plant feeder, and that instead of injuring the soil it benefits it. Am I right? GRANGER.

San José, Feb. 27, 1874.

[1st. We have seen it stated that water-melons when planted near squashes may be more or less deteriorated, and know that some farmers are particularly careful to keep them well separated; but we have no personal knowledge of their mixing.

2nd. A windy night is unfavorable for frost, for this reason—Frost results from the condensation of vapor as it rises from the ground after night-fall. Vapor condenses very readily when it exists in the atmosphere in large quantities; the condensation is more slow, and with the requirement of a lower temperature, when it exists in the atmosphere in smaller quantities. In a still night, this vapor rises, and quickly envelopes vegetation, etc., near the earth, condenses thereon, and soon becomes frost. In a windy night this vapor, as fast as it rises, is taken up by the wind and so rapidly dispersed throughout the upper atmosphere, which contains much less moisture than that near the earth, that no condensation can result—hence no frost.

3rd. Hard well water generally, if not always, contains some plant food; but very seldom so much as rain or river water.

4th. Sandy soil will not be materially injured by irrigation, unless so much saturated, and with cold water, as to chill vegetation and so prevent its proper growth, or unless the soil is washed or leached, as is sometime done to free it of alkaline matter. With proper irrigation, all the water which falls upon the surface, will penetrate the ground to but a short distance, from which it will rise again, either to be taken up by the roots of the plant or evaporated from the surface of the earth. Hence, irrigation conducted in a proper manner serves rather to bring up plant food, than to wash it down.—EDS. PRESS.]

EDITORS PRESS:—Can you inform me through the columns of your paper—1st. Whether there is any application (other than a stain,) that can be made to the surface of common pine to darken it, and so improve its appearance when its grain is developed by oiling? 2d. What is considered the best stock upon which to bond the orange? 3d. Will not the China lemon, so largely used, grow an unbalanced tree on account of its dwarfish nature? 4th. Is it not true that a disease has developed in the Sicily lemon that will render it unfit to furnish healthy stocks for budding? K.

Riverside, Feb. 11th, 1874.

[1st. We know of no means of producing the result desired. If any way could be devised it would, no doubt, be valuable.

2d. Any hardy variety of the orange itself, or the lemon.

3d. We can see no reason why the China lemon should give an "unbalanced tree" to the orange grafted upon it. The irregular growing quince does not seriously effect—if indeed at all—the symmetrical pear when grafted thereon.

4th. We are not aware that any special disease has become developed in the Sicily lemon.—EDS. PRESS.]

EUCALYPTUS SEED.—EDITORS PRESS:—Having read of the rapid growth of the eucalyptus, I am interested in the subject, and would ask, first, is land which is overflowed once or twice a year adapted to its growth? second, where can the seed be obtained, and when should it be planted? JOHN V. DAVIES.

Tuolumne river, Feb. 10.

[The eucalyptus, in its natural state, grows in swampy lands, and ordinary overflows, if not of too long duration, would not injure it. San Francisco nurserymen hold the seed of the stringy bark; iron bark, etc. at \$25 per pound. There is very little seed of the eucalyptus globulus on hand, and dealers ask as much as \$32.50 for it. More of the regular Tasmanian blue gum—eucalyptus globulus, is expected soon, and may be had upon arrival at a much lower figure. The seed can be planted as soon as the weather is warm enough to ensure germination. EDS. PRESS.]

Food Medicine.

EDITORS PRESS:—In your issue of February 7, under heading of "Food Medicine," the statement is made that Dr. Hall "cures spitting of blood by use of salt, epilepsy by water-melons," etc. Now, while I truly hope you will pardon me for coming to you for prescriptions, I know a great many people who, could any cure be found for that terrible disease, epilepsy, would be made perfectly happy, having some dear friend troubled, or perhaps themselves subject to its discouraging attacks. And could any food, or class of foods, be brought to bear against its ravages, what a blessing to humanity. Very few writers pretend to handle the subject understandingly.

How is watermelon to be partaken of—can you give your readers any method of using? If not, has Dr. Hall issued any treatise on the subject—and if so, where can it be found, and what is its cost? Some papers would give these questions a place in their columns, and remark to Dr. Hall that if he would get a customer he should advertise with them; I hope that you will answer directly, and perhaps confer great blessings on your constant reader. THOS. FINLEY.

Los Angeles, Feb. 18, 1874.

[We do not know how far Dr. Hall succeeds in his endeavor to use food medicine alone, but thoroughly believe in the efficacy of suitable food to cure certain diseases. This is not a dogma of a particular school, nor even of quacks; but is a principle accepted by all physicians. Generally speaking, diseases of the digestive system are best cured by wholesome food, light exercise, fresh air and good company, and as it is argued that all parts of the system sympathize directly with the stomach, the physician's first aim is to see that it is in proper condition. Our correspondent is doubtless aware that many of the strongest drugs are found in common fruits and vegetables, though in very small proportions. Thus many of the alkaloids, those most powerful agents, might be extracted from familiar plants, though not profitably, as they are found in much greater quantity in particular species. So, in diseases other than those of the digestive apparatus, regular physicians make it a point to vary the diet to meet the requirements of the case; Dr. Hall carries the idea still further, and makes diet his main reliance. As to the watermelon cure we know no more than our correspondent, having obtained our information through the usual source—other papers. Dr. Hall has not published any treatise on the therapeutical use of the watermelon, so far as we are aware, nor does any reputable physician advertise. The magazine of which Dr. Hall is editor, gives valuable hints on diet from time to time, but probably Bellows' "Philosophy of Eating" would offer the general information on dietetics, which our correspondent seems to need.—EDS. PRESS.]

Lands.

EDITORS PRESS:—I venture, through the columns of your invaluable paper, to ask for advice from some of your numerous correspondents on the following subject: I have recently arrived in this country from England, with the intention of settling. The southern part of this State, where I have been on a short visit, is the one that takes my fancy most; and I intend, if I can suit myself, to "go in" for fruit culture, oranges, vines, (both for wine and raisins), almond's, olives, walnuts, etc.; to be supplemented by the cultivation of a certain amount of grain, ramie, cotton, flax, and silk.

Now, I want to know where I can get land well watered, suitable for fruit culture, at a moderate price, with a fair time given for payment. I should prefer land near the foothills, and require from 100 to 150 acres. I should not object to pay a fair price for land well watered. Is there any land in this State worth having, to be preempted—or is there any in Arizona well watered and free from Indian incursions? Any advice or information on these subjects will be much appreciated by, and greatly oblige, Yours Truly, "LAVIL."

San Francisco, March 3, 1874.

[If persons who have farming land for sale in various parts of the State would advertise the same in the RURAL PRESS, it could scarcely fail to be of benefit to them. When a man makes up his mind to go upon a farm, he naturally turns his attention to an agricultural paper for the proper information in relation to taking such a step, and looks there for advertisements of farming land for sale. We receive letters similar to the above almost every week, both from our California readers and from readers in the Atlantic States.—EDS. PRESS.]

SEMITROPICAL FRUITS FOR SEED.—EDITORS PRESS:—Will you please inform me of responsible parties to whom I can send for decayed oranges, lemons and limes, for their seed? I am unacquainted in San Francisco, and so take the liberty of asking you. M. F. PARKER.

Orange, Los Angeles Co., Feb. 15.

[A Lusk & Co., Pacific market, or A. G. Ennor, Washington street, will supply the fruit desired for seed purposes.—EDS. PRESS.]

RECEIVED.—Geo. H. Williamson's annual catalogue of garden, flower and field seeds, as offered by the Southern Seed House, Gallatin, Tenn.

The Town of Orange, Los Angeles Co.

EDITORS PRESS:—Orange and its vicinity is looking its best; gardens are being put in order, and barley is up and growing finely. There seems to be a perfect rush of newcomers to our locality; scarcely a day passes without a new addition. The Messrs Glassell & Chapman are disposing of their lands very fast, and much land is now being sold second-hand at advanced prices. This rapid growth is all genuine, as there has never been any systematic puffing of the place. It don't need it. All that is wanted is for people desiring the best climate in the world, good soil that will grow almost anything, and beautiful location, to come and see and have for themselves. Besides many strangers from other States and Europe making this their home, old Californians, who are noted for hunting out the choice spots are settling here. Our water facilities are to be enlarged, so as to open up some lands that have heretofore been in the back-ground for want of water. Our settlement has grown so fast that our school house has to be doubled in size, and a graded school will be formed. In regard to the class of people coming here, and already located, I think they are as good as could be desired. Many are from our larger cities and towns, and are cultivated intelligent and moral, and without wishing to claim all the excellences for Orange I must say we have one of the best preachers in the State. Out of respect for his modesty; I forbear mentioning his name or denomination. I. W. A.

DOMESTIC ECONOMY.

Washing Machines.

EDITORS PRESS:—I wish to make some suggestions, through your paper, to the inventors of washing machines. I have studied washing machines for several years, and have been in the habit of buying one occasionally only to throw it away—not because the machine would not do good work, but because it is more trouble, or rather, harder work, to wash with one than to use the common board. I do not think it much of a feat to get up a "washing machine," but any one who contrives a washer which can be run by some other power than that of a poor, sickly woman will have done something worthy of notice. What would we think of a man who would invent a threshing machine to be run by man power? Do you think he would be able to sell many? As Artemas Ward would say, I rather think not. There are many different motive appliances which could be attached to washers. For instance, there might be used a wind-mill, a small one-horse power, a water-wheel, etc. Where these are not convenient, a goat, dog, colt or even calf, on a light, upright power wheel, ten feet in diameter, would produce sufficient power to easily run a washing machine made on the rotary plan, with rubber above. My word for it, the person who invents a washing machine of this kind will be well paid for it. Those who would oppose the plan here advocated, on the ground of its being too costly, should bear in mind the difference between the price of a scythe and a mowing machine, or between a paper of needles and a sewing machine, and reflect whether this difference in the first cost deters users from buying the contrivance which will do the work with least labor. I will guarantee that the cost of a good motor, to be attached to washing machines, will not be more out of proportion, compared with that of the wash-board, than the mowing machine is to the scythe, or the sewing machine is to the needles. We want a washing machine which will make a Chinaman say "no likee John." I should like to hear from you and others on this subject. SOAP SUDS. Davisville, Feb. 10, 1874. [Our correspondent has hit the nail on the head in arguing that the fault is not in the washing machines but in the want of an adequate motor. One of the great questions now perplexing the minds of inventors is to produce a household motor which shall be capable of doing ordinary light work, cheap in first cost and running expenses, and not liable to get out of order, nor to serious accidents. There are a great many contrivances proposed for this purpose, and the number of patents annually taken out in this department of invention, show that thoughtful minds fully appreciate this, one of the great needs of the day. Several low power motors are now before the public, but none, so far as we know, intended for the purpose of driving washing machines. There are the Hyde water-wheel, the diminutive Baxter (one-quarter to one-sixteenth horse-power), the Nicholson engine, and the numerous hot air engines. Some one has lately patented a set of appliances by which the waste power evolved in using a rocking chair may be utilized to work a churn and rock the baby to sleep; but for a washing machine motor, we want something entirely stronger and more serviceable—a motor, not a toy. When the main question of producing a good, universal low power motor for domestic use shall have been solved, "Soap Suds" will receive a satisfactory answer, and not, we fear, till then.—EDS. PRESS.]

Cake Without Eggs.

"Housekeeper" kindly sends us two recipes for making cake, to be used when eggs are not to be had—or when they retail at seventy cents a dozen—which she recommends. The first is known as MARY'S TEA CAKE.—One-half cup shortening, two cups sugar, one cup sour milk, one teaspoonful soda, two full cups flour; season according to taste. The second recipe is for JELLY CAKE.—One cup sugar, one of sweet milk with a teaspoonful of soda stirred in, two teaspoonfuls cream tartar sifted in, one and one-half cups flour, two tablespoonfuls shortening; bake thin and quickly. Water can be used for either of these cakes if milk is not convenient.

HORTICULTURE.

Upturned Trees, Tap-Roots, Etc.

EDITORS PRESS:—"As the twig is bent, the tree's inclined," does not refer merely to its external appearance. The French people have taught the world that by holding the limbs down by weights, so as to check the flow of sap, it would bring the fruit tree into bearing sooner; the philosophy being that the roots sympathized, and were also checked in their growth, and made to throw out laterals; by a law of nature mere fibers, which were shown to be the real fruit feeders: i. e. that these minute rootlets, with their little, living, sucking mouths, absorb the earthy ingredients which go to make the fruit. And this is the reason why trees with the tap-root removed will be brought into earlier bearing. With this view of the subject, fruit is considered in the light of an excrescence, and does not appear on the tree in a perfectly normal condition, as from the seed, in a much longer time. Nurserymen frequently have trees bearing, only one year old, in the nursery rows. A gopher may have nibbled at the root, or a string tied in the grafting, and not rotted or removed, may have "chorded" it. Any thing which disturbs the free circulation of the sap, as the hot weather of our summers, summer pruning, etc., will disturb the equilibrium, and cause fruit buds, which develop, under favorable circumstances, into the choicest fruit. Too many fruit buds may form; and if the tree takes a very vigorous growth afterwards, the fruit blossoms or the fruit may all drop off. It becomes an important consideration to the fruit grower, to know how to grow fruit, and also how to grow wood, at his pleasure. The French, especially, graft their pears on quince roots, which have by nature, an abundance of fibrous roots, and bring their trees almost immediately into bearing. They do the same with the apple, by grafting on the Paradise stock; and also with the cherry, by working it on the Morello stock. They also root from the Standard tree, thereby inducing rootlets. The Chinese understand this system of dwarfing trees and plants, which they do by removing them from pots or boxes, so as not to disturb the soil, and prune their roots. This they repeat, till they finally produce the most beautiful looking shrubs, trees and plants, with their delicate and rich foliage, so much admired. The observant horticulturist is generally able to tell the shape, size, and consequent value of the seedling for grafting, before removing it from the nursery. It becomes not only a matter of curiosity to him, but of utility as well, to know how to make roots or rootlets, at his pleasure. If he plants out quince cuttings, that he may obtain roots for pear grafting, his experience teaches him, that if he puts them in deep, he may expect a very large quantity of small roots unfit for grafting; some, perchance, no larger than the hair on his head, and not sufficient to ensure the life of the cutting, and certainly not capable of sending up much top growth, if it lives. But if the cutting had been put in the proper depth, say 4 inches in adobe or other heavy soils, and no deeper than necessary in any case, he would have had roots for grafting one year from the cutting, and which would have been indicated by the growth of the top. Now, we ask, why are trees blown down? And is there a preventive? We are assured that the tree that takes deep root in the soil will defy the winds, and rather break off than up-turn. This is particularly the case with the tall-growing trees that naturally go deep in the ground. The Eucalyptus, or gum tree, is one of this kind, very popular here just now, the only objection to it being its liability to blow down. But this is chiefly in heavy soils, that the roots can not penetrate, or where the tap root has been removed or broken off. Of course, the latter evil can be remedied by great care in transplanting; and, more especially, if the trees are transplanted when quite small. But, in case of very heavy sub-soils, this precaution will not suffice. I have in one belt of fallen trees, near Victoria, on Vancouver's Island, where the sub-soil is a deep bed of tough clay. The tap-roots could not penetrate this soil more than a few inches, or feet at most; and, although the trees had grown quite large, from the ocean

moisture which they had drunk in through their foliage, the roots had only crept along in the surface soil, cramped, and in a net-work, inclosing the earth as they upturned, while the clayey bed was only a base on which the whole body of the tree rested. Trees resting on a rocky bed will also be influenced in their shape, and be liable to blow over. In case of irrigation, or where the ground holds moisture near the surface, the roots will not go deep, and this is another of the causes for trees blowing over. If you will cast your eye, Mr. Editor, from your home in Oakland, to the highest hill in the eastern part of that rising city, you will see a very tall gum tree, on that very dry ground where it is eighty feet down to well water. That tree has gone down, also for moisture, and is securely imbedded in the land. It is true that the fogs coming in at the Golden Gate, which climb up and creep along the mountain ridges in the back ground, also feed the foliage with moisture and nutriment. Let us select an oak from the clusters near by, hundreds of years old, in soil so loose and dry that the plow may run close to the tree's body. Throw rubbish about the body, muching it so as to hold moisture near the surface, and in two years the plow will meet with roots as large as your arm. I know of no better way to insure trees against the wind, in heavy soils than to bore a hole with a post auger, filling in below and around the roots with loose or gravelly soil, so as to induce them downwards, where they may become securely established. There is more in rootology, (if I may be allowed to coin a word), in connection with all the products of the earth, than is generally dreamed of in our philosophy. I. A. W. Santa Clara, March 4, 1874.

The Rose-Peachblow Potato—A Few Questions.

EDITORS PRESS:—Last year I procured from G. N. Smith, of Berlin, Wisconsin, two pounds of his new seedling potato, called the Rose-Peachblow. They were planted about the 12th of March, and in this county little or no rain fell after that date. The soil was new and sandy. In ninety days I dug potatoes larger than a hen's egg, and of a flavor and delicacy surpassed by none. The yield was light, owing to the dryness of the season, but I saved about thirty pounds of seed potatoes, intending to try them under, I hope, more favorable circumstances. The plants produced no blossom, and the young potatoes hung in clusters directly around the parent tuber. I should like to hear from any of your readers who may have tried them on this coast, and I will report again the coming season to the RURAL PRESS, my success with them. I wish to inquire the proper time and manner of planting okra seed, also egg plant. I have a sunny exposure almost free from frost, about 500 feet above the level of Monterey bay and in sight of it. I am advised to try the raising of oranges and almonds. Do you think with proper cultivation they could be raised to advantage without irrigation? D. G. INGRAHAM. Leafy Glen, Santa Cruz Co., Feb. 8th, 1874.

[With regard to planting okra—it may be done as early as possible, and escape the late frosts. The plant grows about two and a half feet high. It may be planted either in hills or rows; better the latter, and with width between sufficient for proper cultivation. The egg plant requires about the same mode of cultivation as the okra. We see no reason why orange or almonds may not do well in the locality you describe. The matter of irrigation depends something upon the nature of the soil; good soil is needed, and irrigation will be required unless there is permanent moisture in the soil within six or eight feet of the surface. Some irrigation will almost surely be needed for the first and second year, until the trees have become well established, and been able to send roots down to natural moisture. Will some others of our readers furnish us their experience in cultivating the Rose-Peachblow potato?—EDS. PRESS.]

NATURALIZED WEEDS.—Two hundred and fourteen of our weeds have been introduced from foreign countries, and chiefly from England. In 1837 only 137 foreign weeds were enumerated in our catalogues. In 1872 a book entitled "New England Rarities" gave a list of 22 plants, which the author spoke of as having sprung up since the English took possession. Among these the plantain, "white man's foot," is mentioned. In 1758 the toad flax, or butter and eggs, also then known as the "Rausted weed," from the name of the gentleman who introduced it into Pennsylvania as a garden flower—had overrun the pastures of that province, and had caused many anathemas by the farmers against the unlucky introducer. The common chickweed is said to have been first sown in South Carolina as food for canary birds, and the presence of the Scotch thistle is accounted for as due to the *amor patrie* of an enthusiastic Highlander, who brought it hither as an emblem of the pugnacity of his countrymen. Another record says we have the thistle through the carelessness of a clergyman who brought hither a bed of thistle down, and, on changing it for feathers, spread it and the seeds it contained broadcast over the country.—Tribune.

POULTRY YARD.

Care of Young Turkeys.

EDITORS RURAL PRESS:—Will you or any of your correspondents please inform me through the columns of your valuable paper, the cause of the legs and feet of young turkeys, 10 days old, swelling; a trouble which proves fatal in two or three days; also, what remedy, and what food is most suitable for them at that age; also what is good for gapes in poultry? J. D. E.

Los Angeles, Feb. 20.

[We could answer the question with regard to the lameness of the young turkeys, more intelligently, if we knew something of their treatment and diet. Young turkeys often become lame and die, from eating too much curd. The curd seems to weaken them. For a remedy in such a case give them less curd and more meal cooked in the form of hasty pudding. In the case of our correspondent, we would say it would be safe to change the diet, somewhat, at all events; also be very careful of exposure, and keep them out of wet grass, etc.

A very good and safe feed for turkeys is—Indian meal, 2 parts; wheat bran, 1 part; thoroughly cooked and cooled. When fed, stir in a little sour milk. Curd may be fed once a day to advantage and safely. Move the coop every night, and cut up a few onion tops for them, very fine, every other day.

With regard to the gapes in poultry, Mr. Fallon of Oakland, who has fed poultry twenty years says: Great care should be taken to keep the nest and eggs clean in sitting. Sulphur may be sprinkled on the eggs to good advantage. Microscopic (invisible) insects almost always get on the shells, and as soon as the chicken thrusts its bill through the shell, the insects enter the nostrils, where they lay their eggs, from which worms are hatched, and hence the gapes.

This disease is very common. Both turkeys and hens, and in fact all domestic birds, are subject to it. The disease often proceeds from unwholesome or impure food or water. It is also epidemic, when it once makes its appearance among fowls. It is most commonly caused by a worm which infests the windpipe, perhaps always, but in some cases no worm is visible to the closest scrutiny of the naked eye.

There are several modes of treatment, the one generally most successful is as follows: Take a small quill feather, strip the same of its feathers except a half an inch at its top; this should be dipped in spirits of turpentine and then forced down the windpipe, and turned once or twice. The turpentine generally destroys the worms, and the coughing naturally excited throws them out. After such treatment the turkeys or chicks should be cared for more closely for a few days and kept free from dampness and chilly winds.—EDITORS PRESS.]

EDITORS PRESS:—One of my neighbors bought one dozen spring chickens, last September, of mixed common stock—fed them a little wheat in the morning, and about noon scalded a little ground barley, and about three times a week cut up two onions and mixed the same with the barley. Charcoal from the stove was also pounded, and freely eaten by them. In November they commenced laying, and ever since, through all the cold and severe weather, he has had one and a-half to three dozen eggs each week (week before last 45, and last week, 44 eggs) from ten hens. They have all wanted to set, and up to the present time four or five days was all that was necessary to break up the notion. Can you tell us the best way to break hens from setting? G. A. FISHER. Quartz Mountain, March 2.

Where hens are kept more especially for the increase it is always best to let them set when they desire, and give their chicks to capons, who will care for them and bring them up just as well as the mother hen. If you really desire to break a hen from setting, of the many ways to do so we would prefer the following: Have a small coop made with a floor raised a few inches above the ground, and made of laths placed cross ways, with openings to give a free circulation of air from underneath. Place the coop in a cool place. The desire to set is attended with a high fever which should be alleviated as much as possible. A young and vigorous rooster might be placed in the coop with them. Ducking and standing hens in water, under such circumstances, is barbarous. It is a natural and honest desire which should be treated considerably.

EDITORS PRESS:—There seems to be a great deal said about poultry just now, so I thought I would say something too. Last year I commenced with about 30 hens of the common variety, and one Light Brahma rooster. I raised four hundred chickens; and I have now about 300 hens, which for beauty and laying qualities cannot be beat for miles around. For food I use cracked corn soaked in sour milk, which I think is excellent. I think as Mr. Carter says, that small pens are good with any breed, for I have tried it. I have a trio of Light Brahmas accommodated thus, and they lay splendidly. I have seen nothing in regard to grafting; and would like to know when is the proper time to graft apple trees. Tomales, February 16, 1874. L. P. STUMP.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

An Impressive Scene.

The afternoon of the last day of the meeting of the National Grange, was devoted almost exclusively to leave taking. Mr. Wardlaw of Florida was the first to speak, and the impressive scene introduced by him gave tone to all the after speeches, and affords most interesting evidence of the close brotherly union that exists in the Order; a union that effectually bridges all chasms—all differences whether sectional political or religious. All the speeches made on that day were marked like the one we here give, by a spirit of high fraternal regard and devotion to the Order; but this most pre-eminently. Mr. Wardlaw offered a resolution of thanks to the Worthy Master and Overseer of the National Grange, for the patient and faithful manner, in which they had performed their duty. After the resolution was read, he arose and spoke as follows:

"When Florida is called upon to place a beautiful wreath upon the still more beautiful brow of some local sister, she not only responds with alacrity, but esteems it as pleasure, a high and honored privilege. But, to-day, formally to bid adieu, brothers and sisters, to the pleasurable emotions with which we have been surrounded during this convocation, is truly unpleasant, is terribly embarrassing, touching a tender chord. I have always appreciated the noble sentiment—

'The heart feels most when the lips move not,
But the eye speaks a gentle good-bye.'

Very soon, Worthy Master, the sound of your gavel will be heard, and the question asked our Worthy Overseer, 'Are the labors of the day completed?' and the response come back, 'They are, Worthy Master.' Then will the solemn significance of these words, reverberating through this hall, perhaps for the last time, be felt by many of us as never before.

How it should remind us of the important necessity of preparing to meet 'where parting is no more.'

When Virgil bade adieu to his beloved Dido in those beautiful, touching and prophetic words:

'Vale, vale, longam vale
Formosa puella.'

we repeat to admire.

When Napoleon Bonaparte looked upon his lovely Josephine, and turned from her in the consummation of the darkest deed of his life, afterwards to be banished to lonely exile, the reminiscence only tends to give us pain.

But, Worthy Master, many practical illustrations are afforded us of a band of brothers and sisters being together for days in the most harmonious, social and friendly accord; gathered together as they have been in this hall from all quarters of the Union. We rejoice but to sorrow at the necessity of separation.

Sad though the thought, it is a solemn truth that some of us will never meet again. It is gratifying, however, Worthy Master, to know, as I honestly believe, that this meeting, by its wide-spread influence from north to south, from east to west, caps the last arch that spans the bridge of the unfortunate 'Bloody Chasm.' As it was my sad pleasure, as the representative of Florida, fourteen years ago, in the Charleston Convention, to deliver a short eulogy upon one of the honored sons of the Green Mountain State, ex-Governor Robinson, who was suddenly stricken down by death on the second morning of our session, if my brother from Vermont will meet me on this floor we will clasp hands with the Patrons' grip, silently invoking God's blessing, illustrating the truth that 'united we stand, divided we fall.'

Here the representative from Vermont stepped forward and extended his hand, which was held in a fraternal clasp by the gentleman from Florida for some time, amid the wild and enthusiastic applause of those present. For a few moments deep silence reigned in the convention, indicative of the strong feelings awakened by this significant scene.

Mr. Wardlaw resumed his remarks as follows: "Worthy Master, one word more and I am done. May we all prove worthy of our vocation, do all we can in accordance with the principles of right to promote the good of our Order, and may a kind, overruling Providence grant us a happy re-union at our next meeting in Charleston, South Carolina." [Loud and long continued applause.]

How TO CHANGE THE NAME OF A GRANGE.—No change in the name of a subordinate Grange can be recognized until official notice of said change has been forwarded by the Secretary of such Grange to the Secretary of the National Grange, and said information communicated by the National Secretary to the Secretary of the State Grange of the State in which the subordinate Grange is located. This routine is necessary, in order that the National and State record may be correctly kept.

In this connection we would state that we are informed by Secretary Baxter, of the State Grange, that he has no official information of the existence of the organization given in our Directory as "Kern Island Grange," which was changed in our list by request of the Secretary of that Grange from the original charter name of "Pauama."

State Agricultural Society and the Granges.

We append hereto the rejoinder of the State Agricultural Society to the resolutions of the Healdsburg Grange, condemnatory of the management of the State Society. We do not see, however, that the main issue involved is at all met by the reply of the Board of Managers. Some corrections are made in the detail of figures only; but the great, objectionable fact still remains that racing is made the main feature of the exhibition; and it is against that fact that the objection to the management is raised. The farmers of the State appear to be very unanimous in a desire for a reform in this particular, and will no doubt continue to agitate until the point is gained. By reference to the resolutions of the Vallejo Grange, it will be seen that this is the view taken by that body. The same expression of opinion will doubtless be heard from all the Granges in the State in which the matter may be brought up. The Board of Managers of the State Society say:

WHEREAS, Healdsburg Grange, No. 18, P. of H., has caused to be sent abroad a circular containing vague, unfounded charges against the State Agricultural Society and its Board of Directors, which the Board unqualifiedly deny in every part and word: Therefore he it resolved in reply to said Grange, and in answer to its wholly unwarranted attack, as follows:

As to the charge concerning the mismanagement of the affairs of the State Agricultural Society, we deny that any of the avowed objects of the Society have been laid aside or neglected; on the contrary, to the fullest extent each purpose of the Society has been fostered and encouraged to the full ability of the Association.

And further, as to the alleged mismanagement of the affairs of the Society, the Board points with pride to the personal employment and standing of the members of the Board as a compendium to the untruthful and unwarranted attack of Grange No. 18. That the books of the Society have ever been open to examination, and complete exhibits of its financial affairs have been published, showing the administration to have been discreet and successful, in paying off debts long since contracted, awarding liberal premiums, and acquiring valuable property. That the "agricultural mechanical and household arts and the mining interests," have in no sense been made secondary considerations, nor has the Society conducted "horse racing" so as to make it "one grand carnival of pool selling and gambling." The figures quoted by Grange 18, from our report of 1873, when properly stated, make the following showing:

Total expenditures.....	\$47,831 16
Amount paid for premiums in cash, plate, diplomas, gold and silver medals.....	9,987 15
Of which \$7,934 was cash.	
Amount paid in racing purses.....	12,422 00
Of which amount there was received from entrance money to purses, pool privileges and rent of stand.....	10,711 00

Which leaves \$1,711 as all the money of the Society actually expended for racing premiums. As a further proof that the Society money has not been squandered, we cite the fact that the receipts at the park, separate and distinct from the pavilion receipts, for the exhibition of 1872, were \$15,337 50; thus showing a clear gain of \$13,636 50, from the park attractions, which was used in advancing all the interests of the Society. The receipts of the pavilion during the same period were \$8,963 50.

That in relation to speed trials and exhibitions the Board has followed the established custom of the Society for years, and the manifest demand of public opinion, as exhibited in the success which has met the same. When public sentiment and patronage shall be sufficient to enable the Society to accomplish its ends without the attractions of the track, the policy of abolishing all speed exhibitions may be timely considered. That the erection of the grand stand, to which Grange 18 so strenuously objects, is not to be wholly for racing purposes, but is to be used, in common with the general use of the park, as stock ground, and for viewing in comfort the daily stock parades and other exhibitions, which have at late fairs been attended by the people in numbers beyond the present seating capacity of the grounds. That in relation to the alleged liability of contamination of the people by attendance on the State Fairs, we indignantly repudiate the aspersion impliedly cast upon the people of California by Grange 18, and in reply point with pride to the fact, admitted by all observant visitors from abroad, that the assemblage of people at the State Fairs of California, is more orderly and reputable than those gathered on most great occasions and festivals in other States; and that the ill disposed and disreputable persons hanging upon the outskirts of great assemblages are less in number and kept in closer check than in any other State in the Union, and in proof of this we cite the conduct of the last State Fair, especially. Finally, we call attention to the fact that upon our Board, out of ten members, seven are practical and extensive farmers and stock raisers, and no member of the Board has ever exhibited a horse at a speed programme in any race anywhere. That the attendance at the fair has rapidly increased, and the exhibition in all its departments greatly advanced, the exhibition of stock in 1873, having been proven to be the best, most varied and extensive ever made in the Union, and the exhibition of agricultural implements and machines being the best yet given; and as a last reply to Grange 18, of Healdsburg, which threatens to withdraw its patronage from the Society, we reply that a diligent search of the books of the Society discloses the fact that for eight years no life or other membership has been taken from that section, nor has that vicinity had a solitary exhibitor at the State Fair.

Resolved, That the Press of the State be respectfully requested to publish these resolutions, and that the Secretary send them to each Grange of the Patrons of Husbandry, and to his Excellency Governor Newton Booth.

Adopted March 3, 1874, and signed by all the members of the Board present.

FREDERICK COX,
CHLOMAN YOUNGER,
THOMAS L. CHAMBERLAIN,
J. J. GREEN,
CHRIS. GREEN,
MARION BIGGS,
ROBERT HAMILTON.

ROBERT BECK, Secretary.

THE ORDER IN OREGON.—We stated last week that there were over 100 Granges in Oregon. We have since learned that there were, some three weeks ago, 110 Granges in that State, and 21 in Washington Territory. It is safe to say that there is no State in the Union, in proportion to the population, where the Order, in one year from this time, will be any stronger than in Oregon.

THE PATRONS IN MAINE.—A telegram from Lewiston, Maine, of March 5th, says that there is now a deputy actively engaged in the organization of Granges in the State of Maine. Several have already been organized, and it is expected that a State Grange will be organized some time in April. Every State in the Union will soon be fully organized, and then the work of reform will be carried on in earnest.

From the Granges.

WILDWOOD GRANGE, SAN JOAQUIN COUNTY.—I write to you for the reason that I have never seen many articles in your paper written from this vicinity. Wildwood is located in one of the flourishing townships of San Joaquin county. We have here Wildwood Grange, No. 117, organized in November with 30 charter members. Since that time we have worked diligently, and last Saturday initiated three gentlemen and six ladies in the fourth degree. This being done, we adjourned and prepared the table for the harvest feast, and a feast it was truly, such a one as the ladies of Wildwood know so well how to get up. Nearly forty persons partook of the repast, and there was plenty for as many more. We all work harmoniously and are prospering beyond the expectations of the most sanguine. Our Worthy Master, Joseph Leighton, and A. B. Munson, Secretary, are the right men in the right place. In fact, all the cers are well qualified for their positions and work with a will to elevate the farmer and his interests. I noticed in your paper of Feb. 28th that it should be generally admitted as a fact that the Patrons of Husbandry, as a body, should be strong advocates of temperance, although members are not individually pledged in that direction. We have here a temperance division, and nearly every Patron and Matron also belong to the division. Nearly all the members of the Grange are total abstainers. Our hall is not as well situated as it might be for the Grange to hold meetings in, but it is the best we can do at present. We have to use some caution in conferring degrees and in giving instruction in the secret work.

WILLIAM M. MUNCY.

HOLLISTER GRANGE, MONTEREY CO.—Being a Granger, and a reader of your valuable paper, I have anxiously watched, and patiently waited for some worthy sister or brother to represent our Grange through the columns of the Press. Now, as our brethren seem all absorbed in county division, and the contest for county seat and official honors seems the all prevailing top c, I have concluded this matter would still be neglected, and consequently in my zeal have seized pen and paper to inform our sister Granges of the prosperity of Hollister Grange. We have had weekly meetings since January, and all are interested in the farmers' cause. Last Saturday—February 28—we finished with a large class. A harvest feast having been prepared, about one hundred enjoyed the collation spread before them. A few of this number were invited guests, but all seemed to enjoy themselves finely. I think we number near one hundred members, and all "tillers of the soil," and judging from the number of petitions presented after lunch, we still have many friends outside the gate, and I predict we will double our number before harvest. We start with a larger class at our next meeting than any at month preceding. The prospects around Hollister and throughout the county are flattering to the farmer, crops look splendidly and all look for a bountiful harvest. Hoping this article may prompt some more gifted sister or brother to represent our efforts occasionally, is the earnest desire of

SISTER PHOEBE.

STOCK AND GRASS.—We received a note from brother Manlove, of Sacramento, in relation to his organization of Roseville Grange, after we had put the particulars in type as received from another party. Bro. M., in speaking of his trip, says: "Passing along the course of Dry creek we saw many fine farms, with good buildings and fences; large vineyards and orchards; presenting a very thrifty appearance. Most of the farmers of this section seem to be industrious and thrifty. The grain, in a few fields, looked well; but in many it presented the appearance of being injured by excessive moisture. A large amount of land is being fallowed for another season; the grass is very short, affording but little pasturage at present, but a few days of fine weather will make a great difference with it. Stock is very poor in many places. I saw eight lying in one place with their hides off. I trust the lessons of this winter will long be remembered by the farmers of California, and that hereafter they will provide food for the dumb brutes entrusted to their care."

MONTEZUMA GRANGE, SOLANO CO.—Secretary C. Knox, Marshal of this Grange, writes as follows: "I have received several copies of your valuable paper, as have also several of our officers. We are highly pleased with it, and I am getting up a club. As soon as I get the required number of names I will send them down to you. The most of our members, by the way, are readers of your paper already. Our Grange is progressing slowly. We have done but little yet in the way of initiation. As the weather has been bad and the farmers very busy we could not meet very often. However, there are many signals at the outer gate, and the prospect is fair for a goodly number soon."

UPPER LAKE GRANGE, LAKE CO.—D. Q. McCarty writes to the Granger: "We are steadily increasing, and I think by next fall we will have at least 100 members. We now number 38, with a class of seven passed to the second degree. This has been the worst winter I ever saw in California; the roads have been almost impassable, hence our meetings have been very irregular. We expect to have a co-operative store in full blast in Lakeport soon, by a union of Lakeport, Upper Lake and Kelseyville Granges."

MEROED GRANGE.—Bro. W. E. Elliott, Master of this Grange writes as follows: "We yesterday (Feb. 21st) completed the election and installation of our officers for the current year. We have been thus dilatory, for two reasons—the bad weather prevented the attendance of all the officers on the day first set for installation, and subsequently a portion of those elected resigned, which required new electing. At the day last appointed, brother Jolly, our installing officer, being necessarily absent, sister Jolly took his place and he completed the installation. The completed list of officers as it now stands is as follows: W. E. Elliott, M.; A. L. Cressey, O.; R. H. Morison, L.; J. C. Stafford, C.; E. B. Jolley, S.; J. H. Taylor, A. S.; F. E. Tadlock, Jr. Sec'y; J. F. Goodale, T.; H. H. Bean, G. K.; M. Goodale, L. A. S.; F. J. Keeth, Pomona; S. A. Cressey, Ceres; L. Jolley, Flora. Bro. H. B. Jolley was elected Local Agent. Our Grange is in a flourishing condition, we having between sixty and seventy members and more coming in at every First Degree meeting. We instructed ten brothers and sisters in the fourth Degree yesterday, after which we enjoyed a feast of good things as only P. of H. know how to do. The leaves planted by Bro. Baxter last May, is working and spreading and will continue to spread until we have within the gates all of the progressive farmers of this section of the country. Growing crops are looking very well, much better than at this time last year. And the present is full of promise of an abundant harvest for 1874."

CAPAY VALLEY GRANGE, YOLO CO.—A correspondent of the Yolo Democrat, writes from this Grange, under date of Feb. 17th, as follows: "While our lands hereabouts have been too wet to plow the farmers have been organizing under the banner of the Patrons of Husbandry, to secure to themselves the just profits of their own industry. They have a very prosperous Grange, organized on the 4th of October, 1873, with 13 charter members—barely enough to fill the offices; but they now have about fifty members, and applications coming in every meeting. On last Saturday, the 14th inst., the fourth degree was conferred on eight members, after which they enjoyed their first harvest feast. The gates were thrown open and all present invited to partake. The table, when set, reflected great credit upon the ladies and bachelors of Capay Valley. At least 150 persons partook of the repast and still there was a large surplus to spare. Truly, these Patrons of Husbandry seem determined to enjoy some of the good things of this life as they go; and the expression is heard on all sides that the Order is worth all it costs for its social features alone. If the organization is preserved in its purity and allowed to accomplish the mission for which it was created, the world will certainly be none the worse for such an organization."

SUISUN VALLEY GRANGE, SOLANO COUNTY.—A. T. Hatch, Secretary, writes:—"Saturday, March 7th, there were eight added to our number. This Grange has passed a resolution fully endorsing the resolutions of Dixon Grange in regard to the move made by the sewing machine companies. It is evident to the members of this Grange that those agents who signed the circular published in the Press of March 7th, do not desire Grangers to use their machines, and they may think, as they say, 'That the future interests of their business, as well as satisfactory results to purchasers depend on purchasers paying a large percentage to sub-agents. So let it be until they think differently. Great armies move slowly, but sometimes they win the battle.'

WATSONVILLE GRANGE, SANTA CRUZ COUNTY.—Secretary A. F. Richardson writes to the Pajaronian, under date of Feb. 28: The Grange met to-day and conferred the fourth degree on a large number of brothers and sisters. The farmers have had a fine season during the past fortnight, and they have been making the most of it. Young grain is coming forward finely, and, with a few showers during the spring months, Pajaro valley will bring forth all its variety of crops. I think it safe to say that our agriculturists, as a class, are as thorough as any in the State—their knowledge is gained by experience and a study of the different soils, and taking an advantage of what they learn."

ELMIRA GRANGE, SOLANO CO.—M. D. Cooper writes: "Our Grange is getting along well, and the numbers are generally delighted with its workings, especially with the social features of the institution. We have eleven new applications to start in with at our next meeting. The Rural Press is well liked and all those taking it will renew their subscriptions. For myself, I would as soon think of doing without my regular meals as without your valuable paper." [As will be seen elsewhere, Elmira Grange has passed resolutions in sympathy with the Dixon Grange in regard to the Sewing Machine question.—EDS. PRESS.]

TABLE BLUFF GRANGE, HUMBOLDT COUNTY.—B. H. C. Pollard, Secretary, writes: "Our Grange is working nicely and the cause is running high. A class of eleven will take the third degree at our next meeting. We also have thirteen applicants."

GOOD WORDS FROM A SISTER.—At the last harvest feast of the Potter Valley Grange, Mrs. C. I. H. Nicholson read an excellent paper, which, by vote of the Grange, has been sent to us for publication in the Rural Press. It will appear next week.

THE SEWING MACHINE QUESTION.—EDITORS PRESS.—At a regular meeting of Santa Clara Grange, held March 8, on motion of Brother Jamison, the following preamble and resolutions were adopted:

WHEREAS, the Agents of the Wheeler & Wilson, Grover & Baker, Howe, Singer, Weed, Wilson and Domestic Sewing Machines, have refused to carry out their agreement with our Executive Committee, therefore

Resolved, that we, the members of Santa Clara Grange, hereby pledge ourselves not to purchase any machines from the above-named houses or agents in this State; and that we will use our influence to prevent our sister Granges from doing the same.

Resolved, that this resolution be sent to the RURAL PRESS and California Granger. I. A. WILCOX, Secretary.

We are informed by the Secretaries of Sacramento Grange, Suisun Valley Grange, and Livermore Valley Grange that each of those organizations has passed resolutions similar to the above, the members pledging themselves not to purchase any machine of the sewing machine companies which have revoked their agreements with the Grange State Agent. All the Granges throughout the State will no doubt take similar action in this matter.

New Granges.

SUNAL GRANGE, ALAMEDA Co.—Another Grange of the Patrons of Husbandry is added to the already very flattering list of Granges of this State. Sunal Grange was organized by Worthy Deputy W. H. Baxter, on the 7th inst. Twenty good and trusty men and ten equally true and worthy ladies were enrolled as charter members of this Grange.

The following is a list of officers elected: E. M. Carr, M.; Frank Cooper, O.; J. W. Vandewort, L.; Leon E. Jones, S.; D. W. Baker, A. S.; S. W. Millard, Sec'y.; Chas. Luern, T.; Peter Canavan, C.; Geo. Gregory, G. K.; Mrs. A. M. Hadsell, Ceres; Mrs. Baker, Pomona; Mrs. Blake, Flora; Miss Lena Baker, L. A. S.

About midway in our organization one of our fair sisters hinted that there was something good to eat in the ante-room—a hint of that nature was sufficient to call forth a motion for adjournment, which was carried *viva voce*—what a lunch! everything you could think of, and more too! We ate and talked until we found it was nearly an impossibility to reduce the contents of those huge baskets to any perceptible extent. As there must be an end to all good things as well as bad, we had to accept the inevitable, resume business, and complete our organization. Brother Baxter is a most genial and social gentleman—we shall be most happy to meet him again. S. W. MILLARD, Secretary.

ROSEVILLE GRANGE, PLACERVILLE County, was organized on the 6th inst. by Deputy W. S. Manlove, Master of Sacramento Grange, with twenty-eight charter members. Post-office address, Roseville, Sacramento County. The following is the list of officers for the current year: A. D. Nehr, M.; Geo. R. Grant, O.; J. F. Davis, L.; J. F. Cross, S.; W. H. Murray, A. S.; D. L. Allen, C.; N. Mertis, T.; I. N. Nehr, S.; Danl. Lewis, G. K.; Mrs. Cross, Ceres; Mrs. Nehr, Pomona; Mrs. Mertis, Flora; Mrs. Cavitt, L. A. S.

San Jose Farmers' Club.

The Farmers' Club met at the usual hour Saturday, March 7, and was called to order by President Casey.

The attendance was quite large, and the regular lunch was disposed of in a systematic and satisfactory manner.

The following resolution was adopted:

Resolved, That the exorbitant salaries of State and county officers, and their employes, should be reduced to an amount that will correspond to the services rendered, and that unnecessary employes be not retained.

Mr. Rector, of Santa Rosa, addressed the Club on the subject of jute. He was in favor of memorializing Congress to remit the duty of jute machinery for one or two years. This would allow those interested in the manufacture of jute to make all arrangements necessary for establishing their plans on a permanent basis. The present duty is forty per cent.

A committee of three, consisting of Messrs. Younger, Garrigus, and Erskson was appointed to report on the proposed memorial.

A discussion on the revision and modification of the existing school laws ensued. School trustees and school teachers were well represented, and the debate was of a most animated description. There was a difference of opinion as to the advisability of reducing the salaries of teachers, but all the disputants agreed that the present cumbersome machinery of the school system should be simplified, and that the balance of power should rest with the school trustees. The debate will be continued this Saturday.—*Mercury*.

A GOOD IDEA.—It has been suggested that the Patrons should prepare a statement of the estimated surplus of grain and other productions which seek foreign markets, stating the number of ships which will be required to transport the same, and send copies to the Chamber of Commerce of every commercial port of the world, by which means they may attract shipping to this port. It is certainly essential that some measure of this kind should be taken in aid of the end desired.

DAIRY AGENCY.—We understand that the dairyman generally, who are Patrons are shipping their butter to the Dairy Department of the State Agency, in this city.

Sacking Grain, Taxing Crops, Etc.

At a regular meeting of Vallejo Grange, held March 7th, 1874, the following preamble and resolutions were unanimously adopted:

Regarding the present system of bagging or sacking grain for market, as practiced on the Pacific Coast, as an onerous tax upon the labors of the producer, compelling an outlay for which they receive no return, thereby affecting seriously individual as well as the entire agricultural interests of the State. Be it

Resolved, That we will use our united efforts and solicit the co-operation of our brother Patrons and farmers in bringing about a speedy and radical change.

Resolved, That in our opinion the readiest means for accomplishing the desired reform will be for grain growers throughout the State to act in unison, refusing to provide sacks for grain unless paid for by the purchasers of the grain. No exception to be made whether in selling for home consumption or export.

Resolved, That, as in the continuance of the present custom we see no prospective benefits, but on the contrary all that is objectionable and injurious, we will give our support to that system of aggregation, storing and handling grain, which has proved itself to be the most economical, safe and expeditious, by the early adoption of which the farmers of the great grain producing States of the North West, though far removed from the seaboard and markets, are wealthy and prosperous, while the reverse is the condition of the grain growers of the Pacific Coast.

Resolved, That we cannot believe it wise, nor do we concur in petitioning Congress for the removal of duties on sacks, bagging, or the materials from which they are manufactured; as by so doing we discourage interests that will soon develop into an importance equaling those of any of our present industries. California, proving admirably adapted to the growth of jute and all of the textile plants.

Resolved, That we heartily endorse the proposition for cultivating a general and more extended list of products that we may be less dependent upon the contingencies of season, soil and markets.

Resolved, That we deprecate the burning and wilful destruction of the straw from the grain fields, as is commonly practiced by the people throughout the State, believing that in so doing a vast amount of valuable food for earth and kind is wholly and entirely lost.

Resolved, That this Grange cheerfully endorses the action of Healdsburg Grange, with reference to the State Agricultural Society, and hereby joins them in their earnest appeal to his Excellency, the Governor, to use his influence in preventing the people's money from being donated for the erection of racing stands in the name of Agriculture, and sincerely hope he will unhesitatingly veto any bill the Legislature may pass having a tendency in that direction. And it be also

Resolved, That, although the society has answered the charges as preferred by the Healdsburg Grange, and admitting the correctness of the statement, the fact still remains patent, that the paramount interest of said society is horse racing and therefore partakes (under its present organization) more of the nature of a Jockey Club than of an Agricultural Society.

WHEREAS, Under the proceedings of the Legislature as reported March 2nd, that body has refused to pass the bill exempting growing crops from taxation, therefore be it

Resolved, That it is the sense of this Grange, that we regard such action with distrust, as an unwise and unjust measure, a serious drawback to the interests of Agriculture, a clog upon our energies and industry, and that its tendency is to militate against our interests in every sense. And be it further

Resolved, That the record of the vote in the Assembly on that question be preserved by this Grange for future reference.

Resolved, That copies of these resolutions be transmitted to the PACIFIC RURAL PRESS the California Granger and the local papers for publication.

CHAS. B. DEMING, Sec'y.
Hall of Vallejo Grange, Vallejo, March 7, 1874.

Santa Clara Council.

EDITORS PRESS:—An adjourned meeting of the S. C. Council of the P. of H., was held at the rooms of the San José, Grange, in San José, March 9th. Deputy Henning called to order, and I. A. Wilcox was appointed temporary Secretary.

The following delegates, duly accredited, were admitted to seats as representatives in the Council for one year:

Mayfield.—Wm. Paul, Patrick Dowd and W. W. Brown.

Saratoga.—A. McCall, Wm. Cox and Francis Dresser.

San Jose.—Isaac Bicknell, Horace Little, J. W. Haskell, Wm. Erskson, Thos. E. Snell, David Campbell, J. M. Owen, J. Singleton, H. E. Hills, H. S. Maclay and Joseph Holland.

Santa Clara.—Z. L. Garwood, A. B. Hunter, H. M. Leonard, I. A. Wilcox, Rush McComas, J. J. Roberts, Mrs. J. Knowles, and S. I. Jamison delegates at large.

Following were elected officers of the Council:—Master, H. M. Leonard, of Santa Clara; Overseer, J. W. Haskell; Chaplain, Wm. Paul; Lecturer, Mrs. J. Knowles; Secretary, I. A. Wilcox; Treasurer, H. E. Hills, Steward, Francis Dresser; Gate Keeper, Joseph Holland.

Trustees—J. Singleton, of S. J.; A. B. Hunter, S. C.; W. W. Brown, Mayfield; and Wm. Cox, Saratoga.

Next meeting at Santa Clara, on Monday, April 13th. I. A. WILCOX, Sec'y.

POLITICIANS AND SPECULATORS IN GRANGES.—AN OPINION.—Grand Master Adams, says that speculators, demagogues, small politicians, grain buyers, cotton factors and lawyers are interested in agriculturists only as the hawk is interested in the sparrow. Master Adams is right, and the caution against admitting such men into the Grange cannot be too often or too emphatically placed before the Order.

LOS ANGELES HERALD.—It is reported that the Los Angeles Herald has been purchased by a company who intend to run it in the interests of the Grangers. The Patrons of Los Angeles county are wide awake to every thing that pertains to the advantage of the Order, and the general welfare of the agricultural interest.

GRANGES IN NEVADA.—There are said to be three Granges in the State of Nevada, one in Washoe county, one in Ormsby and the third in Douglas.

The Fares and Freight Bill.

Freeman's Bill for regulating fares and freight seems to be still the subject of absorbing interest in Legislative matters. Word comes from Sacramento that there is very little probability, of any reduction in present rates—that the bill, if allowed to pass the Senate at all, will probably be so amended as to render it of no value to the people. The merchants, both of Sacramento and San Francisco seem to have got tired of fighting the railroad, and are asking the Legislature to also throw up the sponge. They ask that body not to be too hasty or ultra. They desire that the Governor may be empowered to appoint Commissioners, "to be composed of prominent business men and leading farmers, to whom the whole matter shall be referred for consideration, and report at the next meeting of the Legislature."

The merchants evidently fear the power of Stanford & Co., and prefer to put up with any freight charges they may see fit to impose, rather than seriously incur their displeasure. Of course, they can put the extra cost of freight upon their dry goods, groceries, etc., and make the people pay for it. It will cost them nothing extra, but how is it with the people—how will they stand it? How will it be with the farmers, who have to pay ten times and more the aggregate of freight which falls upon the merchants? How is it with the miners who have to pay exorbitant freight on all their supplies, machinery, etc.? If the bill now before the Legislature is killed, will it not give the Independents such greatly increased strength in the next Legislature, that both Houses will be far more radical than the present popular branch in this matter, and lead to the enactment of a far more stringent law than the one now proposed? Will not the result be worse for Stanford & Co.? If the law now before the Legislature is really an impolitic one, for the people as well as for the merchants, is there not great danger that the matter will be made vastly worse next year. Would it not be better for all parties that the present bill should be passed—if not as it stands, at least in a modified form—rather than have the bill utterly killed?

We can hardly conceive that the great mass of the people will go back on the reform which they have initiated, whatever the few merchants in the State may do, without at least some kind of a trial which shall demonstrate their error. Let us remember the fight in Iowa, which two years ago looked far worse for the people there than it does here, to-day; yet they have just triumphed by the overwhelming majority of some ten to one!

The Temperance Movement.

Although there has been in this city considerable talk about a temperance campaign after the fashion of that in the East, no very decisive steps have as yet been taken by the ladies of San Francisco. Some of them have been going about with pledges which they ask people to sign, and the pulpit and the press have been earnestly aiding them in their work of reform. While this new "Temperance Movement" is on the tapis perhaps it would be interesting to these ladies to know how habitual temperance is treated in Paris, where a common sense plan prevails.

When a Sergeant de Ville observes a person frequently under the influence of spirits, it is his duty to keep on his track and note where he gets his drink. This is reported to the Chief of Police, who notifies the shops to serve him no more liquor, under pain of forfeiting their licences.

Then his property is put under guardianship. If he work for wages, his employer is notified to pay over such wages; so that his wife or guardian shall receive the money. He is put under surveillance, and, if pronounced incorrigible, he is put in a reformatory.

Altogether, drunkenness is treated as insanity. No intoxicated person is allowed to make even noiseless display of this form of aberration of mind. The man appears to abjure his God and to be making his way to the devil, who is acting through him. As the fiend of drunkenness is liable to invite him to all manner of outrages, it is considered that public safety requires his confinement.

If barefooted or otherwise exposed children appear in the highway, they are quickly removed from public gaze. Their homes are visited and the cause of destitution ascertained. Usually parental abuse is in fault; and stringent remedies are applied.

While our Legislators are in the mood for correcting abuses, we suggest consideration for stringent measures for the suppression of intemperance, not among the lowly alone, but among all classes. Many an estate is being squandered by genteel toppers, where innocent wives and children cry aloud for protection, and no feeling parent will deny their right.

NEARLY all the wheat in Oregon which was stored along the line of the railroad, on both the east and west side, has been removed.

MANY COWS are dying in Walla Walla valley from eating wild turnips.

THE Santa Barbara Press says: "Not since the rainy season of 1868-9 has the crop prospect been so cheering in Santa Barbara and adjoining counties as now."

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Mar. 10, 1874.

FOR WEEK ENDING Feb. 24, 1874.

COAL SCREEN AND CHUTE.—James Flanagan, S. F., Cal.

WASH BOILER ATTACHMENT.—David J. Phillips, Stockton, Cal.

BUNG.—Wallace Shattuck, S. F., Cal.

PRINTERS' CHASES.—John F. Uhlhorn, Sacramento, Cal.

SELF-CLEANING WATER TANK.—Prosper Huerne, S. F., Cal.

DEVICE FOR BURNING HYDRO-CARBONS.—Geo. W. Rumrill, Lima, Peru.

CAR COUPLING.—Abraham Rust, Vaca, Cal.

DUMPING CAR.—James M. Thompson, S. F., Cal.

APPARATUS FOR CONDENSING VOLATILE METALLIC SUBSTANCES.—Ferdinand Fiedler, New Almaden, Cal.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

A New Yorker has now succeeded in making machinery which prepares the fiber in a highly acceptable condition for manufacturing. He is now negotiating with our largest planter on Twitchell Island to greatly increase the production. To insure a continuous market, he offers to take all that can be produced, at a price that will pay the contractor \$300 per acre. We want varied crops in California, and our farmers should inquire into this matter. The same must be moist land; especially after the first cutting, water is needed to insure a second growth. The uses of ramie are almost solely for interweaving with silk and wool. It makes a glossy cloth, and it takes all dyes. It wears well. But it being of the nature of linen, the market offers no inducement to make cloth of that textile alone.—*Bulletin*.

THE RAMIE PLANT.—The farmers have now assurance of unlimited market for ramie. There has been no profit in its cultivation, because there was no machinery to prepare the fiber for the English market. It requires to be prepared when greasy, and therefore it cannot be sent abroad, where there is machinery. Twenty-six acres of ramie on Twitchell Island, yielded, in 1873, two cuttings, of sixty-five tons each, of green stock to the acre. Near Haywood, the same result was obtained; so that its successful cultivation is proved.

We acknowledge, with thanks, the receipt of the Transaction of the Massachusetts Horticultural Society for 1873, kindly forwarded by the corresponding Secretary, Mr. E. W. Buswell. This volume of the Transactions appears to be very complete, and is a model publication of its kind, in typographical and other respects.

THE Santa Rosa Democrat says that Eugene Light has invented a grain sower which he attaches to an ordinary gang plow. The machine is complete and perfect; it plows, sows and harrows the ground at one operation. It will put in from three and a half to four acres a day, and do the work well. The motive power is four horses.

CROP prospects around Vacaville are very poor. There has been very little winter sowing as most of the farmers are depending on summer-fallowing.

PROLIFIC.—Mr. J. H. Bullard, of Denverton, has a cow which had two calves April 30, 1873, and two more February 19, 1874—four calves in ten months.

MORE bees are being taken to San Diego. John Watson, of Yolo has moved 103 stands of them to San Diego, where he expects them to do better than heretofore.

Appreciative.

TO DEWEY & CO.—Sirs: I wish to continue my subscription for the RURAL PRESS. I send them to a friend in Iowa. WM. OMAN.

Wilmington, Cal., Feb. 15, 1874.

P. S.—Do without your paper! my dear sirs, I would rather do without my bread and butter.

N. B.—If there is an agency in San Francisco for the Buckeye mower, they would do well to advertise in the RURAL PRESS.

MESSRS. DAWSON & BANCROFT, 449 Fifth Street, have been long and greatly needed in their present capacity. They are inveterate enemies to swindling and swindlers.

S. METCALF, Melrose, Alameda Co.

tf.

Fearful—the amount of money thrown away in not buying shoes protected by SILVER TIPS. Parents be wise and insist that your shoe dealer should keep them. mrl4-3t



Kern Lake.

(WRITTEN FOR THE RURAL PRESS, BY THAYNE WORTH.)

Not like exalted, proud Tahoe,
Nor yet, with piteous story,
Like Donner, dost thou brightly glow,
Fair lake, in all thy glory.

But like a good man's holiest deeds,
Void of all ostentation,
Thou liest; circled by thy reeds,
A blessing to creation.

A blessing to the countless herds,
That drink thy cool, clear waters;
A blessing to the myriad birds
That make thy marge their "quarters."

A blessing to the weary eye,
Thy silver sheet lies shining;
When morn or evening tints the sky,
With varied hues combining.

No sound disturbs the sweet repose,
That marks thy calm location,
Save wild bird's scream, or cattle lows,
Or tinkling bell's vibration.

No steam-craft parts thy rippling waves,
Nor oar with strokes caressing;
Yet change may come with future days,
And add another blessing.

Ah! learn we then from work like thine,
That usefulness is merit—
True greatness is a good Divine,
That all men may inherit.

Going Down Hill.

BY MRS. S. P. DOUGHTY.

"That looks bad," exclaimed farmer White with an expressive shake of his head, as he passed a neglected garden with broken-down fence, in one of his daily walks.

"Bad enough," was the reply of the companion to whom the remark was addressed. "Neighbor Thompson appears to be going down hill pretty fast. I can remember the time when everything around his little place was trim and tidy."

"It's quite the contrary now," returned the farmer. "House, outbuildings and grounds all show the want of care; I am afraid Thompson is in the downward path."

"He always appeared to be a steady, industrious man," rejoined the second speaker. "I have a pair of boots on my feet at this moment, of his make, and they have done me good service."

"I have generally employed him for myself and family," was the reply, "and I must confess that he is a good workman; but nevertheless I believe I shall step into Jack Smith's this morning and order a pair of boots, of which I stand in need. I always make it a rule never to patronize a man who appears to be running behind hand. There is generally some risk in helping those who do not try to help themselves."

"Very true, and as my wife desired me to see about a pair of shoes for her this morning, I will follow your example and call upon Smith. He is no great favorite of mine; however—an idle, quarrelsome fellow."

"And yet he seems to be getting along in the world," answered the farmer, "and I am willing to give him a lift. But I have an errand at the butcher's. Step in with me a moment. I will not detain you."

At the butcher's they met the neighbor who had been the subject of their previous conversation. He certainly presented rather a shabby appearance, and in his choice of meat there was a regard to economy which did not escape the observation of farmer White. After a few passing remarks, the poor shoemaker took his departure, and the butcher opened his account book with a somewhat anxious air, saying as he charged the bit of meat—

"I believe it is time neighbor Thompson and I came to a settlement."

"No time to lose, I should say," remarked the farmer.

"Indeed! Have you heard of any trouble, neighbor White?"

"No, I have heard nothing, but a man has the use of his eyes, you know; and I never trust any one with my money who is evidently going down hill."

"Quite right; and I will send my bill this evening. I have only delayed on account of the sickness the poor man had in his family all winter. I suppose he must have run behind hand a little, still I must take care of number one."

"Speaking of Thompson, are you?"

observed a bystander, who appeared to take an interest in the conversation. "Going down hill, is he? I must look out for myself, then. I did intend to give him another mouth's credit, but on the whole, I guess the money would be as safe in my own pocket."

Here the four worthies separated, each with his mind filled with the affairs of neighbor Thompson, and the probability that he was going down hill, and the best way of giving him a push.

In another part of the little village similar scenes were passing.

"I declare," exclaimed Mrs. Bennett, the dress maker to a favorite assistant, as she hastily withdrew her head from the window whence, she had been gazing on the passers by, "if there is not Mrs. Thompson, the shoemaker's wife, coming up the steps with a parcel in her hand. She wants to engage me to do her spring work, I suppose, but I think it would be a venture. Everybody says they are running down hill, and it's a chance if I ever get my pay."

"She has always paid us promptly," was the reply.

"True, but that was in the days of her prosperity. I cannot afford to run any risk."

The entrance of Mrs. Thompson prevented further conversation.

She was evidently surprised at the refusal of Mrs. Bennett to do any work for her; but as a great pressure of business was pleaded as an excuse, there was nothing to be said, and she soon took her leave. Another application proved equally unsuccessful. It was strange how busy the dress makers had suddenly become.

On the way home the poor shoemaker's wife met with the teacher of a small school in the neighborhood where two of her children attended.

"Ah! Mrs. Thompson, I'm glad to see you," was the salutation. "I was about calling at your house. Wouldn't it be convenient to settle our little account this afternoon?"

"Our account!" was the surprised reply.

"Surely the term has not yet expired?"

"Only half of it, but my present rule is to collect my money at that time. It is a plan which many teachers have adopted of late."

"I was not aware that there had been any changes in your rules, and I have made arrangements to meet the bill at the usual time. I fear it will not be in my power to meet it sooner."

The countenance of the teacher showed great disappointment, and as she passed on in a different direction, she muttered to herself:

"Just as I expected, I shall never get a cent. Everybody says they are going down hill. I must get rid of the children in some way. Perhaps I may get a pair of shoes for payment of the half-quarter if I manage right, but it will never do to go on in this way."

A little discomposed by her interview with the teacher, Mrs. Thompson stepped into a neighboring grocery to purchase some trifling family stores.

"I have a little account against you. Will it be convenient for Mr. Thompson to settle it this evening?" asked the civil shop-keeper, as he produced the desired article.

"Is it his usual time for settling?" was again the surprised inquiry.

"Well, not exactly; but money is tight just now, and I am anxious to get in all that is due me. In future I intend keeping short accounts. There is your bill, if you would like to look at it. I will call around this evening. It is but a small affair."

"Thirty dollars is no small amount to us just now," thought Mrs. Thompson, as she thoughtfully pursued her way toward home. "It seems strange that all these payments must be met just now, while we are struggling to recover from the heavy expense of the winter. I cannot understand it."

Her perplexity was increased upon finding her husband with two bills in his hand, and a countenance expressive of anxiety and concern.

"Look, Mary," said he, as she entered. "here are two unexpected calls for money—one from the doctor and the other from the dealer in leather from whom I purchased my last stock. They are both very urgent for immediate payment, although they have always been willing to wait a few months until I could make arrangements to meet their claims. But misfortunes never come singly, and if a man once gets a little behind, trouble seems to pour in upon him."

"Just so," replied the wife. "The neighbors think we are going down hill

and every one is ready to give us a push. Here are two more bills for you, one from the grocer and the other from the teacher."

Reply was prevented by a knock at the door, and the appearance of a lad who presented a neatly folded paper and disappeared.

"The butcher's account, as I live!" exclaimed the astonished shoemaker. "What is to be done, Mary? So much money to be paid out, and so very little coming in; for some of my best customers have left me, although my work has always given satisfaction. If I could only have as much employment as usual, and credit allowed me, I could soon satisfy all my claims; but to meet them now is impossible, and the acknowledgement of my inability will send us still further on the downward path."

"We must do our best and trust in Providence," was the consolatory remark of his wife, as a second knock at the door aroused the fear that another claimant was about to appear.

But the benevolent countenance of Uncle Joshua, a rare but ever welcome visitor, presented itself.

Seating himself in the comfortable chair which Mary hastened to hand him, he said in his somewhat eccentric but friendly manner:

"Well, good fellow, I understand the world does not go quite so well with you as formerly. What is the trouble?"

"There need be no trouble, sir," was the reply, "if men would not try to add to the afflictions which the Almighty sees to be necessary for us. We met with sickness and misfortunes which we endeavored to bear with patience. All would go well if those around me were not determined to push me in the downward path."

"But there lies the difficulty, friend Thompson. This is a selfish world. Everybody, or at least a great majority care only for number one. If they see a poor neighbor going down hill, their first thought is whether it will affect their own interests; and provided they can secure themselves, they care not how soon he goes to the bottom. The only way is to keep up appearances. Show no signs of going behind hand, and all will go well with you."

"Very true, Uncle Joshua, but how is this to be done? Bills which I did not expect to be called upon to meet for the next three months are putting in upon me. My best customers are leaving me for a more fortunate rival. In short, I am on the brink of ruin, and naught but a miracle can save me."

"A miracle which is very easily wrought then, I imagine, my good friend. What is the amount of these debts which hang so heavily upon you, and how soon in the common course of events could you discharge them?"

"They do not exceed one hundred dollars," replied the shoemaker, "and with my usual run of work I could make all right in three or four months."

"We will say six," was the answer. "I will advance you one hundred and fifty dollars for six months. Pay every cent that you owe, and with the remainder of the money make some slight addition or improvement in your shop or house, and put everything about the grounds in its usual neat order. Try this plan for a few weeks, and we will see what effect it has upon our worthy neighbors. No, no, never mind thanking me. I am only trying a little experiment on human nature. I know you of old, and have no doubt my money will be safe in your hands."

Weeks passed by. The advice of Uncle Joshua had been strictly followed, and the change in the shoemaker's prospects was indeed wonderful. He was now spoken of as one of the most thriving men in the village, and many marvelous stories were told to account for the sudden alteration. It was generally agreed that a distant relative had bequeathed to him a legacy which had entirely relieved him of pecuniary difficulties. Old customers and new ones crowded in upon him. They had never before realized the beauty and durability of his work. The polite butcher selected the best pieces of meat for his inspection as he entered, and was totally indifferent as to the time of payment. The dealer in leather called to inform him that his best hides awaited his orders. The teacher accompanied the children home to tea, and spoke in high terms of their improvement, pronouncing them among her best scholars. The dressmaker suddenly found herself free from the great press of work, and in a friendly note expressed her desire to oblige Mrs. Thompson in any way in her power.

"Just as I expected," exclaimed Uncle Joshua, rubbing his hands exultingly, as the grateful shoemaker called upon him at the expiration of the six months, with the money which had been loaned in the hour of need. "Just as I expected. A strange world. They are ready to push a man up hill if he seems to be ascending, and just as ready to push him down if they find that his face is turned that way. In the future, neighbor Thompson, let everything about you wear an air of prosperity, and you will be sure to prosper;" and Uncle Joshua, with a satisfied air, placed his money in a pocket book, ready to meet some other claim upon his benevolence, whilst he, whom he had thus befriended, with light steps and cheerful countenance, returned to his happy home.

A VOCAL DUEL.—I once heard a stage driver's story of Jenny Lind, when she was riding in the country. A bird of brilliant plumage, perched on a tree near by, as they drove slowly along trilled such a complication of sweet notes that it perfectly astonished her. The coach stopped, and reaching out, she gave one of her finest roulades. The beautiful creature arched its head on one side, deferentially, then, as if determined to excel its famous rival, raised his graceful throat and sung a song of rippling melody, that made Jenny rapturously clap her hands with ecstasy; and quietly, as though she was before a severely critical audience in Castle Garden, she delivered some Tyrolean mountain strain, till Jenny, in happy delight, acknowledged that the pretty woodland warbler decidedly out-caroled the Swedish Nightingale.

OLD friends are like old boots. We never realize how perfectly they were fitted to us till they are cast aside and others finer and more stylish perhaps, but cramping and pinching in every corner, are substituted. Then we are often forced to hunt up the worn articles from the attic where they have been thrown, and for a little season at least rest our weary feet by wearing them. With our friends it is the same; after trying in vain to fit ourselves to the peculiarities of our new ones, how often we go back with a sigh of relief to the dear people whose very faults may have been brought about by serving us.

In the earliest days of the human race, when population was more sparse than it has ever been since, and introductions were also scarce, with little or none of form or ceremony attending them—"no cards"—our first parents, after their first surprise, had to introduce themselves to one another, though the following dialogue is not found on record:

Adam: Madam, I am Adam.
Eve: Adam, I am madam. [They embrace.]

I LIKE to read about Moses best in the Old Testament. He carried a hard business well through, and died when other folks were going to reap the fruits; a man must have courage to look at his own life so, and think what'll come of it after he's dead and gone. A good, solid bit o' work lasts; if it's only laying a floor down, somebody's the better for it's being done well, besides the man as does it.—Geo. Eliot.

Good manners are the blossoms of good sense, and, it may be added of good feeling, too, for if the law of kindness be written on the heart, it will lead to that disinterestedness in little things as well as great things—that desire to oblige, and attention to the gratification of others, which is the foundation of good manners.

THE mysterious Egg in the Bottle.—Take a good sound egg and soak it in sound vinegar for twelve hours; it will then become soft and elastic. Now introduce it into a bottle and fill it up with limo water. The egg will become quite hard, and create some astonishment as to how it got in.

PRESIDENT Nott, in his wise old age, once took a newly-married couple aside, and said: "I want to give you this advice, my children; Don't try to be happy. Happiness is a shy nymph, and if you chase her you will never catch her. But just go quietly on and do your duty, and she will come to you."

An old bachelor said; "There's more jewelry worn now-a-days than when I was young. But there's one piece I always admire which I don't often see now." "What is that?" asked a young lady. "A thimble," was the reply.

The Adoration of Woman.

That adoration which a young man gives to a woman whom he feels to be greater and better than himself, is hardly distinguishable from a religious feeling. What deep and worthy love is not so? whether of woman or child, or art or music? Our caresses, our tender words our still rapture under the influence of autumn sunsets, or pillared vistas, or calm, majestic statues, or Beethoven symphonies, all bring with them the consciousness that they are mere waves and ripples in an unfathomable ocean of love and beauty; our emotion in its keenest moment passes from expression into silence; our love at its highest flood rushes beyond its objects and loses itself in the sense of divine mystery. Is it any weakness, pray, to be wrought on by exquisite music, to feel its wondrous harmonies searching the subtlest windings of your soul, the delicate fibres of life where no memory can penetrate, and binding together your whole being, past and present, in one unspeakable vibration, melting you in one moment with all the tenderness, all the love, that has been scattered through the toilsome years, concentrating in one emotion of heroic courage or resignation all the hard-learned lessons of self-renouncing sympathy, blending your present joy with past sorrow, and your present sorrow with all your past joy? If not, then neither is it a weakness to be so wrought upon by the exquisite curves on a woman's cheek and neck and arms, by the liquid depths of her beseeching eyes or the sweet childish pout of her lips. For the beauty of a lovely woman is like music; what can one say more? Beauty has an expression beyond and far above woman's soul that it clothes, as the words of genius have a wider meaning than the thought that prompted them; it is more than woman's love that moves as in a woman's eyes—it seems to be a far-off mighty love that has come near to us, and made speech for itself there; the rounded neck, the dimpled arm, move us by something more than their prettiness—by their close kinship with all we have known of tenderness and peace. The beauty is in the expression; (it is needless to say that there are gentlemen with whiskers dyed and undyed who see none of it whatever) and for this reason the noblest nature is often the most blinded to the character of the woman's soul, that the beauty clothes. Whence, I fear, the tragedy of human life is likely to continue, for a long time to come, in spite of mental philosophers, who are ready with the best recipes for avoiding all mistakes of the kind.—George Eliot.

SHE had played the coquette till his patience was exhausted. But as she was walking once with t'other fellow, she whispered in his disconsolate ear, "I shall be home next Saturday night." "So shall I," he said.

ONE can judge something of the patience of Hoosiers from the statement of an Indiana paper that twenty men handled over thirty-five cords of wood to get at a rabbit, which escaped after all.

THERE ought to be such an atmosphere in every Christian church that a man going there and sitting there two hours should take the contagion of heaven, and carry home a fire to kindle the altar whence he came.—Beecher.

REVERENCE the highest, have patience with the lowest. Let this day's performance of the meanest duty be thy religion. Are the stars too distant, pick up the pebble that lies at thy feet and from it learn all.—Margaret Fuller.

Josh Billings says: "There ain't enny-thing that will completely kure laziness, though a second wife has been known to hurry it some."

Arkansas knows it has one politician who is beyond suspicion, because the proof against him is too positive to admit a doubt.

OFTEN do we think when we ought to act, and act when it behooves us to reflect hence caution is frequently as fatal as rashness.

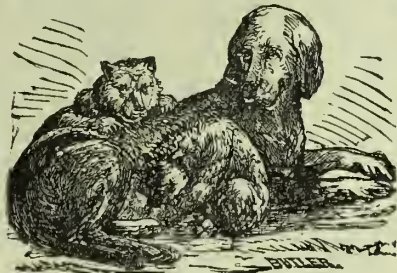
It is no excuse for the Metropolitan railroad working a conductor sixteen hours a day, because he can get his breakfast on the car.

MAN has not love for spiritual life and immortality, until sin breaks to pieces the earthly things on which his affections are fastened.

Young Folks' Column.

Strange and Curious Animals.

The Alligator, of which we here give an excellent illustration, is the name bestowed by the Spanish discoverers of America on the representative of the crocodile of the old world. Although so large and formidable, the alligator is simply an immense lizard, and its ferocity shows well that the dread inspired by even one of the smallest of the species is justly founded on an instinctive appreciation of their real nature. There are few of our little readers who at all feel comfortable in the immediate proximity to any of the lizard species, no matter how small and insignificant they may be, not on account of any possessed power for harm which they possess, but that like many beings elevated much higher in the scale of being, their appearance condemns them. They are just as bad as they look, and only



BABY BEARS.

want the power to inflict injury, not the will. The alligator is found in all the tropical regions of America—the rivers on the coasts of the Gulf of Mexico and the Caribbean Sea swarm with them, as also do the adjacent swamps and lakes. In the United States they are confined to Louisiana, Florida and Texas. The everglades of Florida, and the canebrakes of Southern Louisiana swarm with them. They are particularly dangerous on account of their appearance often rendering it difficult to distinguish between them and the many fallen trunks hidden by the thick



AN ALLIGATOR.

vegetation found on the margin of the rivers and lakes. There is very little difference between the crocodile of the old world and the lizard of the new. The length of the animal varies much—from eighteen to thirty feet, and some have even been found of much more gigantic dimensions. The body is rough and covered with scales, which were proof against the hall from a musket of the old style, and which would probably be proof against one from even the most improved rifle. Their feet are webbed. Their stretch of jaw is greater than that of any other animal, and furnished as they are with hundreds of serrated teeth, they present a most terrific appearance. They are oviparous; that is, they produce their young from eggs, of which each female lays many hundreds, but as great numbers of them are destroyed by wild animals and also used as food by the natives of the countries where they are found, there is a considerable check given to their propagation. The alligator has the muzzle broad, obtuse, and greatly resembling that of the pike. The teeth are unequal, the four lowest ones being the largest, and entering into holes in the upper jaw. The toes are semi-palmate. In the great plains bordering the Amazon they are particularly numerous.

Baby Bears.

In Woodward's Gardens in the Happy Family House are two baby bears, whose gambols are quite amusing, but who instead of being brought up by one of their own kind were suckled by a dog, which is shown in the engraving. They were captured when only a few days old, and as their mother was killed at the same time it was suggested that a dog be procured to suckle them. Accordingly one of the Pointer kind and whose life was thus prolonged, was obtained from the public pound, and suckled them faithfully until they were able to look out for themselves.

To the courtesy of Mr. Henry Andrews, Manager of Woodward's Gardens, we are indebted for the above illustrations.

JEAN PAUL RICHTER says:—To insure modesty, I would advise the educating of the sexes together, for two boys will preserve twelve girls, or two girls twelve boys, innocent, amid winks, jokes, and improprieties, merely by that instinctive sense which is the forerunner of matured modesty.

WHEN a reporter wants a "harrowing case" for a sensation, he should search for it in an agricultural district.

Good Health.

The Causes of Decay of Teeth.

It has been charged against our brethren of the dental specialty, says the *Lancet*, that they are woefully at fault in regard to knowledge of the commonest of all things—caries of the teeth. That they extract teeth with skill, and stop them with even more skill, and in a nobly conservative spirit, is admitted; but the causes of decay in the teeth have remained obscure. The investigations of Leber and Rottenstein into this subject have at least the charm of pointing to definite conclusions. They admit, of course, that there are differences of teeth, constitutional and connected with race, making teeth more or less resistant to the great influences which determine decay. These are not, according to these authors, internal and vital so much as external and chemical. The process of decay begins from the surface, and if it can be controlled or arrested at the surface, it is entirely controlled. The great causes of caries are two, namely, acids and a certain fungus found abundantly in the mouth, *leptothrix buccalis*. This latter agent is characterized by certain microscopic appearances and by its reaction with iodine and acids, which give to the elements of *leptothrix* a beautiful violet tinge. Under the microscope the fungus appears as a gray, finely-granular mass or matrix, with filaments delicate and stiff, which erect themselves above the surface of this granular substance so as to resemble an uneven turf. The fungus attains its greatest size in the interstices of the teeth.

No one can deny now-a-days the action of acids on the teeth, even weak acids, in dissolving the salts of the enamel and the dentine. All acids, both mineral and vegetable, act promptly on the teeth. Various experiments as to the action of acids on dental tissues are given, making the enamel, naturally transparent, first white, opaque and milky, and, in a more advanced state, chalky, and then the dentine more transparent and softer, so as to be cut with a knife. The acids which may actually effect the first changes in the production of caries are such as are taken with food, or in medicines, or such as are formed in the mouth it-

self by some abnormality in our secretions, which should be alkaline, or by an acid fermentation of particles of food. But acids alone will not account for all the phenomena of caries in the teeth. They play a primary and principal part, making the teeth porous and soft. In this state, the tissues having lost their normal consistency, fungi penetrate both the canaliculi of the enamel and of the dentine, and by their proliferation produce softening and destructive effects much more rapidly than the action of acids alone is able to accomplish.

It is not pleasant to think that fungi exist in the mouth of all but the very cleanest of people. Bowditch, in examining forty persons of different professions, and living different kinds of life, found in almost all vegetable and animal parasites. The parasites were numerous in proportion to the neglect of cleanliness. The means ordinarily employed to clean the teeth had no effect on the parasites, while soapy water appeared to destroy them. If this be a true version of the causes of caries—the action of acids, supplemented by the action of fungi—then it follows that the great means of preserving teeth is to preserve the most scrupulous cleanliness of the mouth and teeth, and to give to the rinsing liquids a slightly alkaline character, which is done by the admixture of a little soap. This is not so pleasant a dentifrice as some, but it is effective and scientific. Acids not only dissolve the salts of the teeth, but favor the increase of the fungi of the mouth. No increase of fungi and no action on the dental issues occurs in solutions slightly alkaline, as of a weak solution of soap. The good effects of stopping teeth, in the light of these experiments, are intelligible. The penetration of acids and fungi is prevented.

BORAX FOR COLDS.—A writer in *The Medical Record* cites a number of cases in which borax has proved a most effective remedy in certain forms of colds. He states that, in sudden hoarseness or loss of voice in public speakers or singers, from colds, relief for an hour or so, as by magic, may be often obtained by slowly dissolving, and partially swallowing, a lump of borax, the size of a garden pea, or about three or four grains, held in the mouth for ten minutes before speaking or singing. This produces a profuse secretion of saliva, or "watering" of the mouth and throat, probably restoring the voice or tone to the dried vocal cords, just as wetting brings back the missing notes to a flute when it is too dry.

Action of Tobacco Smoke.

According to Messrs. Vohl and Eulemberg, the amount of nicotine in snuff and tobacco for chewing is so minute that nothing like nicotine-poisoning can result from their use. The action of tobacco-smoke and tobacco-juice is not due to nicotine, for it contains none, but to pyridine, picoline, colledine, and other bases, forming a homologous series, which are produced during the combustion of the tobacco. The reason why stronger tobacco can be smoked in a cigar than in a pipe is, that in the pipe a large quantity of pyridine is formed, which is very volatile and stupefying; while in a cigar little pyridine and much colledine are formed. The unpleasant symptoms experienced by persons just beginning to smoke, or who smoke to excess, as well as the poisonous effect of tobacco-juice, are not due to nicotine, but to the pyridine and picoline bases; and they have probably been attributed to nicotine because these bases, especially those having a high boiling-point, greatly resemble nicotine both in smell and in physiological action, producing contraction of the pupil, difficult respiration, convulsions and death.

They do not act so quickly when injected under the skin as when taken into the stomach, and their action is less rapid than that of nicotine. Other plants which are sometimes used for smoking, though they contain no nicotine, such as dandelion, willow wood and stramonium, yield pyridine bases, whose action are very like those from tobacco, though rather weaker. Pure picoline from Boghead coal had a similar action; and its vapor was poisonous, producing irritation of the respiratory passages, slight convulsions, and death. None of these, except the bases from willow wood, produced contraction of the pupil. The authors consider that the effects produced by opium-smoking are not due to the alkaloids in the opium, but to the bases formed during its combustion; and that the difference between it and tobacco is owing to different bases being formed by their combustion.—Arch. Pharm. and Chem.

Color Blindness.

The derivation of the designation of an affection of the eyes very commonly known as Daltonism (color blindness) is, as many of our readers are doubtless aware, from the name of the great philosopher, the propounder of the atomic theory, who was attacked by it. Properly speaking it is simply incapacity on the part of certain people to judge of color, or more accurately, of certain colors. Dr. Favre has communicated to the Congress at Lyons the result of the researches, which, as chief physician of the Paris and Lyons railway company, he has made on the subject, the object being to determine what influence this disease or affection may have on the general safety of travelers. According to this report, among 1196 different individuals examined from 1864 to 1868, thirteen cases of red-color blindness and one of green were found. Again, among 728 subjects examined between 1872 and 1873 he testifies to forty-two of color blindness more or less developed. He further estimates the number of people in France suffering from this malady at nearly a million, and gives, as the most common causes of it, wounds, typhoid fever, syphilis, etc. The danger of such a disease existing, and possible in some instances without the knowledge of the subject or of his employers, is one which deserves attention, for although we cannot point ourselves to any instances in which errors have been made through it, nevertheless, Dr. Favre, as we understand him, is able to do so, and we quite agree with him, when he says that the only effectual preventive of the dangers which may possibly accrue from such a malady is a periodical optical inspection of all men who have to deal with colored signals, a mistake in the use of which might lead to such disastrous results. We recommend inquiry on this subject to locomotive superintendents and traffic managers.—The Engineer.

EATING WHEN SICK.—It is the custom among a certain class of people, when a member of the family falls sick, to begin at once to ask, "Now what can you eat?" Every one has heard of the old story of the man who always ate eighteen apple dumplings when he was sick. On one occasion when he was engaged upon the eighteenth, his little son said, "Pa, give me a piece." "No, no, my son, replied the father, 'go away; pa is sick.'" When a young man has surfeited in season and out of season, until exhausted nature gives way, and a fever is coming on, the good mother is in trouble. She anxiously inquires, "Now, John, what can you eat? You must eat something! People can't live without food!" Then comes toast and tea, etc. The stomach is exhausted, and no more needs stimulating or food than a jaded horse needs the whip. What is needed is rest. Nine-tenths of the acute diseases might be prevented by a few days' starvation when the first indications appear. I don't mean complete abstinence in every case, but perhaps a piece of coarse bread, with cold water for drink. If such a policy were generally adopted, what ruin would overtake the medical profession. How many physicians would lack for patients.—Hearth and Home.

In the hydropathic treatment, drinking cold water immediately after rising, provided that breakfast be not taken for at least half an hour, is prescribed. The explanation given is that the internal douche acts upon the stomach as a tonic, in the same manner as cold applications externally, upon the skin.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our Scientific Press, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for 1½ year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, March 14, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—How the Eucalyptus Should be Planted; Farming in the Foothills; Lunch for the Cow; Hints on Hop-Growing—No. 1, 161. The Alden Process—A Great and Growing Industry; How to Put in a Late Crop, 168. Take Care of Your Stock; Squirrel Extirminator; California Deep Well Pump; Legislative, 169. Patents and Inventions, 172.

ILLUSTRATIONS.—Proper and Improper Culture of the Eucalyptus, 161. Baby Bears; An Alligator, 167. Squirrel Extirminator; Deep Well Pump, 169.

CORRESPONDENCE.—Rural Homes Amongst the Foothills; Notes of Travel; Conundrums; Eucalyptus Seed; Food Medicine; Lands; Semi-Tropical Fruits for Seed; The Town of Orange, Los Angeles Co., 162-3.

DOMESTIC ECONOMY.—Washing Machines; Cake Without Eggs, 163.

HORTICULTURE.—Upturned Trees, Tap-Roots, Etc.; The Rose-Peachblow Potato—A Few Questions, 163.

POULTRY YARD.—Care of Young Turkeys; Editors Press, 163.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 164-5.

HOME CIRCLE.—Kern Lake (Poetry); Going Down Hill; A Vocal Duel; The Adoration of Woman, 166-7.

YOUNG FOLKS' COLUMN.—Strange and Curious Animals, 167.

GOOD HEALTH.—The Causes of Decay of Teeth; Borax for Colds; Action of Tobacco Smoke; Color Blindness; Eating when Sick, 167.

AGRICULTURAL NOTES from various counties in California, 172.

USEFUL INFORMATION.—Separation of Gold and Silver from Lead; Why Alcohol Cures Rattlesnake Bites; Carbolic Acid; Alcohol from Sawdust; To Increase the Adhesiveness of Gum Arabic; Transferring Pictures to Glass; Improved Seeders; Color-Changing Iodides; New Surgical Devices; The Brains of Idiots; A New Acoustic Pyrometer; Effects of Heat on Textile Fabrics; The Heat of the Moon, 170.

MISCELLANEOUS.—Naturalized Weeds, 163. An Extensive Vineyard; Mountain Farming; Mulberry Trees; Vivisection; Sunshine and Sleep, 171.

From Arizona.

The agricultural interests of Arizona will, we believe, receive far greater attention than now at no very distant day. Will not some of our readers there send us some information with regard to the agricultural resources of that Territory, and what is now being done there in this direction. In this connection we are pleased to give a few extracts from a letter recently written by a very worthy citizen, now residing there, to Mr. Daniel Imman, Master of Livermore Grange, Alameda county. The extracts show that the farmers of that distant section are quite awake to their interests. We extract as follows:

"We have had a terrible flood here. Salt river rose about eleven feet, and has done much damage. Some of the farms on the river are very much washed, and some houses have been washed away. The gates to every ditch on the river were carried away by the flood, and the ditches more or less filled up. It is impossible yet to estimate the damage done; but it has been very considerable. This, added to the low price of grain, this season, will, I am afraid, cause a great deal of suffering among the poorer class of farmers the coming season. My farm was not injured, nor will my crop be if we can get the ditch repaired in season for irrigation.

The farmers here have had a meeting, and concluded to have a Grange of the Patrons of Husbandry here. Do you know anything about them?" [All the necessary information has been sent.—Eds.] "I intend to plant some cotton, this season, if I can get the seed." [As we presume the writer will receive some cotton seed, we should be pleased to hear from him in the fall with regard to his success in its cultivation, and to receive a sample of the cotton, so as to be able to institute a comparison between the fiber grown there and in California.

The Alden Process—A Great and Growing Industry.

With all our boasted superiority of climate and soil, we have been and still are laboring under vast disadvantages in some respects. While we raise grapes which equal any in the world, pears which challenge the admiration of all, and the fruits of different zones in wonderful perfection, we are too remote from the great centers of population and commerce, to successfully market the perishable products of which we, as Californians, are so justly proud. Pears are shipped by rail to the East in considerable quantity, and latterly grapes have been occasionally sent, but whatever is forwarded has to compete with the products of other and nearer localities, which do not bear the burden of long freight, long travel and expensive packing before they reach a market. Here the population is not sufficiently dense to consume a tithe of what could be grown. And the capacity of the soil is found to fully to keep pace with the increase of inhabitants, and the greater facilities for communication, so that the local demand can not overtake the possible production, at least for long years to come. Hence farmers are driven to growing the cereals or raising stock, in places where fruit and vegetables would flourish, but would not prove a commercial success.

Could, however, the vegetables and fruits be placed upon an equal footing with wheat and barley, by being made imperishable, the gain to the producer would be precisely in the ratio which the value of the former, raised on a given acreage, bears to that of the latter, from a similar area—or about one thousand per cent. If this be possible, the legitimate deduction is indeed startling: farmers in many sections of the State would receive ten-fold the profit from their land above what is now returned. In such a case there would be no sensible reduction in the price and no home-competition; for the markets of the world, in comparison with which the local requirement is but infinitesimal, would be open to us. The proposition is apparently so wild, so chimerical, that we hasten to say it is made advisedly and can be proved—we might say, has already been shown.

The Alden process of preserving fruits and other perishable commodities is now known, by name at least, to all of our readers. A great many fully understand the mode of treatment, and appreciate the excellence of its product. But very few, we think, realize the important part this Alden process is destined to play in the agriculture and commerce of the State. There is no escape from the conviction, when all the facts are taken into account, that its bearing upon our future prosperity is far beyond any estimate yet made. And because we are so deeply impressed with the magnitude of the theme, we propose to enter more into detail than we have yet been able, although frequently the merits of the process and the success of the factory now in operation have been noted in these columns.

First, then,

What is the Alden Process?

The Alden product is often confounded with ordinary dried fruit, and thought to be merely prepared in a novel manner. That such is not the case would seem to be conclusively shown by the commanding advance held by it in the market, over common dried fruit. But when the nature of the process is considered for a moment the difference becomes evident. If the two were identical, the Alden would still take the lead, from its perfect uniformity and cleanliness, resulting from the peculiar form of apparatus used. When fruits are dried in the open air, they are liable to attacks of insects, and at all times contaminated by dust and stray refuse, carried by the wind, and are besides darkened by the partial decomposition caused by the light and dry heat. In all other modes of drying the fruit is invariably very dark and tough. The Alden fruit, on the contrary, is subject to the following conditions: rapid circulation of air, accurately adapted and graduated heat, and considerable humidity. The process is an evaporation in moist air, in the presence of heat, thus directly imitating nature in the organic process of ripening, the whole being so quickly accomplished that there is no time for the slightest decay to set in. The product is not discolored, and preserves intact the fresh flavor and texture of the original article. Thus much was learned from theoretical considerations and examination of the various Alden products on exhibition at the office of the company, 402 Montgomery street, room 5, where visitors can at all times judge for themselves of the merits of the process, and have it thoroughly explained.

But wishing to see the process in actual operation we made a

Trip to the Factory

At San Lorenzo, Alameda county, the only factory as yet at work, on the coast, situated in a great fruit growing district which is rapidly extending in quantity and variety of products. The bulk of the currants and cherries with which our market is supplied comes from this locality, and its ability to furnish the world with these two products is now made positive.

We found a pleasant, well arranged building, containing five of the pneumatic evaporators, with space for double the number, to be put in when operations are extended. The factory

is probably the most efficient of the kind in the United States. It has plenty of water on each floor, kitchen, bed-rooms, etc., for the employees, making in itself a small village, giving work to from fifty to one hundred men, according to the season, all of whom board at the works. The company have already negotiated for the sale of several evaporators, and the indications are that quite a number of factories will be established in this State during the coming season.

At the time of our visit apples, pears and squashes were being operated upon. After preparing they are spread upon trays, three feet square, and placed in the evaporator at the bottom. Endless chains work at each corner of the evaporator, having lugs or fingers which fall down on entering the inside, and form a shelf upon which the tray is placed at certain intervals; the chains are moved one space, or four and one-half inches, and the tray holding the fruit is carried upward. The heat being applied at the bottom, it will be seen that after the fruit is subjected to a heat of, say, 260 degrees for five minutes, it being carried upward and the next tray of fruit placed under it, the first tray becomes cooler because of the moisture of the second, and thus as the first tray is advanced, the water being evaporated from the fruit, the heat is lessened at each stage; when all the moisture which it is desired to remove, the fruit is in heat not sufficient to change any of the acids, or in other words does not change the flavor, color or tissues, and when placed in water will resume its natural size and have all the properties of the fresh fruit. In short, the Alden process simply removes from the fruits the free water, leaving, in an improved condition, all of their nutritive qualities and flavor.

The marvel is that through such simple means such unexpected results ensue. Some one has said that all great innovations, discoveries and inventions are simple; if such is the fact, the Alden process should be ranked very high, for we wondered, as we looked, that no one had thought of it before, and imagined how easily one could have anticipated Mr. Charles Alden.

Besides the difference between common dried fruits, owing to the fact that the Alden product is dried in dampness, a thing once deemed impossible, but which prevents overheating and hardening, keeping the pores soft and open, we learned that the

Superior Quality

Is due principally to certain chemical reactions, induced by the peculiar treatment, as yet unexplained, by which the starch in the fresh fruit is largely converted into glucose, or grape sugar, without engendering the usual acids. However this is brought about, the facts remain that analyses show a gain of some twenty-five per cent. in glucose, which is richer than sucrose, or ordinary cane sugar, and that the directions for using prescribe only one-half the amount of sugar to be added in cooking which would be required for other fruit. Ordinary dried fruit contains less sugar than the fresh fruit, the sugar being neutralized by fermentation, and the gain of the Alden fruit must therefore be the result of the super-ripening which it undergoes. Pies made of apples, peaches, currants and rhubarb thus treated are in every instance equal to those made of fresh fruit. The great saving in sugar to housekeepers is an important item in domestic economy, and it alone would explain the higher price given for the preserved article. When prepared for the table, the Alden fruit is equal to the fresh, and in all cases better than any other method of preserving. We ate of string beans which before cooking looked like hay made of rank grass, which were equal in every particular to the fresh article; the same excellence is claimed for onions, potatoes, corn, squash and other vegetables. In all cases the articles are worked with such good results and with so little

Expense

That it seems as if it were only a question of time until we are able by the productive soil of our State to feed the world with our delicious fruits and nutritious vegetables. With the exception of preparation; that is, paring, coring and pitting of fruits and the shelling, husking and cutting of vegetables, which for use of the fresh article have to be done in the kitchen, the cost of producing these articles is remarkably small. We are informed that 60 bushels of apples, (after paring and coring,) can be placed in an imperishable condition for about 5 cents per bushel. The bulk of expense on every article is in preparing it for use, which the housewife escapes, and which is not always taken into consideration in counting the cost of the Alden product. Take, for example, the Alden apples at 20 cents per pound. The wholesale price quoted in the Eastern markets, is only equal to \$3.00 per barrel, 15 pounds being the result of a barrel. They require but one-half the sugar, with neither waste nor loss of time in preparation.

So rapidly have the products of this process

Grown in Favor

That although it has only been used in the Eastern States for three years, the several factories there are unable to supply the market, and orders constantly come to this city from the East and Interior for the full line of the Alden goods. The government has been a large customer, and has sent the Alden fruits and vegetables to all the posts, where they have uniformly given satisfaction. Several carloads, principally apples, have been sent East from this city. This being the first season for the San Lorenzo factory, comparative-

ly little has been done, but enough to prove that from sales this year a handsome profit will accrue both to growers and operators.

The Alden products find a ready market in England, and considerable quantities have been shipped from this city, upon orders, to Australia, Honolulu and South America, and the demand is rapidly increasing.

Several kinds of fruits have been mentioned; among

Other Produce Suited to the Process

Are the apricot, plum, prune and nectarine, which will always be in demand in the Eastern markets, when once dealers learn what fine fruits they become when processed. In the same way the making of raisins is likely to become a prominent industry, and one of our principal resources. The Alden raisin, though different from the Malaga, compares favorably with it, especially as the Alden retains the exact flavor of the grape treated, a result which has not been attained by any other method known; at the same time, the grape is thoroughly "raisined." Very few raisins were made last year, on account of the scarcity of grapes in the neighborhood of the factory, but with another grape season we hope to see them made in large quantities, knowing that they will be sought for.

We were also shown herbs, roots and flowers of many kinds, which were preserved as has been described. Quite an extensive business is being done, especially in Illinois, in the preparation of medicinal plants, which are well received. These are pressed, after being processed, into packages of two ounces to one pound, and sold twenty-five per cent. cheaper, although superior to common dried herbs. The process has been successfully tried in the curing of hops, chicory and tobacco, and also in the preserving of fish, meats, game, etc. We have not attempted to give a full list of articles which may be preserved by the Alden method, and probably it has not yet been fully experimented on in all directions, but we understand the general claim to be that it will cure almost all fresh food. As a secondary treatment, a

Jelly Process

Has grown out of the regular business, and is the sole occupation of some factories in the East. In the system of pneumatic evaporation nothing need be lost, however perishable; not even the refuse and parings of any kind of fruit, or of saccharine vegetables, such as sugar beet, cane, sorghum, sweet potato or pumpkin. All these are quickly reduced on the spot where grown, to an imperishable and very light and compact condition, fit for indefinite storage or transportation; and whenever called upon, will yield up their syrups to the exhausting process, no less fresh and lively in flavor, and far richer, than any juice that could be obtained from the fruit in its prime.

In Conclusion,

We may form some estimate of the field which is before the new enterprise by observing the extent of the drying and canning business. It is said that five millions are invested in the latter, in New York city alone.

For California we think the process especially adapted, not only from the remoteness at which we are placed from the principal centers, but also from the great superiority of our fruits and vegetables, which are exempt from rot and worms, while in the East it is found impracticable to grow certain varieties, from these two causes. We hope to see more attention devoted to the culture of plums, prunes, apricots, raisin grapes, etc.—fruits in which California would have no Eastern rivals.

How to Put in a Late Crop.

Many of our friends are just now puzzled to know how to treat their flat lands, that have up to this time been too wet. Some tracts have not been plowed at all, this season, and on others the early sown grain has been drowned out. In most localities it is getting late for sowing, and much land will be left idle, or at most turned over for a summer fallow. All grain that is put in after this should certainly receive extra care. A very successful cultivator, near Oakland, gives us the following particulars in regard to his method of putting in barley late, and still raising very fine crops. His soil is black, rich and deep, but often too wet for an early sown crop. When it comes into the right condition, he plows and harrows thoroughly, and sows a hundred pounds of barley to the acre. Several teams are then put on, and the land is plowed at right angles to the first furrows, to a depth of about four inches, turning the grain under. A second sowing of a hundred pounds of barley is given, and harrowed in in the usual manner. The result of this apparently extravagant outlay of labor and seed is not unfrequently a hundred bushels of barley to the acre at harvest time. Our informant says he can easily raise twice as much on an acre, by his method, as his neighbors can in the usual way.

We have long thought that late crops could be raised successfully, if they received thorough cultivation. We believe that grain put in with a drill to the same depth, would thrive as well as that plowed in as above, if the soil were first properly pulverized and mixed by harrowing. Probably wheat and oats would not bear planting so deep as four inches, but of course grain will come up through a much greater depth during the warm days of spring than in winter. We wish some of our readers would try an acre or more of well cultivated, late sown grain, and report results in the autumn.

Take Care of Your Stock.

From many portions of this and adjoining states come reports of the death of stock from bad weather and want of feed. We are scarcely surprised that this complaint is so general, while it is at the same time a matter of wonder that proper precautionary measures have not been taken to prevent it. That our farmers are very negligent in providing shelter for their stock is a fact that strikes any one not familiar with the California way of attending to these matters. While we on the coast are not subjected to such extreme cold as is the lot of Eastern farmers, and it is not absolutely necessary to pursue the course which they are compelled to, we should nevertheless pay more attention than we do to the care of our stock in the winter. We may have two or three mild winters in succession when sheds and stables would be of little value; but then comes on a hard, severe winter, which in many instances kills off stock enough to have paid for substantial barns which would last a life time. We prepare warm, comfortable shelter for our work horses, but allow the horned stock and horses not in immediate use to rough it out doors and keep themselves warm as best they can.

We received a private letter this week from a dairyman in Sonoma county, who complains as do many others that his cows and calves have died off badly this year from want of food and shelter. In it he mentions casually, but as a great hardship, that he has actually been compelled to drive his cows every night of late, into his barn to keep them alive. This view of the matter is doubtless taken by many other farmers. He tells us he is going to give up the dairy business and take to raising grain.

When a man complains because he has to take care of the stock that gives him a living, it is time for him to go into some other business. They trust too much to nature to work for them. No food was provided for winter, nor was there any place where the cattle could find shelter from the pelting rain and cold winds. It is, however, hardly worth while to lecture our farmers on this subject for most of them have had practical experience that the course they pursue is a wrong one, yet they "trust to luck" from year to year and fail to procure food or shelter for their cattle.

Not only do we hear complaints on this subject from different parts of this State, but from adjoining ones. Governor Bradley and his son John Bradley, of Mineral Hill, have lost stock in Rye and Elko counties, Nevada, by starvation and cold this winter, valued at from \$75,000 to \$90,000. Accounts received from various quarters in that State announce that cattle are dying from exposure and inclemency of the weather. In many localities entire herds have died, and others are greatly depleted, and if the weather does not relax in severity, more herds are liable to perish. Up north they are having the same trouble. In our own State a few instances of prominence may be quoted. The Chico Enterprise is informed by a gentleman from the coast range, that the stock of that section is dying off very fast. Hogs, cattle and sheep are dwindling away so fast as scarcely to leave hope that there will be enough left from which to make a new beginning. No feed had been provided, the owner of stock relying upon the usual amount of natural feed furnished in that locality. The backwardness of the season has left the stock entirely without feed, and they are dying by thousands.

Up the Russian River way the stock raisers are in the same fix. Speaking of a late storm the Flag says: "Owing to the severity of the winter, the cattle had suffered great hardships in procuring food, and before the storm of this week were in a very poor condition. The cold rains and high winds had not by any means been 'tempered to the shorn lamb,' for the grass was too soft and too short to be of much value, and the hay and other dry feed had become exhausted. In the present weak condition of the stock it is feared that large numbers which were considered out of danger will succumb to this last downpouring of rain."

Farmers who lose their stock from the bad weather and want of feed may thank themselves for it, in a great measure. Of course those having large herds in the mountains can hardly help themselves, but dairymen and others with a comparatively small number, could easily remedy the case by providing proper shelter and looking out for feed enough for winter use.

The wood of the osage orange is found to be useful for many purposes. An eastern paper states that a correspondent, who has been experimenting with the wood of the osage orange says that it takes a fine polish, and is very durable. The wood grown in Texas is found to be durable in all situations, and none more so than in fence posts. It is largely used for wagon wheels, and the wheels made of it are said never to require a second hooping. In Pennsylvania it is of slow growth, but further south it finds a congenial climate, and grows rapidly. If seed is to be sowed, the trees should be planted in clumps, in order that fertilization may be perfect.

The Yreka Journal recommends the growing of sugar-beets in that and Shasta valleys, and estimates the value of the annual consumption of sugar and syrup in those valleys to be from \$35,000 to \$40,000.

Squirrel Exterminator.

Herewith we illustrate a form of apparatus for destroying squirrels, contrived by a correspondent, Mr. James Hebborn, of Natividad, which may prove of great value to those of our friends who are troubled with the pests.

Killing squirrels by means of sulphurous vapor is not a new thing, many farmers having been accustomed for years to suffocate them by igniting sulphur at the mouths of the holes, thus strangling, or at least stupifying, such of the inmates as happened to be within at the time. The sulphur fumes have always been recognized as a cheap and most efficient



QUIRREL EXTERMINATOR.

agent of extermination, but at the same time the difficulties of applying them have been great. To ignite a ball of brimstone and drop it into a squirrel hole is certainly to inconvenience the squirrels to some extent—and almost equally the users—but is not a very effective plan, considering that the object of the proceeding is not to discommode, but to destroy the squirrels. What has been needed is to find some way of projecting the fumes so as to drive them through the long underground passages, seeking every nook and filling each cave and turn alike.

Mr. Hebborn has accomplished this end in a manner at once ingenious and simple, and which will commend itself to the notice of fellow sufferers from the ease with which the apparatus may be put together and operated. There is a sheet-iron cylinder, rather larger than a common stove pipe, with a tapering nozzle. In it is a perforated partition. On the large end is a snugly fitting cap, like that on the top of the can used by milk peddlers, but having a tube to receive the nozzle of the bellows. The bellows are of the ordinary construction, and should be some fifteen or eighteen inches across. The mode of applying the contrivance is as follows: A shovelful of live coals is placed upon the partition within the cylinder; the nozzle is inserted into the squirrel hole; a large tablespoonful of sulphur is dropped upon the coals; the cap is affixed; the bellows attached, and worked. In a few seconds a dense, sulphurous smoke issues from every hole which has any connection with that attacked, even though thirty or forty feet distant, and by stopping these up with earth and applying sufficient force to the bellows the smoke can be driven through even the crevices and worm holes. Mr. Hebborn states, as a curious fact concerning the wonderful vitality of the pests, that the rough treatment sketched does not always kill the squirrels, though it mildly suggests to them the advisability of moving their quarters, in which case they are easily dispatched as they seek to escape; and asks that some one should suggest a more deadly poison. There are plenty of more powerful agents than the sulphurous acid gas generated by the combustion of sulphur, but the difficulty would be in using that they would prove inconvenient and dangerous to those employing them. Probably our correspondent has chosen the cheapest and most effective means for the purpose, if it is intended to fight the squirrels in this direction.

There is still much uncertainty about the comparative effect of the poison usually applied. A great deal is to be learned by studying the various results attained by different persons, and to this end we invite discussion in the columns of the Press by our farmers, who are so deeply interested in the matter, and who hope so earnestly that in some way they may be enabled to overcome their natural enemies, which now appear to be becoming a more serious nuisance than ever before. If all will but set their wits to work, and publish whatever they discover, it will not be long until the State will be rid of ground squirrels. We thank Mr. Hebborn for his invention, and have no doubt but that it is as good in practice as it appears correct in theory.

BODEGAS.—We saw in the office of the Dairy Department of the Granges ten potatoes, from near Bloomfield, weighing in the aggregate twenty-five pounds. The largest, alone, weighs three and one-half pounds. These potatoes are remarkable as being not only large, but eatable, and like ordinary ones in texture. Most of the very large specimens are woody, watery and tasteless. Not "small potatoes," these.

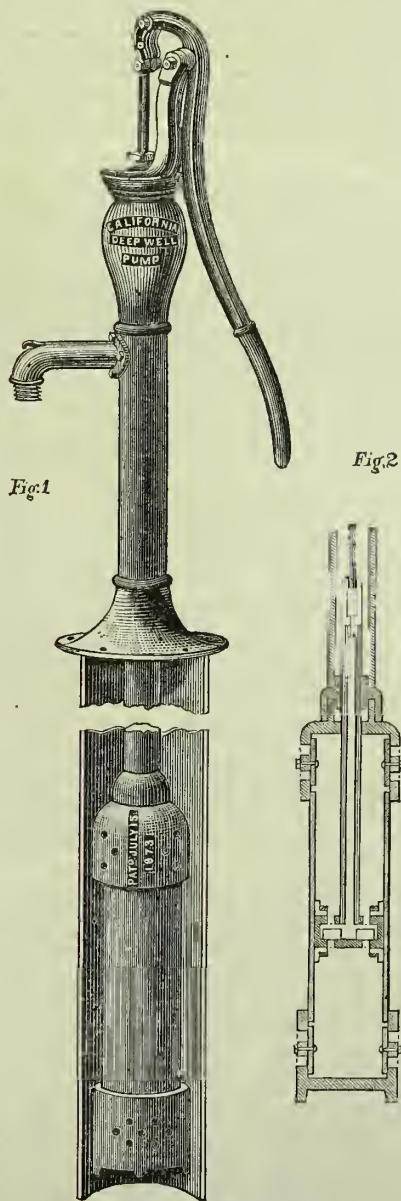
The late rains have given the grain in Santa Clara valley a fresh start, and even if no more rain should fall this season, the grain-crop would not be a failure.

California Deep Well Pump.

This pump, as its name indicates, is a California invention, patented July 15th 1873. One of the figures shown on this page represents the pump suspended in a bored well; and the other is a transverse-vertical section, showing the working portion thereof.

It is well known to farmers and others using bored wells that a single-action submerged pump, the only one heretofore adapted to bored wells, when run by horse, steam or wind power, owing to the burden of work being thrown upon one stroke, gives an uneven strain upon the machinery and causes a thumping or jerking action injurious to it, and annoying to horses when horse is power used and various means have been resorted to for remedying these evils, such as sinking double wells and using two pumps, the use of balance wheels and other expensive devices. In wells where water comes near enough to the surface to admit of using double action suction pumps, if the pump is run by wind-power and forced by high wind beyond a certain speed the cylinders fail to fill with the stroke, and the mill being relieved thereby from its work has to be "tied up" to prevent its "running away."

This invention was designed for the purpose of obviating these difficulties by furnishing a double action submerged pump, which could be operated inside of the casing of bored wells, and the inventor claims that it is the only double action pump which can thus be operated. It can of course be used in any other position in which a pump is needed, but its construction is such that the inside diameter, or bore of the pump, need be but one inch less than the diameter of the well casing; and, being submerged, it will fill with every stroke at any practical



DEEP WELL PUMP.

speed, thus keeping the strain equal upon the machinery; and the weight of water raised, increasing with the speed, operates as a brake to prevent wind mills from "running away."

This pump is admirably adapted for situations exposed to freezing, as by having a small hole in the conducting pipe at a point below the freezing point, to which the water will recede when the pump is at rest, it will always be ready for action. The pump is so constructed with brass and iron as to prevent corrosion by contact of iron with iron.

Brittan, Holbrook & Co., 111 and 113 California street, San Francisco, are sole agents for the manufacture and sale of these pumps, and for the sale of State and Territorial rights throughout the United States.

SHASTA county wants to be included in the Alameda bill for the protection of small game.

SAN DIEGO exported 116,000 pounds of honey last season.

Legislative.

Reports from Sacramento, the past week, give rather a better indication of progress than heretofore; still it is difficult to see how the Senate is to accomplish the immense amount of work which its past dilatoriness has allowed to accumulate; since but seventeen working days remain from this writing. Not more than two or three bills of any special importance, which have passed the lower House have, as yet, reached a final action in the Senate. Early, late and prompt must be the word from this day out, or much important business will be left undone.

THE FARES AND FREIGHT BILL, which is elsewhere more fully alluded to in this issue, was again before the Senate Committee on Corporations on Tuesday last. Mr. Freeman of the House—the author of the bill—was called before the Committee and subjected to an examination, which elicited information decidedly damaging to the railroad management. But we judge from all indications that the mind of the Senate is pretty much made up to give the bill the go by—but still no man can know before the final vote.

THE APPORTIONMENT BILL is still before the Senate Judiciary Committee, which is its proper reference; but there seems to be a desire on the part of the opposition interest to get it into the hands of Farley's famous Corporation Committee, where it can be more conveniently and safely strangled, along with the Freights and Fares bill. There seems to be a deliberate intent on the part of many Senators to rob the agricultural and commercial interests of the State, of their fair share of representation in the Legislature. The influence at the bottom of this movement is most unmistakable. The matter was before the Judiciary Committee on Tuesday evening, and the result of their deliberations has not come to hand up to the time of this writing.

SAN FRANCISCO HARBOR.—The people of the whole State, and the farmers in particular, are interested in the proper and economical management of all matters pertaining to the harbor of San Francisco; hence it must be of interest to all to know that a suspicious bill has been introduced into the Legislature to take the appointment of the Harbor Commissioners out of the hands of the Governor and to give the Legislature in Joint Convention, not in separate action, the power to select. This bill was introduced by Farley, so well known in connection with all the anti-reform efforts of the present Legislature, and it is difficult to separate the effort from the idea of a direct connection with some scheme of private interest in opposition to the general interests of the people. The irregularities, to use no stronger term, connected with the late management of the Harbor Commission, have, under the present Board, been overcome, and the receipts vastly increased. This being an acknowledged fact, we can scarcely conceive why any honest man or set of men should seek to change the present status or organization of the Board.

REDUCTION OF SALARIES.—There is a general demand throughout the State for a reduction of the salaries of county and State officers, and no little complaint because the Legislature has, thus far, failed to properly respond to this reasonable and popular wish. The cost of living here has been greatly reduced since the present salaries were fixed, hence it is no more than just that there should be at least a corresponding reduction in salaries. An honest legislator will favor every reasonable move in this direction. A Washington Territory paper strikes this note of the times in the following fashion: "Farmers selling their wheat for forty cents a bushel, and county officers paid at the rate of \$3,000 a year. Our legislative Solons should have a vote of thanks."

SAWDUST IN STREAMS.—Considerable complaint has been made on account of the injury to the water of many of our rivers, killing of fish, etc., by reason of the immense amounts of sawdust thrown into the streams by the owners of saw mills located upon their banks, and a bill was recently introduced in the Legislature making such a disposition of sawdust a misdemeanor. Mr. O'Connor, of the Senate, opposes the passage of the bill, stating that millions of dollars which are invested in the lumber business would be almost annihilated by the passage of such an enactment. There is no probability that the bill will become a law.

THE MILITARY BILL, designed to break down the present military organization of the State, has been killed by the casting vote of the President of the Senate. There is little doubt but that the cost of this department is an unnecessarily large tax on the people of the State, and should be greatly reduced; but such a sweeping bill as the one introduced by Mr. Laine should not have been passed. That a great saving might be made in this direction is sufficiently evident from the following facts: The State of Illinois, with four times the population of California, does not spend one dollar of State money on her militia. Indiana, with three times our population, spends only \$1,493, and the large State of Pennsylvania not half so much as California. In Minnesota \$5,000 only is required to make the military of that State efficient. There is only one State in the Union (New York) which pays as much for the militia as California. There is no reason, therefore, why California should spend as much money as she now does to keep up a reasonably efficient military organization. It is to be hoped that a bill may be framed for presentation to the next Legislature which shall meet the reasonable demand of the people for reform and reduction of expenses in this direction.

USEFUL INFORMATION.

Separation of Gold and Silver from Lead.

But little is known, to those not engaged in the business, of the methods employed in this country for separating gold and silver from impure lead; and we believe the following facts, gathered by our reporters, will be found of interest:

Two grades of impure lead are exported from Utah to the Eastern States for refining. The impurities are gold and silver, which communicate a superior hardness to the lead, and also increase its fusibility. These ingredients, however, do not exist in sufficient proportion to warrant the application of the cupel process, or rather the loss of lead would be so great as to make the operation too expensive. The lowest grade contains 80 ounces of silver and 1 of gold to the ton; the other grade, known as the R. C. M. bullion, contains 120 ounces of silver and 4 of gold per ton of bullion. Beside these components, certain proportions of antimony and occasionally a trace of arsenic enter into the composition of the bullion.

The bullion is first placed in kettles and melted to refine it. In this process the dross, which rises to the surface of the metal during the melting, contains the greater part of the impurities, such as antimony, bismuth, etc. This dross is afterward refined separately in an appropriate furnace. This having been removed, the melted metal is drawn off into a larger kettle. It is thence removed to other kettles, and a certain proportion of zinc added, the quantity bearing a fixed ratio to the quantity of silver already in the metal. In the working of each sample of bullion a preliminary assay is necessary to determine the proportion of silver.

When the metal is melted with the zinc, a slow fire is employed; and, as the process goes on, an alloy of silver and zinc rises to the surface. The latter is skimmed off, and placed in a plumbago crucible, provided with a neck similar to a retort. The crucible is then placed in one of Du Faur's furnaces, which is so arranged that it can be tilted by the aid of a wheel attached to the furnace. The zinc is here distilled off, and condenses in the tube or neck, which is attached to the crucible. A part of the zinc is driven off as oxide, and this is lost, but about two-thirds of it sublimes in the neck of the crucible. When the tube is removed, the zinc is withdrawn therefrom, and used again in a similar operation. It will be remembered that silver melts at about the same temperature at which zinc is volatilized.

The metal remaining in the crucible consists of gold, silver, and lead, the latter in small quantity. This having been withdrawn, the precious metals are separated from the lead by cupellation. The resulting gold and silver are then run into ingots, and the silver removed by nitric acid, or by whatever method may be most convenient. In this mixture of gold and silver, gold forms from one-half to one and a half per cent. Some idea of the magnitude of the operation may be formed from the following facts regarding a large establishment. They claim a weekly production of silver of about 12,000 ounces, and a proportionate quantity of lead. Generally, the process returns about 89 per cent. of the lead which was in the bullion, at the commencement of the operation. They use cast iron kettles in the process of separating the silver from the lead by the aid of zinc, each capable of holding two tons of bullion. Twelve of Du Faur's tilting furnaces are used, each cupola holding about 250 pounds of metal. Four refining furnaces are used, two capable of a charge of 6 tons each, one of 12 tons, and one of 16 tons.—*Iron Age*.

THE MANNER in which liqueur bon-bons are made is extremely simple. The sugar preparation, reduced to a fine powder, is spread over a tray, and upon this single drops of the liqueur are allowed to fall; the tray is then shaken, and the pulverized sugar forms a coating round the several drops of fluid, which can be increased at will to any thickness. The manufacture of bon-bons is carried on all over France, and in Paris alone there are nearly 200 shops devoted to it, employing over a thousand hands. The men get from a franc and a half to eight francs a day, and the women from one to four francs; while the amount of indirect industry, such as making boxes, packets, crackers, and fancy goods, is enormous. The last published statistics show that the sweetmeat trade of France exceeds twelve million francs. Perhaps the greatest marvel is to find that the country itself expends ten millions of this sum.—*The Engineer*.

WHY ALCOHOL CURES RATTLESNAKE BITES.—The experiments of Professor Binz, of Bonn, in regard to the effects of alcohol on animals, are exceedingly interesting, in-as-much as he seems to have discovered the reasons why alcoholic stimulants were so useful in cases of snake poisoning. He found that when decomposed blood was introduced into the veins of the living animal, all the symptoms of putrid fever were shown, the temperature increasing until death ensued. Alcohol reduced the heat, retarded the putrid process, increasing the action of the heart. This seems to be precisely the effect of alcoholic stimulants, when administered in case of rattlesnake poisoning.

Carbolic Acid.

Carbolic acid, in some of the various forms in which it is offered to the public, is one of the most popular disinfectants, and deservedly so. For simple disinfection, where the cause has been removed, nothing is superior to the acid itself, either concentrated or in solution. It is extremely useful in sick rooms and similar places for cleansing the vessels which have been used, and a small quantity of it added to the water in which the clothes are washed, will effectually destroy all germs of disease which may be present. For disinfecting the air of a sick room a few drops may be put upon a hot shovel or stove-lid, or any article that will retain its heat for some time. It has the advantage that it does not injure clothing or metal articles with which the vapor comes in contact. It should be used with care, however, as the liquid itself is a violent poison, even in small doses.

In many cases, however, something more convenient of manipulation is wanted than the liquid. This is furnished by several different compounds. The so-called "metropolitan disinfectant" is a mixture of sesquioxide of iron and carbolic acid. The iron destroys the organic matter with which it comes in contact, and the carbolic acid is slowly given off and acts in purifying the air. Another compound is the "Egyptian powder," which contains common clay as a basis. Still another, and one which has proved of great use, is carbolate of lime. Carbolic acid has the property of combining with alkalies and alkaline earths without having its active qualities destroyed, as these compounds are very unstable, and are decomposed by the weakest acids. The carbolate of lime is a dry powder, with generally a rose tinge, and smells somewhat like ordinary coal-tar. The lime in it acts upon, and soon destroys any organic matter with which it may come in contact, the carbolic acid being set free. It is extremely convenient and useful in all places where decaying matter is found. A little of it scattered two or three times a week around a swill-pail or other offensive object, keeps it perfectly sweet, and will also drive away all the flies from the vicinity.—*Journal of Chemistry*.

ALCOHOL FROM SAWDUST.—The cheapest material of which to make brandy, whisky, and alcohol is at present sawdust. We mentioned before that sugar is now made of it, and a direct consequence of this is that this sugar, by proper fermentation and distillation, can be made into alcohol, and this again by rectification and flavoring, into any of the mixtures known as gin, whisky, rum, arrack, cognac, brandy, etc. This manufacture of alcohol from sawdust is now carried on in Sweden very economically and on an extensive scale. We rejoice, because if the great staples, such as corn, wheat, rye, barley, etc., are used for this purpose, there is a destruction of material valuable for food; a breaking down of more complex valuable organic compounds into simpler ones, and if these same simpler compounds can as well be obtained from sawdust, which neither animal nor man can eat, there is a great saving in valuable material. The only objection thus far, is that in this operation a portion of the product is not the ordinary ethylic alcohol, but methylic alcohol, or wood spirits, which is less palatable and more unwholesome than ordinary alcohol; but that there is no doubt that improvements in this respect will soon be made, if this is not already the case, and that, as people must have alcohol, it will in the future not be produced at the cost of the destruction of a great portion of the staples of food otherwise adapted for the nourishment of millions, and which now are continually being destroyed by the distillers over all the world.—*Manufacturer and Builder*.

TO INCREASE THE ADHESIVENESS OF GUM ARABIC.—Concentrated solutions of gum arabic as a mucilage, says Hager, possess the disagreeable property, when spread upon printing or other paper not strongly sized, to penetrate them to transparency, and in spite of this not making them adhere to other paper. Paper cannot be attached to common pasteboard, nor wood to wood. Paper pasted with mucilage on metallic surfaces usually falls off soon. The use of gum as cement for glass, porcelain, or earthenware, etc., is entirely impossible. All these disadvantages of mucilage are remedied, when an aqueous solution of sulphate of aluminum is added. For 250 grammes of the concentrated gum solution (prepared with 2 parts of gum and 5 of water,) two grammes of crystallized aluminum sulphate will suffice. This salt is dissolved in ten times its quantity of water, and mixed directly with the mucilage, which in this condition truly deserves the name of vegetable glue. Solution of alum serves the same purpose, but far less efficiently.

TRANSFERRING PICTURES TO GLASS.—Coat the glass with a varnish of balsam of fir in turpentine, then press the engraving on smoothly and evenly, being careful to remove all air bubbles. Let it stand for 24 hours, then dampen the back sufficiently to allow the paper to be rubbed off by the forefinger, rubbing it till a mere film is left on the glass, then varnish again.—*Scientific American*.

ANOTHER process for preserving meat is announced. By this method the animal is killed by felling, and immediately skinned and cleaned. It is then glazed over with a preparation of sugar and alcohol and placed in a bed of fat. The case is exhausted of air and soldered up.

Improved Seeders.

In a new form of seed planter, invented by a Mr. Koeller, of Illinois, the bottom of the seed box is formed with a circular recess in its center, in the sides of which are formed slots to receive the sliding bar, by the movements of which the dropper is operated. To the center of the bottom is attached a projection which passes up through the sliding bar and forms a pivot for a star wheel, which is made with seven rays, the outer ends of which are made more inclined upon one edge than the other, so that the point or extreme end of the arms may be at one side of the radius passing through the centers of the said arms. To the upper side of the sliding bar are attached two wedge-shaped projections, which fit into the space between the rays of the star wheel, and which alternately strike an arm of the wheel and turn it through have the space of one arm. The dropping plate is made in the form of a circle with its middle part cut away, and is carried around by and with the star wheel. In the dropping plate, near its outer edge, are formed fourteen holes, arranged in a circle and at equal distances apart, which receive the seed from the hopper and carry it to the discharge hole through the bottom, through which it falls into the guide spout that conducts it to the ground. Upon the lower side of the sliding bar is formed a projection which works in a slot in the bottom, and to the end of which is pivoted the end of a bar, the other end of which is pivoted to a bar, which is in turn pivoted to the conductor spout so as to detain the corn in the conductor spout. This is operated at each movement of the sliding bar to allow the corn to drop to the ground.

Another new machine, a grain drill, is described as follows: A long grain hopper extends across the front portion of the machine with a chamber into which the grain escapes through the passage, which is regulated by a gate. The side of this chamber is made to fit nearly half around a small dropping roller containing pockets, opposite which there are slots, through which the grain passes into the pockets. The roller has as many pockets as there are to be drills in the machine, and each pocket discharges into a spout for sowing in drills. The drill stocks may be readily released for adjustment or removal. The dropping spouts terminate over the drill tubes, and have, when the machine is to be used for planting, a gate or valve closing against the lower end by a spring shank to retain the grain until it should fall into the hill.

COLOR-CHANGING IODIDES.—Some time ago M. Meusel announced the discovery of two new double iodides of mercury, silver, and copper, which were of especial interest in virtue of the property of changing color upon the application of heat. The first of these new compounds is prepared by adding a solution of silver nitrate to one of mercuric iodide in potassium iodide, and is of a bright, lemon yellow color, changing under the influence of heat below 212 deg. to a rich orange, and regaining its original tint when cooled. The second is prepared by adding to a warm solution of mercuric iodide, in potassium iodide—first, copper sulphate, and then sulphurous acid. Its color is carmine, becoming black, however, at a temperature of 158 deg. Fah., but restored on cooling. When mixed with gum-water and applied to paper, these bodies exhibit their color-changes in a most striking manner. Especially interesting, however, is the fact that Professors Barker and Mayer have suggested and patented the application of the carmine compound to the bearing portions of machinery in motion, which are frequently difficult of access, to determine whether they are heating. An inspection of the paint would determine the fact without the necessity of actual examination.

NEW SURGICAL DEVICES.—Two great surgical novelties have lately been introduced into European hospital practice. The first is the aspirator, originated by Dr. P. Smith, which has been extensively employed by Dr. Dieulafoy, of Paris. By this instrument fluids can be extracted from formations at some distance from the surface with safety and certainty. The second novelty is the introduction of a bloodless method of amputation and other operations on the limbs, by means of a compressing bandage, by which the limb is blanched by a circular elastic cord, which compresses both the arteries and veins of the limb. This plan, proposed by Professor Esmarch, has been adopted by many hospital surgeons. It remains to be seen whether there are any drawbacks to this system, and especially whether, in certain cases, embolism is likely to result from displacement of clot, which may have already formed in the veins of a damaged limb.—*Scientific American*.

THE BRAINS OF IDIOTS.—The brains of idiots have usually been found quite small—often less than half the ordinary weight, and in some instances less than a fourth. But in a list of crania, contained in a recent work by Dr. Flint, one idiot is shown to have a brain that weighed 54.33 ounces; two others had brains weighing a little more than 48 ounces; the brain of another, of "the lowest degree of intelligence," 46.56, and that of one "below the condition of a brute," 44.3, or less than four ounces below the moral weight of the human brain. The cranial cavity was measured by Morton in 553 instances; the largest, 114 cubic inches, was that of a German; the smallest, that of an Australian, only 58 cubic inches.

A New Acoustic Pyrometer.

It will be remembered that, some time ago, we gave an account of an acoustic pyrometer, devised by Professor Mayer, of the Stevens Institute. The principal on which the instrument is based is the variation of the length of a sonorous wave in air, when the temperature of the latter is changed.

M. Chautard states, in *Les Mondes*, that in his opinion the method proposed by Dr. Mayer is difficult in application, and he suggests the following arrangement as more suitable for practical requirements:

The sound is produced by the aid of an organ tube, Ut 4, for example, disposed with reference to a resonator which is put in relation with the two branches of a König improved interference apparatus. To the moveable branch is attached a long tube of copper, which enters the furnace or other locality, the temperature of which it is desired to determine. The tube returns on itself and communicates with a small manometric capsule. The fixed branch of the apparatus is terminated by another capsule, which, like the first, is in relation with the same source of heat. The arrangement is completed by a revolving mirror, in which the state of the flame is seen.

Thus disposed of, if the pipes which separate the resonator from the capsules each contain an equal number of half wave lengths, the flame will be edentulated; in the contrary case the indentations will diminish, and this is as much more as the difference of length of the tubes is more nearly equal to an unequal number of half wave lengths. In the latter event the flame takes in the mirror, the aspect of a ribbon; and by noting the changes in its appearance the calorific state of the air in the tube in the furnace is determined. If the temperature is elevated, the length of wave augments and a clearly defined interference is shown by the flame in the mirror. If, during the continuance of the experiment, the moveable tube be gradually elongated, it will be easy to bring the flame back to its primitive state, that is, to cause the indentations to re-appear. Then, by the aid of a scale previously determined and empirically translated into thermometric degrees, the degree of temperature in the tube can be easily noted.

Effects of Heat on Textile Fabrics.

Recent experiments on disinfection by means of heat, made by Dr. Ransom, of Nottingham, show that white wool, cotton, linen, silk, and paper may be heated to 250° F., for three hours without apparent injury; although the wool will show a faint change in color, especially when new. The same may be said of dyed wools and printed cottons, and most dyed silks; but one kind of white silk easily turns brown by this heat, and pink silks of some kinds are also faded by it. The same temperature will, if continued for a longer period, slightly change the color of white wool, cotton, silk, paper, and unbleached linen, but will not otherwise injure them. A heat of 295° F., continued for about three hours, more decidedly singes white wool, and less so unbleached; and white cotton and white silk, white paper, and linen, both unbleached and white, but does not materially injure their appearance. The same heat, continued for about five hours, singes and injures the appearance of white wool and cotton, unbleached linen, white silk and paper, some colored fabrics of wool, or mixed wool and silk. It is noteworthy that the singeing of any fabric depends not alone upon the heat used, but also on the time during which it is exposed. In these experiments the heat was obtained by burning gas with smokeless flames, and conducting the products of combustion, mixed with the heated air, by means of a short horizontal flue, into a cubical chamber through an aperture in its floor, and out of it by a smaller aperture in its roof. Fixed thermometers showed the temperature of the entering and outgoing currents, which represented the maximum and minimum temperatures of the chamber. A self-acting mercurial regulator maintained the temperature of the entering current at any required degree.—*Jour. of Applied Science*.

THE HEAT OF THE MOON.—The Earl of Rosse, in a recent lecture before the Royal Institution, gave some interesting information concerning the various experiments heretofore made to detect the heat of the moon, and then described his own efforts in this line, which are the latest that have been made known. By means of a specula-mirror, a thermo-pile, and a pair of reflecting galvanometers, made on Sir William Thompson's plan, such as are used for sending messages through the Atlantic cable, the Earl was enabled to demonstrate the presence of heat from the moon, but the temperature of the lunar surface still remains far from being determined. My calculations, he says, lead me to estimate the heat from the moon as the eighty thousandth part of that from the sun. Bouguer's experiments give the brilliancy of the full moon as the 300,000th part of that of the sun. Wollaston gives it as the 80,172d; Zollner as from 618,000th to 619,000th; and Bond as the 470,980th. The maximum of the lunar heat appears to be a little before full moon; the unequal distribution of its mountains and plains, perhaps, goes to explain this phenomenon.—*The Engineer*.

A Wisconsin man claims to have invented a machine with which wagon and buggy wheels can be made in fifteen minutes.

An Extensive Vineyard.

Mr. G. G. Briggs, who last year purchased the ranch of the Rev. M. M. Dodson, two miles south of this place, has set out 150 acres of it to the choicest varieties of raisin grapes, intending, we understand, to cure the raisins himself, pack and ship them to the Eastern markets. It is surprising that more of our farmers do not engage in this profitable branch of industry. Our valley is splendidly adapted to grape cultivation, and the crop never fails, no matter how dry the season may be. It is said, too, that grape growing does not exhaust the soil anything like equal to the continual wheat cropping that is now practiced, while the older the vines get the more productive and valuable they become, and the quality of the product is also improved. We have not the facts necessary at hand to give a comparison of the expenditures and profits—if any one will favor us with them we shall be pleased to publish them. We are satisfied, however, that the culture of the raisin grape in this valley will prove profitable, and at no distant day will receive far more attention than at present. This Continent alone will furnish market enough; if not, those of the whole world are open. And those who stop to think will see that but a comparatively small part of the vast field to be supplied is adapted to grape growing. Hence there is no danger of an over-supply. There are several in this vicinity who have done something in this line, and successfully, too, but we are not aware of any one having branched out quite so extensively as Mr. Briggs, who, we trust, will be entirely successful; and we also hope his example will be followed by others.—*Yolo Democrat*.

Mountain Farming.

In support of our position in regard to the profits of farming in the foot-hills and uplands, we quote the following enthusiastic endorsement of the *Amador Ledger*:

We have on a number of occasions referred to the capacities of several of the ranches, orchards, gardens and other cultivated lands in the vicinity of Jackson, and given their actual products and the amount of money realized from each acre cultivated. We have done so, to show the advantages in point of profit, of mountain over valley lands; trusting that families of limited means seeking homes in California might, from facts, be induced to turn their attention to the foot-hills, where homes can be had almost literally without money and without price and where health waits on prudence and wealth on industry.

This week we give the actual product of the ranch of Mr. C. J. Ruffner, situated at the north-western foot of the Butte mountain, three miles east of Jackson. Mr. Ruffner owns 160 acres with government title, 20 acres of the tract is cultivated to grass, producing one ton per acre without irrigation. Hay is never worth less than \$25 per ton; income from hay produced, \$500. Eight acres are planted in fruit trees and grape vines, and two acres in vegetables. The fruit-trees embrace apple, pear, peach, plum, apricot, quince and nectarine; from the orchard last year were taken and sold the following products: 8 tons of apples at 2c. per lb., \$320; 2 tons peaches, pears, plums and other fruits, 3c., \$120; 18 tons grapes from 7,000 vines, 2c., \$720; 1,000 lbs. of raisins, cured and sold, 20c., \$200; from eight acres, fruits and vines, \$1,360.

From the two acres cultivated in vegetables, the following sums and products were realized: Four tons of tomatoes, at two cents, \$160 00; from the sale of cucumbers, beans, peas, cabbages, beets and other vegetables, \$300 00; product from two acres, \$460 00. Whole amount realized from thirty acres as follows: From twenty acres to hay, \$500 00; eight acres to fruits, grapes and raisins, \$1,360 00; two acres to vegetables, \$400 00, total sum realized \$2,320 00; being \$25 per acre for land cultivated to hay, \$270 per acre for land cultivated to fruit and grapes, and \$230 per acre in vegetables. There are two living springs on the tract, affording through the driest months three inches of water, with which the orchard and garden are irrigated; about forty acres of the land is well adapted to alfalfa, and the whole tract can be irrigated from the Amador canal. From the amount realized from this small area of cultivated land we think we can safely say to immigrants, come to foot hills, secure homes in the healthiest part of the world, and where independence is the certain result of industry.

MULBERRY TREES.—We regret to state that Mr. Brannan has uprooted his whole mulberry orchard of nine thousand trees, of seven years' growth. The reason assigned is, viz: There is no demand for that kind of property! This asks public attention. Mulberry trees flourish; four years' experience in Nevada county proves that silk-worms thrive, and that first quality cocoons are raised; but there is no market for them.

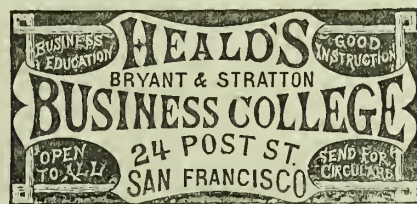
Yet we have in San Francisco a silk factory, getting its raw silk from Japan, and declining to buy and reel our own silk! They say, bring your silk ready reeled and we will buy; but we don't want to take cocoons at any price. Something is wrong here, which will, we trust, find an early remedy.—*Bulletin*.

A New tubular wicked petroleum lamp has been contrived. It consists of ten small circular wicks in place of a large one. They are arranged in a circle and are attached to a frame movable by a single rack.

Vivisection.

The dissection of living animals for scientific purposes, is at present the subject of warm debate in England. On the one hand it is maintained that vivisection is not justified by any requirement of science, and on the other, that the reasonable hope of the smallest addition to our stock of physiological facts, fully warrants even the most severe torture inflicted upon helpless brutes. Both these views are extreme. "When man's convenience, health, or safety interfere, his rights and claims are paramount, and must extinguish theirs," said the sensitive, sometimes even morbidly sensitive, Cowper. But to what extent "man's rights and claims" may justify him in inflicting pain upon lower animals, is a question not always easy to decide. That many of the most important acquisitions to physiological science, could hardly have been achieved without experiments upon living animals, no one will venture to deny; and that the pain inflicted is, when the end to be attained bears a reasonable proportion to the brute agony inseparable from the investigation, fully justifiable, will be granted by all in whom sentimentalism does not reach the degree of mental weakness. But, while the investigations of a Harvey, a Bichat, or a Brown-Séquard, involving more or less animal misery, ought not to be, and cannot be reasonably condemned, it does not follow that their experiments are to be repeated by every student, or for the edification of every class of students who may find it necessary to be informed of the facts which the leading scientific investigators have brought to light. A renewal of Harvey's experiments, for instance, is not necessary to the understanding of the laws of the circulation of the blood; neither would a promiscuous slashing and mutilating, either with the hope of stumbling upon some new fact, or merely for the purpose of witnessing, at first hand, phenomena already known and described, be anything more or less than diabolical cruelty.

SUNSHINE AND SLEEP.—Sleepless persons should court the sun. The very worst soporific is laudanum, and the very best, sunshine. Therefore it is very plain that poor sleepers should pass as many hours as possible in the sunshine, and as few as possible in the shade. Many women are martyrs, and yet they do not know it. They shut the sunshine out of their houses and their hearts, they wear veils, they carry parasols, they do all possible to keep off the most potent influence which is intended to give them strength and beauty, and cheerfulness. It is not time to change all this, and so get color and roses in our pale cheeks, strength in our weak backs, and courage in our timid souls? The women of America are pale and delicate, but with the aid of sunlight they may be blooming and strong.—*Home and Health*.



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars.

E. P. HEALD,
24½-tf President Business College, San Francisco.

SAN JOSE INSTITUTE

— AND —

Business College.

A Day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department

Is under the supervision of James Vinsonholler, who for many years was at the head of Business Colleges of San Francisco.

The Twenty-fourth Session commences January 19th, 1874.

For circulars address
3v7-2m JAMES VINSONHOLLER.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to
22v6-1v ELWOOD COOPER,
President Board of Directors.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F.
de27-tf

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission

St. S. F. C. H. Gruenhausen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San

Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of

Bed Springs, including the Obergmann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS,

PIECE MILK-PANS,

CREAM PAILS,

MILK PAILS,

ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m SAN FRANCISCO.

McLAREN, BRYDGES & CO.,

DEALERS, MANUFACTURERS AND INTRODUCERS OF

NEW INVENTIONS

FOR THE PACIFIC COAST.

Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.

—ALSO—

Real Estate and General Business Agency.

NO. 605 CLAY STREET, SAN FRANCISCO, CAL.

ja10-bp-3m

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.

3v7-3m WILLIAMS & MOORE, Props.,
Stockton, Cal.

OUR SPECIALTY: "BEYOND THE MISSISSIPPI."
GO WEST, YOUNG MAN! GO WEST!

Gold by the Bushel! Silver by the Ton!
Capital required: Nerve and Honest Industry.

THE FAR WEST,
The Great Treasure Chamber of America.

All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in

CROFT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chromo.

"AMERICAN PROGRESS,"
free to each subscriber.

Two sample WORLDS sent for 10 cents. Agents wanted.

LANDS & HOMES FOR SALE

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho.

Apply to
ALFRED ROBINSON, Trustee.
542 MARKET STREET,
N. E. corner of Montgomery

GRAIN & STOCK FARM FOR SALE.

A FINE FARM OF 140 ACRES;

Good Grain Land; all plowed and ready for seeding and promising fine crops, and 360 acres of good tule land adjoining; excellent pasturage; situated in Suisun valley, within a mile and a half of landing at Suisun City and one mile of a railroad station. Has a good house, barn, corals and fences; also, work-horses and a full assortment of agricultural implements, seed, feed, etc. Price moderate and terms easy. Apply to BERRY & OAPP, 418 Montgomery street, Real Estate Agents. feb14-4w

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,
311 Montgomery street, San Francisco,
Or Pacific Rural Press Office.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,
On Gift Map 4.

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

WAKELEE'S

Granulated Squirrel Exterminator.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is scented so that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger of fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco,

Who may also be addressed. 3v7-3m

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahma, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, at \$5.00 per dozen; White Leghorns, Game Bantams, Crested Game, Bantam and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, (first premium at Buffalo, 1874), Silver Spangled Bantam, Golden Bearded Poland, Black Poland, White Crests, Brown Leghorns, White Sultans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland,

At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection at the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 41 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent O. O. D.

6v7-tf

AVERILL'S

CHEMICAL PAINT

Of any desired Shade or Color,

Mixed ready for application, and sold by the gallon

It is Cheaper, Handsomer, more Durable and Elastic than the best of any other Paint.

Office, corner Fourth and Townsend streets, San Francisco. Send for sample card and price list.

16v23-3mcowbp HEALY & JEWELL, Agents.

AGRICULTURAL NOTES.

BUTTE.

STOCK DYING.—*Record*, Feb. 28: John Ogburn, of Parkville, says stock are perishing in great numbers in the section of country extending from Battle creek to Shingletown, from want of food and shelter. Farmers and stock men must learn to prepare feed and shelter for their live stock if they wish to avoid great loss each winter, for the range is about exhausted.

CONTRA COSTA.

THE WEATHER AND WORK.—*Gazette*, March 7: The protracted wet weather of the season has so retarded the work of our farmers that much less than the usual breadth of land will be sown in the section of the county west of the Diablo meridian.

HUMBOLDT.

DRYING OUT FAST.—*Times*, Mar. 7: The strong northwest winds that have been blowing for the past five or six days are drying out the ground very fast. The roads, for this reason, are rapidly improving.

KERN.

Courier, Mar. 7: The area of cultivation in the delta of Kern river the present season will greatly exceed that of last. Several fields have been seeded with grain and alfalfa, in consequence of the enactment of the no-fence law; but we doubt if the supply of produce, from present appearances, will come much nearer to satisfying the demand than it has done last season. Almost everything has long since been exhausted. For months past nearly all the barley used has been imported, and the hay now on hand will not suffice for a month longer. Long before the new crop comes into market, if any hay is used at all, it will likewise be necessary to bring it by way of the railroad at a cost of forty or fifty dollars per ton. If a sufficient crop had been raised last year, for the supply of the home market, money would have been plenty, business brisk, and everybody would have felt rich and enterprising. Although much more farming is being done than ever before, it is by no means proportionate to the most moderate estimate that can be placed on the increase of population, and the enterprises that will be undertaken requiring, in particular, vast quantities of hay. The work on the extension of the Kern Island irrigating canal, that is to be commenced in about two weeks, will alone require, for the consumption of the work animals, at least 1,000 sacks of grain, and hay in proportion, all of which must be brought here from abroad. Next summer and fall other works of reclamation are to be undertaken of a still more extensive and costly character. The rain a few weeks ago, which was unusually cold and long, was rather fatal to young lambs. Some sheep-owners report a large percentage of loss. But this will be more than compensated by a fine grazing season. The grass is better in this vicinity than we have ever seen it before, at this season of the year.

MENDOCINO.

PROSPECTS.—*West Coast Star*, Feb. 28: The fields along the coast are looking finely and there is every prospect of splendid crops this season.

MERCED.

THE RAIN.—*Tribune*, Mar. 7: We have been visited most of the present week with copious showers of rain—just what was needed to soften the crust caused by the recent heavy winds. The season has, thus far, been most propitious for our farmers, and the outlook at present is favorable for a heavy crop.

NAPA.

BROOM-CORN.—*Reporter*, March 7: Samuel Brannan who was in town last Thursday, and informed us that it was his intention to plant the present season 100 acres of broom-corn, and 150 acres, if possible. Other parties are making preparations to plant ten to twenty acres each, and he thinks something like 300 acres will be put in this year in the neighborhood of Calistoga alone. Mr. Brannan has purchased the best seed to be had in the market, known as the "black," and Mr. Ezra Badlam has 500 pounds of it on hand now which he will sell at two and a half cents per pound. This seed has been cleaned for planting, and is as recommended. Five pounds is the quantity sown to the acre, and planting should be at the same time, or sooner if possible, as for Indian corn. As Chicago broom-makers buy our broom-corn sooner than that raised in the Atlantic States, there is little question but that we can here raise better broom-corn than can be grown in any other State. Mr. Brannan offers to take all that is raised, and the fact of a party having started a factory in Vallejo for the manufacture of brooms, ought to be sufficient inducement for our farmers to plant a few acres of corn as an experiment. We understand that the Vallejo man has purchased all the broom corn to be had in the State, and we doubt not there will be market next year for double the amount raised in California.

FARMING PROSPECTS about Calistoga are not flattering the present season. But few of the farmers have any considerable portion of their crops in, and the rains will make it very late getting much more grain sown. All that may be expected is a good crop of hay, and only a moderate yield of grain. Some of the early sown grain has been drowned out, and will have to be resown. Notwithstanding the unfavorable season, grass is good and stock looking well. The oak and many other kinds of trees are budding out, and peach and almond trees in bloom. It looks strange to see spring so far

advanced, and farmers so backward in getting in their crops.

PLUMAS.

Herald, March 4: The farmers in the western part of the county have about despaired of sowing any more grain this season. The crop prospect is rather slim.

PLACER.

STOCK.—*National*, Feb. 28: We learn that more than a thousand head of stock has been driven out of Beckworth and Sierra valleys to the sage brush range, during the past month. At every hay-stack in the valley, hundreds of rabbits congregate and feed with the cattle. One rancher counted four hundred and thirty at one time around his hay-stack.

SACRAMENTO.

SEEDING.—*Folsom Telegraph*, March 7th: The farmers hereabouts made the best of the spell of fair weather last week, and hundreds of acres of wheat, oats and barley were sown. It was about the first opportunity since the setting in of winter, and right well did they improve it. It is late, it is true, but perhaps, better late than never. Should the rains continue late they may yet reap a golden harvest. Stranger things have happened.

SANTA CRUZ.

FROM SOQUEL.—*Cor. Santa Cruz Sentinel*: Ploughing and preparing the land for the sugar beet culture in our vicinity are progressing rapidly; a ton or more of the seed has arrived and five tons more are on the way. There are also at our landing twenty-five tons of the sugar beet to be planted to raise seed from for the next season, besides several and various implements for working, crushing and pulverizing the land.

STANISLAUS.

DOUBLE HARROWING.—*News*, March 7: In conversation with a practical farmer, the other day, he informed us that he was this year trying the experiment of harrowing over his grain after it was up, and over two inches in height. He states that year before last he tested the system very thoroughly by harrowing alternate lands in the middle of his grain field, and that the result was that he realized from three to five bushels more to the acre, thus treated, than under the old system. He further says that this double cultivation, by means of the harrow, had the effect to keep the grain green a full week longer than where it was not so treated, thus giving it that much more time in which to fill and mature. So thoroughly is our informant convinced of the benefits that will accrue to him from this system of cultivation, that he will, the present year, not only harrow his young grain over, but that he proposes going over a portion of the field a second time, to see if that system will not also be an advantage. We shall watch the experiment with considerable interest, and will report the result.

RAIN.—The rain of the present week has indeed been most opportune. Whilst there was, as yet, no serious danger, still there was much of the soil, owing to the heavy winds, that had become crusted. Where that was the case, especially where the grain was not up, the rain was needed to soften the crust, and thus give it a chance to grow.

SANTA CLARA.

Mercury, March 8: Mr. C. Fieldsted has some young coconut trees growing on his place in the warm belt near this city. He is also confident that he can grow the banana and pineapple. He has tried both of these tropical fruits, and with a fair measure of success.

The rainfall since last Saturday night amounts to 68-100 of an inch. Total for the season, 9.71 inches.

SONOMA.

Democrat, March 7: We have seen a number of oranges grown at "Lachryma Montis," Gen. Vallejo's beautiful home near the city of Sonoma.

Mr. Siston, of Yolo county, who recently purchased 40 acres of the Lucas tract, will plant 10 acres in hops this spring. If the experiment proves a success, he will increase the amount next year.

SANTA CRUZ.

A NEW GRASS.—*Gilroy Advocate*, Mar. 7: At the express office in this city may be seen a specimen of what is called Ray Grass, sent by a gentleman residing near San Rafael, Marin county. It is of this year's growth, and stands nearly 3 feet high.

RAMIE.—In addition to the land to be set out in Ramie by Mr. Furlong, at San Felipe, Mr. Van Schaack, of this city, has procured the plants, and will devote a portion of his ranch, near Old Gilroy, to propagating them.

THE WEATHER AND CROPS.—The cold, dry north wind which prevailed last week had a perceptible effect on the crops and grass, baking the surface of the ground, and drying up the moisture beneath, so that the rain which commenced last Sunday was much needed.

SUTTER.

Banner: John Briggs, in his orchard, near this city, has cherry trees five years from the setting, that are 30 feet high and 40 in circumference. For large growth and vigorous trees, his orchard probably beats the State. Mr. Briggs' orchard covers about 210 acres. The kinds of fruit that he cultivates the most largely are peaches, plums and apricots. Mr. Briggs has originated a new early peach, and has 3,000 trees of them that will bear next season. He claims that it is eighteen days earlier than Hale's Early, and thinks that he has the best thing in the country. This peach he has kept

out of the market until he could get a good start of all competitors. Of apricots he has more Moreparks than any other variety. He cultivates a good many varieties of plums, some of them of his own originating, which are very fine.

The wild geese have proved an intolerable nuisance in this county. They are like unto the locusts of Egypt, and devour everything before them. Some of our farmers are obliged to stand over their grain fields with a gun, in order to drive off the destructive geese.

SAN JOAQUIN.

THE CROPS.—*Independent*: The reports concerning the grain crops in all sections of the valley are of the most encouraging character. On the sand plains the prospects are bright, and on heavier soils bordering upon the swamp lands, the young wheat has grown remarkably during the last eight or ten days. It is only on the heavy adobe or black adhesive soil where there are any signs of backwardness, and the area of that kind of land is quite limited. With favorable weather late in the season, the harvest of 1874 will be the most extensive ever had in California.

VENTURA.

ITEMS.—*Signal*, Mar. 7: Mr. Dana B. Clark arrived on Monday last with 40,000 young orange trees, en route for Santa Paula valley, where he will set them out during the week, on the ranch of Blanchard & Bradley. He will also plant out a few banana and pineapple trees on the same ranch. Mr. C. has traveled considerably through Mexico and Southern California, and has lived near Santa Barbara for several years, where his nursery now is, and he is satisfied that anywhere in the Santa Clara valley the orange can be grown successfully.

The big grape vine on the ranch of Jesus Morago, in the Ventura cañon, is eighteen years old and ten inches in diameter; it is the next largest grape vine in California, and bore last year about 2,000 pounds. This year it promises a much larger yield.

Owing to our heavy winter rains, corn may be planted and grown with success high up on the foothills.

More semi-tropical fruit trees have been planted out in this county this year than have been in any year previous.

Many parties, we are glad to learn, are profiting by the example of Messrs. Clark, and Blanchard & Bradley, and are setting out orange orchards.

YOLO.

PROSPECTS.—*Democrat*, March 7th: The present year so far has proven a remarkable one in this vicinity. Many had fallow ground put in wheat, but much of it is drowned out. Mr. Lamar had three hundred acres in wheat all killed. There has been very little winter sowing, so many depending on fallow.

GROWING WEATHER.—*Mail*, March 5th: Sufficient rain has fallen during the forepart of the week to moisten the crust of earth, produced by the severe north winds, and the sun has been quite warm, making it good growing weather. The farmers who plowed their ground while it was wet, experienced some fear that their grain would not penetrate the hard surface, but they are feeling better now, and all is quiet and serene. There are, however, a great many rough-looking fields of wheat, because of wet plowing and sowing—so rough, indeed, that the rains can never mellow them down, and the time of harvest will tell how unpleasant it is to have these earthen boulders for the horses and headers to travel over.

OREGON.

FARMING ITEMS.—*Oregonian*, Feb. 28: Wheat is quoted at 75c. a bushel in Corvallis; oats, 37c.; eggs, 20c.

A large band of sheep was recently sold in Polk county at \$3.10 per head.

The continued snow and rain storms that have prevailed in Jackson county lately have incapacitated the ground for plowing, and the farmers are unable to do much.

A private letter from Polk county informs us that the crop of wheat in that county this year will be at least 20 per cent. larger in acreage than it was last. The fall-sown wheat looks well.

An up-valley paper says: "Spring buds on the herbage are swelling, the wild gooseberry and the willow have presented their leaves to the cold blasts of February. Grain sown in the fall is growing nicely, and farmers are busy plowing."

The Walla Walla *Statesman* of the 14th inst. says: "The cold snap of two weeks was quite severe on some of our stock men, many of them reporting heavy losses. Dr. Whitley, who lives on the Walla Walla, informs us that he lost between forty and fifty head."

There are many horses dying in Grand Ronde valley of epizooty, especially in the vicinity of Union. Mr. Wm. Hutchison, living near Union, has lost three or four of his best horses, and a Mr. Peobler has lost ten or twelve, while others are on the sick list.

W. O. Kendall, Esq., of Benton county, has demonstrated that the land in Oregon never wears out. He had a field that had been sown to wheat and oats for 15 or 20 years. He plowed it a foot deep in the fall, and four inches deep in the spring, and planted it in corn, getting 40 bushels to the acre. Last fall he sowed it in wheat, and now the luxuriant grain is tall enough to hide a rabbit.

Have employed MESSRS. DAWSON & BANCROFT to dispose of live stock. Their veracity, capacity and integrity none can doubt. They are now, and will continue to be, the farmers' men. D. S. BLACK, March 5, 1874. Lafayette, Contra Costa Co.



LINFORTH, KELLOGG & CO,

Importers of

HARDWARE

And

Agricultural Implements.

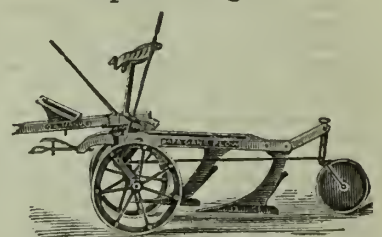
Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with Dropper.
World Reapers, and Mowers with Dropper and Hand Rakes—side delivery.
Clipper Mowers and Reapers, with Dropper.
Cayuga Chief Mowers and Reapers.
Sulky Rakes—Furst & Bradley's, and Bay State.
Wood Revolving Hay Rakes—Tiffin and Geneva.

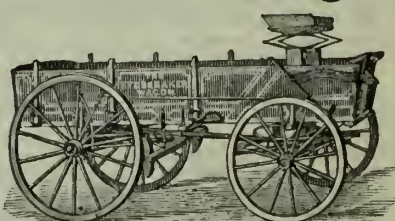
PITT'S "PACIFIC" THRESHER,
30 and 36 Inch Cylinder, with or without Power.
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

Studebaker Wagon,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps;
Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators,
Mortise Head Hay Rake, Scythes and Snaths,
Soule, Ketsinger & Co.'s First-Class Farming Tools.
Gold Medal Forks, Hoes and Rakes,
Batcheller's Forks,
Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,
Road Scrapers,
Canal and Garden Barrows,
Hay Cutters—Burdick's
National, Belcher & Taylor's
Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

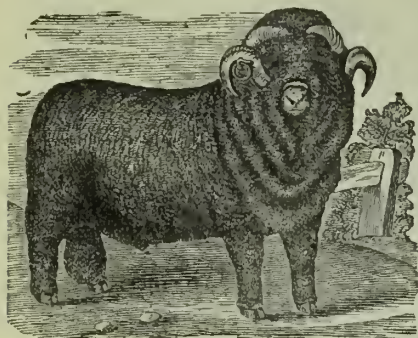
EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.
Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m



SULTAN SECOND.

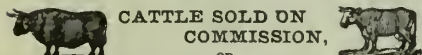
See description in Pacific Rural Press January 4, 1873.

Address N. GILMORE, El Dorado, El Dorado County, Cal.

U. S. LIVE STOCK EXCHANGE,



S. E. COR. FIFTH AND BRYANT STS., S. F.



CATTLE SOLD ON COMMISSION, —OR— Bought on Farm for Cash.

WANTED—43 MILCH COWS, 24 WORK HORSES, 470 HOGS, 260 BEEVES.

Address, DAWSON & BANCROFT, 512 Fourth street, S. F.

Special Rates to Members of the Grange. 10v7tf

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull, "DANDY JIM,"

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties buying fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured. 4v7-3m

CYRUS JONES, GEN. GILES A. SMITH, L. H. HICKS.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Dubesses, Rose of Sharon, Booths, Miss Wileys, Mazurkas and others. Having purchased the Avenue Ranch (formerly Sbar Ranch) five miles east of San Jose, on Santa Clara avenue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO., San Jose, Cal. 2v7-3m

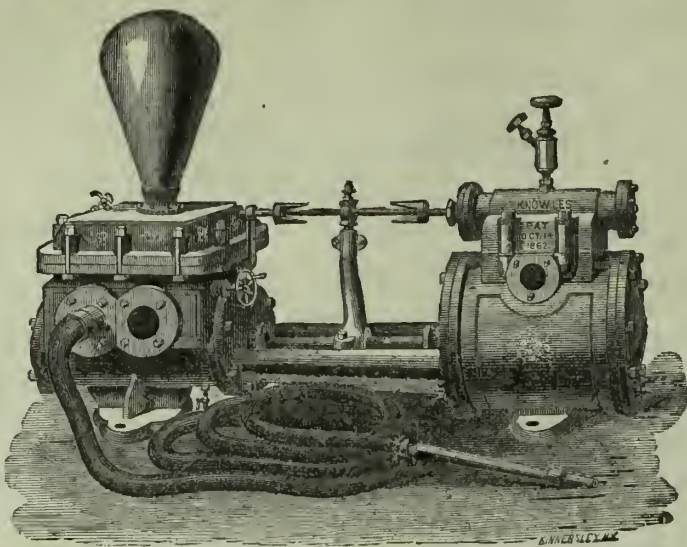
Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,238. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER, Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

KNOWLES' PATENT STEAM PUMP.



It has no Cranks or Fly-Wheel, and has no dead points where it will stop, consequently it is always ready to start without using a starting-bar, and does not require hand-work to get it past the center. Will always start when the steam cylinder is filled with cold water of condensation.

CENTRAL PACIFIC R. R., OFFICE OF THE GEN'L MASTER MECHANIC, SACRAMENTO, Cal., January 14, 1873.

A. L. FISH, Esq., Agent of the Knowles Steam Pump, San Francisco—Dear Sir: In reply to your inquiry as to the merits of the Knowles Steam Pump, in use upon this road, I will say that it gives me great pleasure to report that they have performed their work well whenever called upon. In no instance have they failed. We have now over 30 of them in use on this road as fire engines, and pumping water for shop and station use. I consider the Knowles Steam Pump the best in use, and prefer it to any other. Yours truly, A. J. STEVENS, General Master Mechanic.

A. L. FISH, Agent Knowles' Steam Pump—Dear Sir: In answer to your inquiries, we state that the highest award for Steam Pumps at the Eighth or last Mechanics' Fair in San Francisco, was a First Premium and Diploma, awarded to the Knowles Patent Steam Pump, as published in the Official List September 23d, 1871.

A. S. HALLIDIE, President Board of Managers. W. H. WILLIAMS, Sec'y Board of Managers Eighth Industrial Exhibition, M. I.

WE BUILD AND HAVE CONSTANTLY ON HAND

The Largest Stock of Pumps in the World, And for Every Conceivable Purpose.

SOLE AGENT ON THE PACIFIC COAST FOR THE

CLAPP & JONES SUPERIOR STEAM FIRE ENGINE, Challenging the World!

THE CELEBRATED BOOMER PRES,

For Wine, Cider, Lard, Paper, Wool, Hops, Hides, Tobacco, Rags, etc.—the Most Powerful in Use.

A. L. FISH, Agent,

Nos. 9 and 11 First Street, San Francisco, Cal.

P. S.—All kinds of new and second-hand Machines on hand.

10v26-1ambp

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE OLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST, 152 New Montgomery Street, SAN FRANCISCO. 2v7-6m

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, imported last year, and bought of Hammond.

J. H. DODGE.

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal. ja24-tf

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m

304 California Street.

CALVERT'S



CARBOLIC

SHEEP WASH.

Sole Agency on the Pacific Coast at

T. W. JACKSON'S,

feb14

416 Sacramento Street, San Francisco.

LONDON ASSURANCE CORPORATION.



The Oldest and Wealthiest

Fire Insurance Company doing business in America.

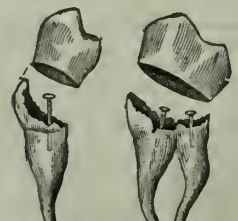
Risks taken at current rates.

CROSS & CO., General Agents,

feb14-cow-bp

316 California Street, S. F.

Don't Have Your Teeth Extracted.



DR. BEERS' PATENT ENAMELED GOLD CROWNS, for Covering Teeth broken down by Decay, have been thoroughly tested, and when properly applied will surely restore them again to usefulness and beauty.

Call and see them. Office, 230 Kearny street. 6v7-cow-bp-3m

AGRICULTURAL ARTICLES.

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradles without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m

MATTESON & WILLIAMSON, Stockton, Cal.

O. CREGO.

S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkies, Skel-ton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffey, Camden, New Jersey; Helfield & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:

O. Grabam, New York; J. B. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingles, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, San Francisco.

Pacific Coast Agency for Patent Rights.

WM. SMALL & CO.,

331 Kearny Street, San Francisco, Cal.

We offer for sale the right to manufacture and sell in the Pacific States and Territories the following new and valuable inventions:

Dahl's Improved Plow. Pooley's Miter Machine. Muntzberger's Barrel Washer. Kaestner's Wire Coal Scoop. House's Wire Fence Stretcher. Ramsdell's Adjustable Plasterers' Float Handle. Wells' Improved Egg Carrier. Duckett's Self-Spring for Vehicles. Campbell's Ice Cream Freezer. Corlies' Clothes Line Reel. Davis' Hand Corn Planter. Riviere's Improved Plow. Mendenhall's Spark Extinguisher and Rotary Engine. Philo Marsh's Defecated (lubricating) Oil. Muck's Garden Cultivator and Lawn Mower. Kiblinger's Improved Eaves Trough.

Call and examine samples and specifications. No unreasonable terms demanded.

WM. SMALL & CO.,

331 Kearny street, np stairs.

A. K. Dahls' Patent Cast Steel Plow.—We have been appointed agents for the right of the above valuable patent, to which we would respectfully call the attention of manufacturers. Strong and durable, easily repaired, light draught, warranted to scour in any soil. WM. SMALL & CO., 331 Kearny St.

Pooley's Improved Index Miter Machine.—This machine is calculated to cut miter by index of any size desired. Can be gotten up at low cost. The right for this coast for sale by WM. SMALL & CO., 331 Kearny St.

House's Patent Stretcher for Wire Fences.—Invaluable for the construction and adjustment of wire fencing. Gives uniform and constant tightness, prevents breakage and pulling over of fence posts. For further particulars apply to Pacific Coast Agency for Patent Rights. WM. SMALL & CO., 331 Kearny St.

Wood's Spiral Spring False Bottom for Water Coolers.—A sample of this important improvement for Refrigerators and Water Coolers can be seen as below. Effects a saving of thirty-five per cent. in ice and adds greatly to the durability of the cooler. Agents for right for Pacific Coast. WM. SMALL & CO., 331 Kearny St.

Muntzberger's Patent Barrel Washer.—This simple but effective machine will cleanse ten or twenty barrels at a time, by hand or other power, at a great saving of labor. The right for Pacific States and Territories on reasonable terms. For sale by WM. SMALL & CO., 331 Kearny St.

Kaestner's Wire Coal Scoop and Sifter.—The right of this handy article for housekeepers' use, for sale. A large size for furnace use can be manufactured. For right to manufacture and sell on this coast, apply to WM. SMALL & CO., 331 Kearny St.

Ramsdell's Adjustable Handle for Plasterers' Float.—Manufacturers of mechanics' implements would do well to examine this improvement, which can be made to supersede all others. For right, apply to WM. SMALL & CO., 331 Kearny St.

Tnll & Weston's Improved Tnb Washing Machine.—The latest invention in this valuable article of domestic machinery. Can be used in any ordinary sized wash tub. The right for the Pacific Coast for sale by WM. SMALL & CO., 331 Kearny St.

PURCHASERS please say advertised in Pacific Rural Press.

NURSERY NOTICES.

ESTABLISHED 1853.

Stock for Nurserymen and Florists.

TERMS CASH.

Cherry Seedlings—Mazzard.....	\$12 per 1000
—Mahaleb.....	20 per 1000
Apple Seedlings.....	12 per 1000
Pear Seedlings.....	15 per 1000
Walnuts, English, 4 to 6 ft.....	15 per 100
California bl'k, 4 to 6 ft.....	15 per 100
Spanish Chestnuts, 6 to 12 in.....	15 per 100
Cork Elm, 4 to 6 ft.....	15 per 100
" 6 to 8 ft.....	20 per 100
Blue Gums, or Eucalyptus, in variety.....	\$3 to 10 per doz.
Magnolia, Grandiflora, 3 to 5 in.....	3 per doz.
" 6 to 12 in.....	6 per doz.
" 12 to 18 in.....	12 per doz.
Golden Arborvitae.....	8 to 12 in..... 6 per doz.
" 12 to 18 in.....	6 per doz.
Heath-leaved Arborvitae, 12 to 18 in.....	6 per doz.
Crataegus Arborescens, 12 to 18 in.....	2.50 per doz.
" 2 to 4 ft.....	6.00 per doz.
Enonymus Reptans, Variegata.....	2.50 per doz.
" Puichella.....	2.50 per doz.
" Argentea Marginata.....	3.00 per doz.
" Japonica.....	3.00 per doz.
" Aurea.....	3.00 per doz.
Swedish Juniper, 12 to 18 in.....	3.00 per doz.
Heath, Mediterranean "Hardy".....	2.50 per doz.

Will only sell in quantity specified at these prices. If less, 10 per cent. added; if more, 10 per cent. discount.

BERNARD S. FOX,
1376-tf San Jose, Cal.

Fruit Trees! Fruit Trees!

AND WHERE TO PURCHASE THEM.

The Santa Clara Valley Agricultural Society has awarded:

Largest collection of Pears, first premium.....	B. S. Fox.
Best twelve varieties of Pears.....	B. S. Fox.
Largest collection of Apples.....	B. S. Fox.
Best twelve varieties of Apples.....	B. S. Fox.
Best collection of Plums.....	B. S. Fox.
Largest collection of Nuts.....	B. S. Fox.
Best soft-shelled Almonds (Languedoc).....	B. S. Fox.

Forest Trees, Shade Trees, large and small, in quantity.

BERNARD S. FOX, San Jose, Cal.

Agent, Mr. THOS. MEHERIN, Battery street, San Francisco. oc18

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants.

Ever offered in this market, and at Reduced Prices. Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.

Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address THOMAS MEHERIN,

516 Battery Street,
SAN FRANCISCO.

P. O. Box 722. 24v6-3m

NEW PEACHES, ETC.

Having a large stock on hand of Rivers' and new Southern Peaches, which I think will be great acquisitions to California, I have concluded, in order to introduce them, to reduce the prices as follows: Beatrice, St. Johns, Plowden, 1 yr old, 50c ea; in buds, 25c ea. Freemanson, Van Buren, Golden Dwarf, Italian Dwarf, 1 yr, 40c ea; buds, 25c ea; 2 yr old bearing trees, \$1 ea. Utah Hybrid Cherry, Wild Goose and Miner Plums, 1 yr, 50c ea; 2 yr, \$1 ea; buds 25c ea. Louise, Albert, Early Rivers, Lord and Lady Palmerston, and others from Rivers, and Piquet's Late, Blood Leaved, Lady Parham, Face, Amelia, Julia, Darby and other choice Southern Peaches, all in dormant bud, 25c ea; also Salway, Smook, Hale's Early and other well-known leading kinds, at low prices; 1 yr old and in bud. Beatrice has been well tested in the East and proved to be the very best and earliest variety. St. Johns, in the South, is their best early kind and beats all others. Freemanson, Piquet's Late and Lady Parham are noted as the best of their season, and all will no doubt prove superior for orchard culture to the more common fruit heretofore grown in California. My trees I warrant always to be true to label. Also, a general assortment of fruit trees including Cherries, Plums, for drying, and Almonds, all for sale at reduced prices, with a liberal discount by the quantity. Terms cash with the order, and all orders promptly filled.

6v7-tf D. E. HOUGH, Vacaville, Cal.

SUPERIOR

FRUIT TREES,

TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSEYMAN.

T. CORLEY,
4v7-3m No. 315 Washington st., S. F.

MULBERRY TREES,

(JAPONICA AND GRAFTED ROSE-LEAVED.)

For Sale at Felix Gillet's, Nevada City, Cal.

Japonica, 2 and 3 year old trees at \$10, \$8 and \$6 per hundred; cuttings at \$2 per hundred; grafted rose-leaved, standard trees, with heads at six feet from the ground, \$1.50 per tree; \$10 per ton; scions, for budding and grafting, \$2 per dozen. Small packages of Japonica (3d-class trees) and cuttings, and rose-leaved scions, may be sent by mail in four pound packages, or by express; larger invoices with common freight. Send for more particulars. Also Blonand Brizana Silk-worm Eggs. 6v7-6t

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of

NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,

(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.

Nurseries on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.

Letters by Mail or express will reach us.

ja10 MILLER & SIEVERS.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRUS,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m



BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESALERS AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Daphnes, Araucarias, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Eucalyptus Acacias, Peppers, Cypress, Pines, Junipers, Cedar of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tube Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine.

2v7-3m

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental Trees, Shrubs, Roses, GREEN HOUSE PLANTS, ETC.

We are constantly adding to our varied stock the NEWEST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call.

LANDSCAPE GARDENING attended to. ja24tf

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN TREES, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good reference must accompany all orders. Lombardy Poplars, 1 1/2 to 2 inch trees, 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists,

K street, between 8th and 9th, SACRAMENTO, CAL.

4v7-3m

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Finley Peach, Georgia tree-rose Seedling, the first offered in the state, its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

4v7-2m BRYAN & DOMINGOS,

P. O. Box 157, Sacramento, Cal.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER,

21v6-1y

Petaluma, Sonoma Co., Cal.

THE FINEST COLLECTION OF PINES,

Cypress, Australian Eucalyptus,

EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices.

Send for priced Catalogue to

8v7-3m A. D. PRYAL, Oakland, Cal.

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy BLACKBERRY SETS, for sale at LOWEST RATES. Orders may be addressed through DEWEY & Co., of the Rural Press, San Francisco; ROBT. WILLIAMSON, Capital Nurseries, Sacramento; or to me,

CALVERT T. BIRD,

25v6-3m San Jose, Cal.

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

Or C. J. CLAYTON,

Clayton, Contra Costa Co., Cal.

10v7-6m

FOR SALE!

Valuable Fruit Orchard and Garden

Of ninety-two acres choice land, one mile from Railroad Depot; 10,000 fruit trees, grafted, best sorts, in full bearing; five acres vineyard, half foreign table; two acres best blackberries.

Three Artesian Wells supply an abundance of water. Seven-room Dwelling, hard-finished; barns, sheds, vinegar house, fruit-drying house, steam engine, boiler, saw for box making, and every requisite for raising, curing and shipping fruit on an extensive scale.

This property will be sold as a whole, or in two subdivisions of forty-six acres each, on easy terms. Title perfect.

For particulars, apply to

YOUNG & PAXSON,

No. 424 Montgomery St.,

San Francisco, Cal.

21-4

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrus Deodare, or De-vine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubb's Hotel.

Send for Catalogue. ja10

BEATRICE PEACH TREES,

AT GLEN GARDENS.

To close out my stock of new Peaches, one year old from bud, such as Beatrice, Louise, Foster, Freemanson, Glen Garden Seedling No. 1, Stanwix Early York, etc., I have reduced the price to 25 cents each, where 50 trees are ordered. Beatrice, in dormant bud, 15 cents each.

E. F. AIKEN, Sacramento, Cal.

P. O. Box 212. f21-1m

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT TREES for sale, from three to five years old. The five-year-old Orange Trees are the largest ever offered for sale in this county. For Price, address,

MILTON THOMAS,

6v7-2m P. O. Box 304, Los Angeles, Cal.

THOS. A. GAREY'S

Semi-Tropical Nurseries,

San Pedro street, two miles below the Court House, LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit Trees in Southern California,

Grafted Orange Trees a Specialty.

14v6-6m THOS. A. GAREY, Proprietor

Priced catalogue sent free. Address P. O. Box 265.

AUSTRALIAN

GUM TREES.

250,000 on hand for this season, at rates to encourage forest culture. Also, 50,000 Cypress, in shipping order. Nursery on 12th street, one block north of Tubbs' Hotel, East Oakland, Cal. Or address, Box 80, Oakland.

Beautiful fresh Cypress Seed, \$4 per pound, sent by mail, warranted pure and of the finest quality.

25v6-3m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor.

2v7-3m

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

DAVID CROCKETT..... BURGESS, Master,

Is intended to sail with dispatch. To be fol-

lowed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,

San Francisco.

H. K. CUMMINGS,

1858.

H. H. RALSTON,

1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer.

4v23-1y

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California.

My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS-

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnice & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,

Red Clover, White Clover,

Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,

Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the Interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk.

My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

THE BEST SEEDS

AT WHATEVER COST,

ARE ALWAYS THE CHEAPEST IN THE END.

No person, Gardener, Amateur, or Farmer, can afford to plant any but the BEST. We make a specialty of furnishing, for Market Gardeners' use, choice grown, extra selected seeds, of varieties having their special approval.

Also, for Family Gardens the finest and best varieties introduced up to the present time. With us QUALITY stands first, all other considerations secondary to this.

Our Catalogue, with prices for Spring of 1874, contains full information. We mail free to all who send for it.

SCHLEGEL, EVERETT & CO.,

BOSTON, MASS.

mr7-3t

Flax Seed and Castor Beans.

Pacific Oil and Lead Works

SAN FRANCISCO, are prepared to

FURNISH SEED, AND CONTRACT

For next year's crop of Flax Seed and Castor Beans, a rates that, with proper cultivation on suitable land, will make them among the most profitable crops grown. For further particulars address

PACIFIC OIL AND LEAD WORKS,

3 and 5 Front street, San Francisco.

12v6-3m P. O. Box 1443.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

BEST SHADE IN USE.

-THE-

RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture IS FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE. Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS

Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the Bottom.

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are simple, work to perfection, and never get out of order.

Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.

6v7-16p-3m

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GEESE,

58 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address: M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.

3v7-3m-16p-sp

U. S. CATTLE MARKET,

Cor. 5th & Bryant sts., S. F.

Cattle Sold on Commission or Bought on Farm for Cash.

MILK COWS AND BEEVES WANTED.

Our accommodations for Cattle, Sheep and Live Stock are most convenient and complete; our terms most reasonable and moderate; our proximity to the Fourth and Kearny street cars, Long Bridge and Freight Depot of Trans-Continental R. R., afford our friends and patrons a combination of conveniences never before experienced by them in San Francisco.

DAWSON & BANCROFT,

mr14-tf

No. 449 Fifth st., S. F.

THE ALDEN

Fruit Preserving Company

OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery Street, SAN FRANCISCO. 11v7-6m

Angora Goats at Auction.

ON WEDNESDAY, MAY 6TH, AT 2 O'CLOCK P. M., I will sell to the highest bidder Seventy Head of Thoroughbred Angora Goats, imported by their owner, Wm. Eutychedes, from Asia Minor. Sale Positive. Terms cash, in U. S. Gold Coin. ROBT. BECK.

I have also the best imported Alderney, Jersey and Ayrshire Cattle; Spanish and Siberian Merino Sheep at private sale. R. B. Sacramento, March 10, 1874. 11v7-6t

"BLOOD WILL TELL." WHY KEEP POOR FOWLS WHEN GOOD ONES ARE AS CHEAP?

San Jose Poultry Yards, Corner Main and St. John streets, San Jose, Cal.

My stock consists of Dark and White Brahmas, Houdans, Silver Spangled Hamburgs, White Leghorns, Black Spanish and Black (white crested) Polands. Eggs and Fowls on hand and for sale. Shipped with care and guaranteed to be pure. H. H. STEVENSON. 11v7-3m

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street, Agents for the Pacific Coast. 11v7-3m

FOR SALE.

ONE HOADLEY STEAM ENGINE, 8x12.

One SEPARATOR, 36-inch cylinder; one SAW FRAME, STRAW STACKER, BELTS, TOOLS, WATER BARRELS, Etc., in fair order. Price, \$1,200, if applied for before May 1st. Apply to

A. R. WOODHAMS,

11v7-6t

Santa Clara, Cal.

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS. White Faced Black Spanish, Light and Dark Brahmas, Buff Cochins, Houdan, Crevecoeur and Games. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D.

P. J. PHILIPS,

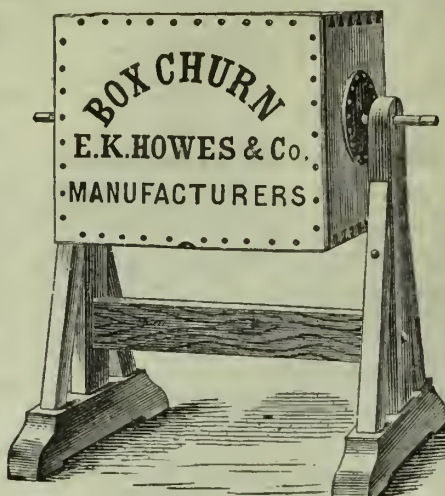
11v7-

608 Clay street, S. F.

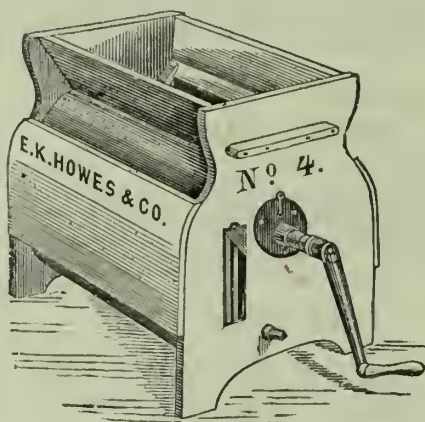
DR. E. J. FRASER, Homeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No. 305 Kearny street, northwest corner of Bush. 6v7-3m

E. K. HOWES & CO.,

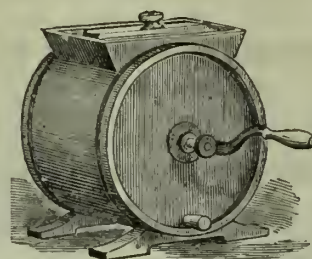
NOS. 118, 120 AND 122 FRONT STREET, SAN FRANCISCO.



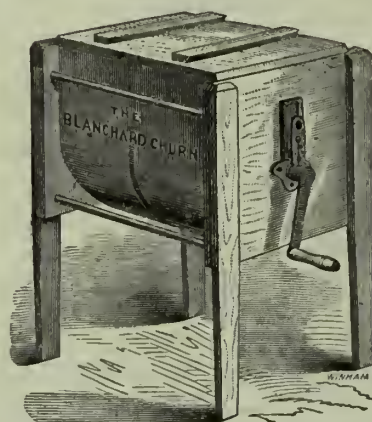
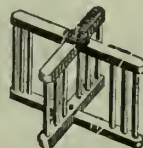
BOX CHURN.



THERMOMETER CHURN.



CYLINDER CHURN AND DASHER.



BLANCHARD CHURN.

SOLE MANUFACTURERS ON THIS COAST OF

All Descriptions of Churns, Butter Workers & Moulds, Butter Tubs, (35, 50 & 60 Pounds), Butter Kegs—Plain and Gal Hoops—Wholesale & Retail.

Send for Price List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired. 6v7-16p-eow-3m

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS. 7v6-tf-16p2

TO FARMERS.

WE ARE PREPARED TO CONTRACT FOR NEXT SEASON'S CROP OF

FLAX SEED at 31-4 Cent per Pound,

Delivered at our works in this City. Will also furnish Seed for sowing, to be paid for from the contracted crop. Will also advance

Money Necessary for Harvesting Crop,

required. Farmers can ship direct to us, thereby saving all

EXPENSES OF COMMISSION.

Now is time to sow. For further information apply immediately to

THE PACIFIC OIL & LEAD WORKS,

3 and 5 Front Street, San Francisco.

mar14-16p-2t

HAVE had live stock sold by MESSRS. DAWSON & BANCROFT, 449 Fifth Street. Have determined to patronize them again, and soon. Would sincerely advise every brother farmer and stock raiser to do as I have done. JOHN PITCHER, Half Moon Bay.

THE DR. BLY ARTIFICIAL LIMBS.

166 Tehama Street,

COR. OF THIRD, BETWEEN HOWARD & FOLSOM.

References to parties wearing these Limbs given when applied for.



THE "ANATOMICAL LEG," WITH A UNIVERSAL ankle motion; the above cut is its illustration. This artificial leg approaches so much nearer an imitation of the functions of nature than any other, that it stands without a rival among all the inventions in artificial legs, old or new. (The very latest announced new inventions duly considered.)

Address:

MENZO SPRING,

166 Tehama St., San Francisco, Cal.

26v27-1am-bp-3m

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - SAN FRANCISCO.

SEND FOR CATALOGUE. 21v6-tf

For the very best Photographs go to BRADLEY & RULOFSON'S GALLERY, with an "Elevator" 429 Montgomery street, San Francisco. 2v7-6m

THE PACIFIC RURAL PRESS has a larger Circulation than any other Pacific Coast Weekly, independent of a daily issue.

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS, ENGLISH RYE GRASS, RED TOP, ORCHARD GRASS, TIMOTHY, MESQUIT, RED CLOVER, WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street, San Francisco, WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER SEED, etc.

Agent for GARET'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE.

BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th.

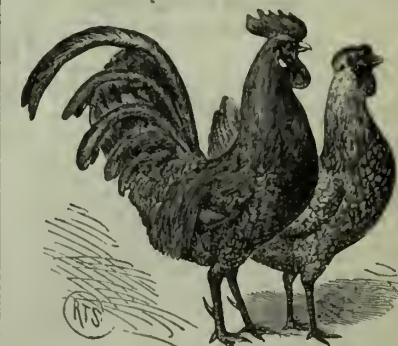
R. J. TRUMBULL, 15v6-6m-16p 427 Sansome st., San Francisco.

IMPROVE YOUR POULTRY,

It Costs No More to Keep Good Fowls than Poor Ones!

OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.



BROWN LEGHORNS!

A few trios just imported. Eggs, \$8 per doz. Fowl, 40 per trio. Stock guaranteed perfect in markings.

Also, for sale, one Bronz Turkey Gobbler, 13 months old; weight, 25 1/2 lbs. Price, \$50. No inferior stock sold at the Oakland Poultry Yards for any money.

For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed. 5v7-tf

W. M. BRANDON,

JACOB W. ROOBER

BRANDON & ROGERS, California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO,

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges. 20v6-1y-16p

More than double the number of Farmers and their families read the PACIFIC RURAL PRESS than any other journal on this Coast.



Volume VII.]

SAN FRANCISCO, SATURDAY, MARCH, 21, 1874.

[Number 12.]

Theatrical Machinery.

Perhaps no class of persons in the world require the genius of invention more than stage carpenters. Every new play must have its appropriate machinery arranged to work with the utmost precision, so as to produce the most deceptive effect upon the audience. Some of the devices and apparatus used on the stage possess remarkable features of mechanism, requiring originality of the first order, and although these devices are seldom patented, many of them show more real ingenuity than three-fourths of the inventions for which patents are obtained. Yet, with all of this ingenuity in devising and constructing novel machinery for producing startling scenes upon the stage, but little improvement has been made in the mechanism for working the permanent apparatus of the stage. To-day the drop scene is rolled up by cords and pulleys operated by hand, at the proper signal, in the same manner that it was rolled up fifty years ago; and who has not often witnessed the distressing accident of two flat scenes positively refusing to come together properly just at a time when it was particularly necessary to shift them quickly? We have recently forwarded to the patent office the application of Mr. H. F. Parsons, a resident of Los Angeles, in this State, for some very useful and ingenious improvements in the permanent mechanism of a theatrical stage. In the first place Mr. Parsons proposes to paint the scenes on wire cloth instead of canvas, as heretofore. One or two preliminary coats of paint upon the wire cloth, he states, will completely fill the meshes so that a perfectly opaque and uniform surface is provided. Mr. Parsons claims that there will be a saving of 30 per cent. in the amount of paint required to complete the scenes. He proposes to use wire cloth, not only for the flat scenes, but also for the wings and flies, and to use wires instead of ropes for operating them, thus rendering the stage comparatively fire-proof, and effecting a reduction of 70 per cent. in the insurance rates. The scenes thus made will also be more easily handled. Instead of ropes and pulleys for raising and lowering the drop scene, Mr. Parsons will employ a small water-wheel driven by water conveyed through a pipe connection with the water main of the city, and the valve will be controlled by the prompter, so that he can, at the proper moment, drop the scene without depending on an assistant. Besides the above improvements, Mr. Parsons has provided a number of others, by which the flat scenes, wings and flies, can be easily worked by one person instead of the large number heretofore required. He claims that a saving of 60 per cent. in the labor of operating stage machinery is obtained by his improvements, besides every part is so adapted as to work smoothly without noise or stoppages.

Mr. Parsons expects to place his improvements on some of the theatrical stages in this city during the coming summer.

GAMBLING PRICES.—Paul Ketchum, writing at length in the *Rural Sun*, of the New York mills sale of short-horns, reaches this pungent conclusion: "The tendency of these gambling prices is not for the good of farmers as a class. It is not beneficial to the stock-raising community. Horses sell for extravagant prices in proportion to the speed they can make upon the turf, and the amount of money they can win for their betting and gambling owners. When owners of blooded stock take the same track, and use the same means to run up the prices of good breeds of cattle to fabulous figures, even outstripping the prices of the fastest horses, it will not take Lord Ross's telescope for any man to see that they are in the gambler's line of business, and that it is highly detrimental to the interests of legitimate stock-raising."

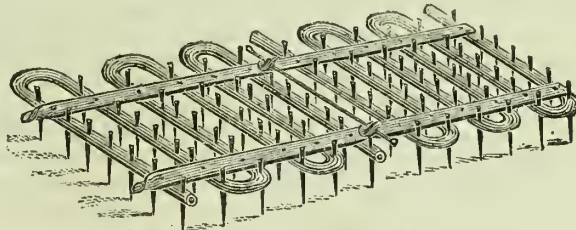
ALMOND TREES.—Since the trees, alluded to in a late number of the *Rural* as for sale on shares, have been disposed of, we have received two letters from persons offering suitable land for almonds. We do not know whom to refer them to.

Tubular Iron Harrows.

The San José Foundry, at San José, Santa Clara county, and the Petaluma Foundry, at Petaluma, Sonoma county, are both extensively engaged in making tubular iron harrows—a California invention, patented by James

harrows have now been thoroughly tested, and the tubular iron has proved to be the best material that can be used in the construction of these implements, as it does not warp, check, or loose the teeth. Although an improvement on old styles, they are sold just as cheap.

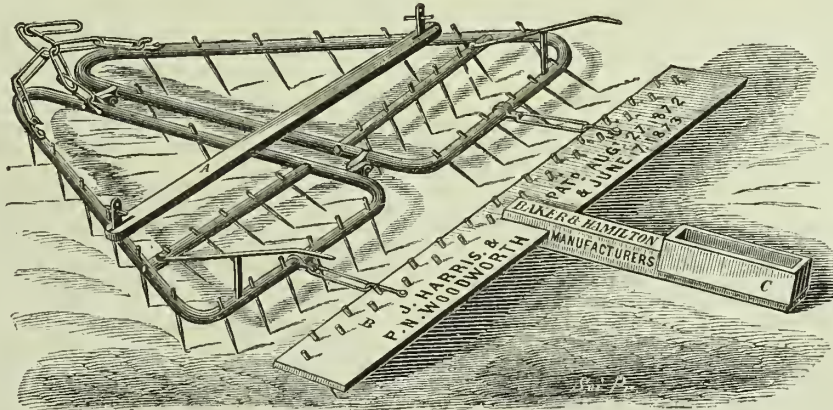
TREE PLANTING.—We are informed that some



BENT TUBE HARROW.

Harris, of 216 Perry street, San Francisco. The harrows made on this patent have made a reputation for themselves far exceeding the anticipations of the patentee and manufacturers. The frames being made entirely of iron, and

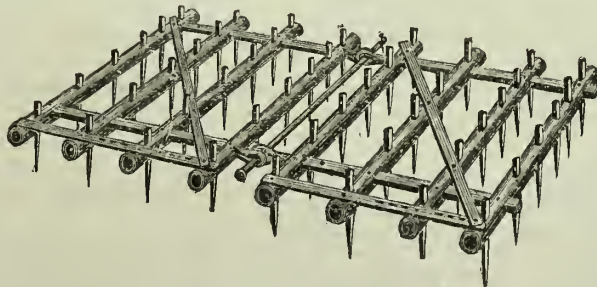
140 acres of fruit trees have been set out this season by Messrs. Winton, Russell and Garcia, all members of Haywood Grange, Alameda county. About one-third are almond trees; and apricot and plum, with a large number of



V-RAKE HARROW.

steel teeth being used, the harrows are not affected by the weather, which, in our climate of long, wet winters, and long, dry summers, is a great advantage over those made of wood, since the teeth never become loose and drop out. These harrows are of very light draught,

cherries, constitute the balance. Large quantities of currants have also been set out in Alameda county this year. Mr. Jas. T. Stratton, Dep'y Surveyor-General, has bought 40 acres more of ground opposite to his upper tract of gum trees, on which he contemplates



STRAIGHT TUBE HARROW.

and, being made of round iron, the dirt does not adhere to it and increase its weight.

The advantages of the use of iron over wood in agricultural implements is nowhere more apparent than in California, since the peculiarities of the climate are such that wooden implements are soon used up. This particular class of implement is especially liable to become rickety, since it is used only for a short time, at stated periods, and then laid away. The cuts shown on this page show the three forms of harrows made under this patent by the manufacturers. Their lightness and simplicity will at once be seen. The inventor has a great number of testimonials, referring to the efficacy of these harrows, most of the farmers stating it as their opinion that the yield of grain is increased by using them, more especially when sown in rough land. Several patentees have already adopted Mr. Harris' patent on tubes in their harrows, and he offers it to others for a small consideration. These

planting additional Eucalyptus forest. The members of Haywood Grange, on Feb. 21st, resolved to use their "influence for the purpose of planting shade and ornamental trees in the public highways, and to protect the same."

VARIED PRODUCTS.—The *Sonoma Democrat* in its last issue very sensibly remarks: When our farmers adopt a more diversified system of husbandry, when they raise more corn, feed more stock, market more fruit and dairy products, and ship less wheat, then Sonoma county will commence an era of prosperity which will exceed the expectation of those most hopeful of its future.

The farmers in Pope valley have all got their crops in, and are satisfied with the present prospect of an abundant harvest. Nearly all the valley is sown in grain this year, though what ground has been reserved for hay will, by its present appearance, turn off an abundance.

Partz's Cube Sugar Process.

We have watched, with considerable interest, the practical development in this city of a recent invention, which seems to be destined to impart a new feature to an important branch of manufacture. It consists in a process by which hard, white sugar is produced in a much shorter space of time, and at less cost than heretofore, and by which, moreover, the sugar is furnished in the shape of well-defined cubes.

The process has been introduced by its inventor, A. F. W. Partz, of Oakland, at the Bay Sugar Refinery on Battery street, where it has been in use now for several months, and where we have repeatedly inspected its operation.

There have been many attempts to convert granular sugar into solid cubes, or pieces of other shapes; but the methods employed were too slow and otherwise inefficient, and the products, besides, of an inferior quality; so that the old mode of making "cube-sugar," by sawing loaves into slabs and bars and cutting the latter into square blocks, has thus far been the only one successfully practiced. Yet, it takes about two weeks from the time the sugar leaves the vacuum-pan until it is finished in the form of loaves; and the work of dividing them into small blocks is quite laborious and expensive.

By Mr. Partz's new process granular sugar, taken fresh from the centrifugal machines, is in a few hours transformed into cubes of three-fourths of an inch in size, which are equal in firmness to those made from loaves and superior to them in appearance, in as much as they are more regular in shape and the crystalline luster of the sugar is not despoiled by sawing. These cubes are turned out by the one machine now in operation, at the rate of about 36 pounds per minute, and they are dried in two hours. The total cost of making them scarcely exceeds one-tenth of a cent per pound. To meet the increasing demand for this sugar, which has become already quite a favorite in the San Francisco market, especially among restaurants, the Bay Refinery has given orders for another one of Mr. Partz's machines, which is yet to be supplied with some minor improvements. These machines, and the apparatus used in connection with them, are as simple as they are original in their conception, and we intend giving a detailed description of them and their *modus operandi* on a future occasion.

What we mainly lay stress upon, regarding this invention, is not so much the fine and convenient form in which the sugar is obtained by its application, as that it enables the manufacturer to produce good, hard, white sugar with so much dispatch and at a reduced price. Indeed, sugar discharged from the vacuum-pan at noon may be packed in barrels and stored before night, so that the factory is no further to be encumbered with a large quantity of partly finished sugar, consuming interest on the capital therein invested. The room hitherto occupied by thousands of conical molds can be dispensed with, and men need no longer work all the year around in a temperature of over 100 degrees Fahrenheit.

We understand that Mr. Partz intends to go to the East, and expect in due time to be advised by our exchanges of the introduction of his valuable invention in the refineries of the Atlantic States and Europe.

AT IT AGAIN.—Joseph Newman, whose name is connected with numerous attempts at silk culture in this State, now proposes to carry around a subscription list to raise ten thousand dollars, in order that this industry of California may be represented at the coming Centennial Exposition. He wants to feed silk worms in two or three different parts of the State "under our own superintendence."

GRAPE CUTTINGS TO JAPAN.—R. Chalmers, vineyardist and wine manufacturer of Coloma, has sent to Japan ten large cases of choice grape cuttings.

For a farmer not to keep accounts, says the *New York Tribune*, is a good deal, as if a merchant should sell his goods without knowing what they cost.

A circular barn, built of stone, 150 feet across, and 40 feet to the eaves, is one of the features of a Shaker village in Massachusetts,

CORRESPONDENCE.

Farm House Chat.

[Written for the Press by MARY MOUNTAIN.]

One good little sister reformer heaves a melancholy sigh and thinks 'tis such a pity that I mix up my aermona with soda and fine flour. She would like to "have it out" with me, pen to pen, till our crisp and well-baked RURAL would be yellow with too much soda.

Now, I have not a word to say in behalf of "too much soda," but the exact and scientific use of its gentle magic agreea well with butter-milk, with digestion, and with my own desire to "prove all things and hold fast that which is good."

Long years ago, almost in my first days of cook-book misery, there went on in the New York Tribune a notable fight over this same soda business, and it was enough to make our lamented grandmothers turn in their graves if they could but have heard the din.

The Yankee character is generally understood to be pretty nearly the correct thing; but the few blemishes that have cropped out here and there were chargeable to the action of salaratus upon the acids of the Puritanic temperament. Probably the "milk of human kindness" had soured; but we shall never know whether too much or too little "alkali" produced the eruptive enormity known as Salem witchcraft, and several other unseemly blotches upon the historic page. And then the physical ills, indigestion, rotten teeth, jaundice, etc., made things look rather dark for those ignorant mothers of the race, who worked so hard to obtain the obnoxious stuff. In the primitive days of New England, soda was not a familiar article of commerce, and corner groceries had not yet found their corners. Patented mixture put up in tin boxes, and all the modern conveniences for cookery were unknown and not even imagined.

But then, as now, the loving mothers were anxious to offer some variety in the daily fare, and when they decided upon a pan of light biscuits for Sunday, or for company, they had to begin with ashea, and manufacture with tedious care the crude alkali called pearlash.

And the pearlash biscuits being puffy, tender, and produced only as a thank-offering on special occasions, came finally to be looked upon as a prime luxury, and, in fact, fine flour itself was a luxury often hoarded with jealous care when wheat fields were small, ten bushels to the acre a large yield, and grist mills few and far apart.

By-and-by came "York flour" rolling over the country in barrels; and, with fore-handed farmers it soon became a point to have always a plentiful supply. No need any longer to send the children "with a clean pillow case" to borrow a few pounds from some obliging neighbor; for, country stores increased, "fine flour and salaratus, could be bought at every one of them; and the notion prevailed and strengthened that these and other "store goods" represented luxury, high-living, and gentility. So you see how easily the hot biscuits and fine food came to be perpetual instead of occasional, and the formerly abundant and healthful coarse bread was voted old fashioned; and, on many tables no longer appeared, except in conjunction with the traditional bean-pot.

Beans and brown-bread for Sunday as a truly orthodox observance could not be lightly set aside; and so inseparable are they in popular estimation that when the Boston man accidentally dropped and mashed the pot of beans, and then deliberately threw the brown bread among the ruins, it was thought to be a righteous verdict that "the two must go together, anyhow." Curiously enough, so far as health is concerned, the coarse bread is more needed with some other articles of diet than it is with beans, as they contain such strong, nutritive qualities that white bread will do very well to accompany them.

A bright little boy in San Francisco teases his mother to let God's day come quick, so he can have more brown-bread and beans. I asked why the child could not have them upon week days, and she said: "O, we are in the habit of having them just for Sundays, and he really thinks they're made on purpose for God's day; but there's no rest till the last bit of brown-bread is gone, he is so fond of it."

Why does not the mother take the hint and give him brown-bread every day? According to some theories it might prevent the lad from hankering by and by for tobacco and other strong stimulants.

However this may be, it is true enough that children will have better teeth, and grow up with stronger and healthier bodies, if they can have all the way along a fair proportion of coarse bread to eat. It is not enough that mothers say—"O, my children won't eat it!" Probably they're never had half a chance to know how good it is, or how good it ought to be.

Whether this bread shall be made with buttermilk, sour-milk, sweet-milk, water or yeast, is not so much to the point as that it shall be so carefully made as to be thoroughly wholesome and to taste good.

Whether the soda used to sweeten and raise the sour-milk loaf is really injurious—well, like the old woman of Cloddeen, "sometimes I think, and again I don't know."

Some of our wise heads decide that the skillful use of soda versus acid is perfectly proper and harmless, while others equally strong of

brain, (but weaker of digestion perhaps), have a totally different theory; and are almost as severe upon soda as the old Tribune Reformers, who were willing that the whole intellectual, physical, and theological back-sliding of the Yankee race should be laid at the door of the pearlash grandmothers. Ah, those delicious cream biscuits, that nobody else could make "quite so good" as grandmother! A very skippy old maid was enjoying them one day and asked how they were made.

The keen spirit of mischief lurked in grandmother's eye as she replied, demurely, "I put in cream until I think there is enough, and then I shut my eyes and put in a little more." I know that she put in a little salaratus, and that her daughters and granddaughters have gone and done likewise even unto this day; but, among the 113 descendants who live to bless her memory, I do not know of one who is noted for dyspepsia or bigotry. The dear old lady died this winter at the age of 93; but I will not claim that this good old age strengthens the soda argument for mayhap my ante-soda critic will live to 100, and leave a still longer line of healthy and grateful posterity.

Like all other questions affecting the healthfulness of daily food, this one of soda is worthy of study and careful observation. The stuff is simply detestable when carelessly used; but the coming

Exact Domestic Science

Ought to set us all right, and leave nothing to chance. With what cool and cutting sarcasm a learned scientist has just been asking "How much is a cupful? How much is a teaspoonful? What do you mean by a pinch, large or small, or a trifle, of this, that or the other?"

Alas, we can only think of our assorted cups, big and little teaspoons, and the fatal difference there may be in "pinchea!"

Verily, we are dumb, and glad to let the terrible man answer his own questions.

But there is the question of "Novice" in regard to the size of my flour-pan—I hated to begin this talk about cooking, for fear of mistakes—first, my own, then the "typo's," and then the reader's.

What bothered me so, was that in cooking, I always go by my eye, instead of by weight and measurement. But, I managed to measure a few things, and began my chat with Blue-eyes, forgetting, entirely, that all the other eyes were out of range, and might, like Novice, be puzzled to know whether my flour-pan holds a pint or a bushel. On a dairy-farm, a pan is a pan; and mine is one of that sort—broad, rather shallow, and pressed tin—and holds about ten quarts. But the size of the pie-crust made in the pan always depends upon the quantity of mixing used, and the surrounding margin of flour is merely for convenience.

Self-Raising Flour.

Having received a sample-box of this from the Golden Gate Flouring Mills, and astonished myself and several friends with its bouncable disposition and "sure tricks," I have concluded that it must be the advance guard of "exact science" in the kitchen. It is so handy to have, so delightful to use, so swift to puff itself into the most surprising lightness and whiteness, that it needs all my ateady-going brown-bread faith to keep me from a new departure, that would demand unlimited supplies of this incomparable flour. It professes to supply the phosphates that are lost in the process of bolting, and true it is that we all felt unusually comfortable after eating a mess of biscuits—felt, in fact, as "light as a biscuit." As for the doughnuts, popcorn itself could not be lighter, and my good old doctor ate without counting, declaring they were the best doughnuts he ever ate in his life; and I think he was right.

Printed directions came with the flour, and good results are as sure as fate. For beginners, for bachelor house-keepers, and for those who are liable to "sudden emergencies" with Bridget and John Chiuaman, this article of flour must commend itself as a direct blessing, invaluable as the manna that fell ready fixed for Sunday and all the days.

Of course the question will occur, "why sift out the phosphates, etc., at a great expense, and then incur still further trouble and expense in returning these elements to the flour?"

Ah, this civilization of ours is a wonderful and complex business, and "they who dance must pay the piper!" The lightness and whiteness of bread is a matter of special pride with most house-keepers. My own efforts and triumphs are chiefly in the direction of irresistible brown-bread, gems etc., but there is great danger that I shall "hanker" for this self-raising flour—occasionally.

A Bachelor at the Cooking Stove.

EDITORS PRESS:—Having been a reader of the RURAL for some time, I could hardly do without it, as I find in almost every number some good hints to help me in my work. I think it is the most practical farming paper that is published.

I am an old bachelor, live all alone, do my own cooking, and have to work for my living. As I believe in living according to the laws of hygiene, I have been particularly interested in recipes for making graham bread, graham gems, etc. I am desirous of learning whether there is a better way than the one I am using. "Hygienic," in RURAL of Feb. 14, comes nearly up to the mark; but prescribes salt—and I don't think salt is hygienic.

Here is my way: After building the fire, I

put the cast-iron gem-pans in the oven, turn up the damper, and let all heat together. Then I take about a pint and a half of cold water, (sometimes substituting milk) in a basin, stirring in the graham flour by sifting it slowly through one hand while stirring with the other, until the batter is thick enough to prevent running over, if the pans are heaping full. I have eleven gem-pans, of the following dimensions: one and three-quarter inches deep, two and three-quarter inches across the top, and one inch at the bottom. The amount of batter given is required to fill them. I usually stir a good deal, as I think the lightness of the gems depends, in a great measure, on the air which is mixed with the batter.

When the oven is sufficiently hot, I take out the pans, place them on the top of the stove, grease them, and put in the batter; filling each and returning to the oven as quickly as possible. I then fill the stove about half full of wood, and by the time this is burned down, my gems are done, together with the rest of my breakfast. A stove full, and one-half full again of good, dry oak answer to cook all. The gems are very good, made in this way.

Now, what I want is to learn how to make a good graham loaf, without taking so much time as all the recipes require. We hard-working men can not afford to spend from four to twenty-four hours on a loaf of bread. At present I use yeast powders; but they are too expensive.

San Diego, Feb. 28th, 1874.

Letter from Marin County.

EDITORS PRESS:—Knowing the deep interest you take in everything connected with the Grange movement of this State, and the vigorous manner in which your paper has entered into the fight for the welfare and interests of the people, I would like to add some notes to its columns in regard to the Grange movement in this county, which may prove of some interest to Patrons of Husbandry in other parts of the State.

In my journeyings through this county, I find grass rather backward in growth, but the dairymen hope for a good crop of grass the present season. I find all with whom I have talked very much in favor of the Grange movement in regard to the disposal of their produce. The Grangers of this county are very enthusiastic in the cause, and are increasing very rapidly in number. I believe that when our dairymen get rightly to work, two thirds of the butter produced in this county will reach the consumer through their Grange store in San Francisco. Our dairymen are cultivating all of their land which is adapted to hay and roots, which makes them Grangers in the true sense of the word, and will undoubtedly pay them well for their labor.

The narrow gauge railroad, running through this county, is a matter of great interest to the people. The tunneling through White's Hill only needs seventy-five feet more to finish it, which will take until about the 15th of this month. Immediately on the line of this road are situated the powder and paper mills. The powder mill is not now in working order. It is owned by a company which is largely interested in mining. They purchased the mill for the purpose of manufacturing their own powder; but, the company previously furnishing them with powder, lowered their price one dollar on the keg; which, in an indirect way, makes the property yield an income of about \$40,000 annually. The paper mill is owned by S. P. Taylor, is in complete working order, and doing a good business. The scenery along the line of the road is very grand and beautiful; and the road, when it is completed, will well repay one's time and money to pass over it and view some of nature's wonderful works.

Respectfully yours, R. B. NOBLE.
Nicassio, Marin county, Mar. 4th, 1874.

Cottonwood Trees—Another "Interesting Fact."

EDITORS PRESS:—Your contributor (see article in Press of Feb. 28th) and advocate for the cottonwood tree will find, if he will make a close inspection, that the mist of which he makes mention does not emanate from the leaves of the cottonwood, but from a small pea green winged insect; an insect, I believe, peculiar to this coast, and so far as I know, not classified.

They may be seen in countless numbers, in dry, hot weather, on the leaves of the cottonwood, willow and alder, in continual motion with their wings, the wings opening and closing with a quick, respiratory motion, emitting from the posterior end of the abdomen a minute jet or drop of fluid as clear and transparent as water, each time the insect closes its wings. A natural mist could not be better imitated by any artificial contrivance. A gentle breeze, which we almost invariably have in hot weather, in California, carries the millions of drops quite a space away from the trees on which these curious insects are for hours continually in motion.

So far as my observation serves me, this little mist-insect is harmless to vegetation or anything else.

Los Angeles, Mar. 6th, 1874.

Letter From Tulare County.

EDITOR PRESS:—Just starting into a new month, we may look for some bright, warm, growing days, as we have not had the usual amount during February; though there has been less cold and frost this winter than usual, there has been more rain—the total, up to March 2d, being 12.35 inches—nearly as much as is, or has been, usual for the whole season. Yet, there is plenty of time for half as much more, so we look for full crops with a reasonable chance of not being disappointed. I never saw barley look better at this time, but it would do you good to notice the difference in favor of

Summer Fallow,

By which I do not mean land broken up late in the season, after all the moisture has dried out, but such as had been cultivated to a crop of peas, potatoes, etc., or been broken up and pulverized well with a harrow whilst it was moist enough to work nicely; say during March, April, May, or even June. When there are very late rains, spring is the time to prepare the land to insure a crop of grain. The next winter, use the harrow to keep it clean, should the weeds start. Peas are just in full bloom, and potatoes coming along nicely—all planted after the rain began in December. I see some of the good fruits of our Grange, in the fact that the Secretary has received ten names for the RURAL Press since my starting for

Kern Island,

Where we have taken a homestead, and intend moving, as soon as the crops are off here. That county, with its supply of easily procured wood and water, warm climate and easily cultivated soil, gives promise of a great future. Most of the new settlers seem full of enterprise. They have already three Granges in operation, and have formed a ditch company, with an evident determination to have plenty of irrigation. To illustrate, I may mention the People's Irrigating Canal Co.; which, with only 40 members, has taken out a ditch, some 45 feet wide, to carry 200 feet of water. One branch of the same, near Panama, is between 15 and 20 feet wide. The soil for a few miles below Panama is sandy loam, spotted with patches of alkali; but, near the lake, the surface is covered from 4 inches to 4 feet with a heavy black soil, supposed to be siltment left at a time when that locality formed part of the lake. The distance to water varies from three to fifteen feet. Upon that heavy soil I have seen a fair crop of corn, the only irrigation it has, being at planting time. The sandy soil needs more irrigation, but is easier to work and is said to be better adapted to

Alfalfa,

Which is the crop of crops there, and why should it not be, when it seems never to fail, making quite a quantity of hay the first year, besides cutting from five to ten tons per acre ever after; or, if Mr. Jewett's account is not exceptional, a settler, after getting his 80 acres in alfalfa, can keep 1,600 sheep upon it the year round—enough to furnish a good living for any reasonable family—but what about

The Alkali Spots?

Water will probably cure them, I have reports of alfalfa growing well upon it, after being once started. Fig trees are as said to do well, and an old settler, who has cultivated grapes there for some five years, says they ripen best upon the alkali land. Will not some, or every one who has had experience, let us know what he has found to do well upon such land, besides beets.

Orange and Lemon

Culture, I should think, would be adapted to that climate. Has not some one by this time, had enough experience to gather up facts and write a full treatise upon the subject, "soil" and describe the climate best suited to it? Some thing of the kind seems needed, and would no doubt interest many.

Yours Truly,
ISAAC B. RUMFORD.
Plano, Tulare Co., March 2d, 1874.

Pasture Grasses.

EDITORS PRESS:—It is no wonder that the farmer of this State feels a natural distrust of agricultural books, and agricultural newspapers other than our own. Let the proposition be to convert a field in which he has been growing grain, into as good grass land as it was originally. How is he to do it? He may take flint on grasses and forage plants, or George Sinclair's celebrated Hortus Gramineus Waburnensis, but what are they good for, if he does not know how to adapt them to suit his case? They are no better to him than old almanacs, the tides and times in which are calculated for a different meridian.

But what is to prevent him from having good grass? Instead of theorizing on the properties of this or that plant from its known qualities in other places where it is indigenous, why does he not have recourse to our own native grasses, such as grew on the soil before it was broken up? It is true, no grasses thrive equally well in all places. But if he has been cultivating his land prudently, it ought to admit the better native grasses to be grown upon it. Let him fence off and preserve for seed a sufficient extent of natural grass, where it seems of better quality than usual, and mow it as soon as the earliest grasses, which are almost invariably the best, have come to maturity. Such grasses, in all probability, may form but

a half or so of all the grasses which are mixed up together. But no matter; let the others go. They ought to be rejected as if they were weeds. In this way, from seeds thus obtained, a field may be laid down in permanent grass of better quality than it was at first, and which is suitable for the climate and can not fail. Besides, in addition to sowing such seeds, an enterprising farmer may mix with them those of the grasses he has been accustomed to sow in the Eastern States in which he has confidence; but it is well to know how to secure good grass when he wants it, without having to rely upon them entirely. AGRICOLA.

San Joaquin Valley Lands.

EDITORS PRESS:—Will you be so kind as to give me the price of unimproved lands along the line of the San Joaquin Valley R. R.? Would you prefer the San Joaquin valley for fruit and stock raising? Do you have any fever and ague in your section of country? A large number of persons propose to emigrate from Minnesota to California this spring. They are all farmers, and want to get into a good farming region—that would be natural, you know. MARK D. JUDKIN.

Glenwood, Minn., Feb. 25th, 1874.

[1. We hardly understand our correspondent's first question. For fruit raising, to any profit, he will need to be near a shipping point, and on first-class land, improved, of course, he will have to pay from forty to one hundred dollars per acre. But if he wishes to try stock-raising, he can get land at a price commensurate with the distance he is willing to go. State lands, at \$2.50; Government at \$1.25; and Mexican grant much lower, down to perhaps twenty cents an acre, are open to him. The San Joaquin valley is quite a little place. It contains some twelve million acres, and would make several respectable States if cut up. So we may be pardoned for not giving very definite answers to our correspondent's inquiries.

2. The San Joaquin valley is the great stock raising district of California, and is preferable for that purpose on account of the room available for grazing. About fruit, the question is different, and the country adapted to that culture dependent altogether upon communications, as we have said.

3. Our "section of country" is San Francisco. We do not hear of much fever and ague in this city, nor in the State at large, as compared with the interior States. So far as we are aware, our orchard men do not utilize the chills by leaning against the trees, and thus shaking down the fruit, as is said to be done in Missouri.

We are glad to learn that real farmers are about to come hither from our correspondent's neighborhood. Such a course, we are sure, will prove mutually beneficial.—EDS. PRESS.]

Taxing Growing Crops.

EDITORS PRESS:—The taxing of growing crops is very unjust and unequal, being no less than an additional tax on land, over and above its true value. Property is supposed to be assessed at its value, said value being fixed, of course, by the supposed net value of its yearly product or income. Now, this unjust law would assess also the value of the product or yearly income—provided, only, that said value should be in a growing crop on land.

If it is right to assess property and its yearly income also, why not treat all property the same? For instance, a flock of sheep or fine goats are assessed, and the value is fixed according to the supposed net money value of their yearly income, which would be the wool-growing upon their backs, and their increase. Now, the net value of this wool and increase can be known as nearly as that of a crop growing upon land. And so of a rented building; why not tax it at its full value, and then tax the net money value of its yearly product, rent or income; and, if so, then the same with a piece of machinery, a mechanic's shop, or, in fact, any assessed thing that has an income; for, I see no just cause for discriminating against the product of land.

The farmer's stock and implements which he uses to cultivate the land, as well as the land itself, are all visible to the assessor, and are all fully taxed. That being the case, the yearly income therefrom, should, as all other kinds of property now do, remain to be taxed the following year; that is, if any income should be obtained (for it is only prospective); the grain may dry up or be drowned out, or ruined from rust or other cause; the sheep or goats may die; the tenant may fail to pay his rent, etc. Justice demands that such a law should be repealed. C. COULTHARD.

Salinas valley, Cal., March 4th, 1874.

Home Industry.

A correspondent writing from, San Diego, says: When I came to these parts, four years ago, and commenced gardening, I bought seed said to be grown in California. Bought from three different firms in San Francisco and got fooled by all. Seed good, but not true to name. Long scarlet radishes proved to be olive-shaped and got to be old before I thought they were fit for market. Long blood beets were of all shapes and colors, and so on to the end. Since then I send to the states for seeds and always get what I send for. Last year my employer sent direct to a San Francisco house

for quite a lot of vegetable seed—beets, beans, radishes, lettuce, cabbage, etc. Two papers of beet seeds of two pounds each, one marked large red Mangel Wortzel and the other White sugar beet, true French, sowed one paper one side of a path and the other on the opposite. When they were large enough to transplant, we found they were all Mangel Wortzels; two papers, one pound each, one marked bush beans, the other Lima beans. Planted the bush beans early, but what was our surprise to find they all wanted poles to grow on, but as timber is scarce we couldn't afford it. Planted forty hills of Limas later in the season, gave them poles to grow on, but when large enough to begin to pull, we found that there was but five or six vines in the lot that were Limas at all. They appeared to be all the same as those we planted for bush beans. Lettuce seed didn't come up, only once and a while a seed. This year my employer sent to the States for his seeds. We send to Henderson for garden vegetable seed, and to Vick for flower seeds, and always get what we send for, and sometimes more of it for the same money. I understand there is a general complaint about California seed dealers as above, is it so? If it is, we gardeners ought to know it, as it is not pleasant to plant and not have an idea what we shall reap.

GYPSUM.—A correspondent wishes to know whether there is any gypsum to be had in this city. We have not been able to find any one who has it in quantity, for agricultural purposes. The demand for gypsum, as a fertilizer, is very limited in this State. One firm we visited had about a dozen barrels of it on hand, but all consigned. If any one has gypsum for farm use, he does not advertise it, nor are the principal chemical houses aware of their being any, in lots to suit, in town.

SHEEP AND WOOL.

Angora Goat Prospect.

Because there has not been any large shipments of fine Angora fleece by the breeders on this coast, certain papers are questioning the profitability of breeding Angora goats. Now, we think they are a little too fast in their distrust. It is only a few years since the first pure Angora was brought to this coast, and but very few have ever been brought here at all. The breeding with the common or Mexican goat so as to produce a grade sufficiently high to shear a fine grade of mohair, takes several years with the utmost care. The breeders of such goats are encouraged with most remarkable success, as any one can see who will visit the various flocks over the State. From this time on we will see the results of this close system of breeding, in large shipments of mohair, increasing every year. The time spent in "breeding up" from the common goat as a basis, is not lost, although it has been slow work. Any sensible person that knows anything about breeding, ought to be able to comprehend the facts in the case. It is only occasionally that anything less than a thirty-one thirty-second breed will make a fine fleece, and some of them even show the common goat kemp too plentifully. But after an animal is very nearly pure breed, it only takes a few years to produce from them in their progeny the qualities required. As to manufacturing the mohair, there are now eleven manufacturing factories in the world, and three in the United States, where it is worked into fabrics. When the material becomes plentiful here—and it will now in a short time—there will probably be machinery in California for spinning the mohair into glossy threads. Such machinery will not cost much and the spun yarn will be in demand to mix with wools in manufacturing the finest fabrics, to give a lustre to the cloth. There is not a more sanguine set of men in the state than the breeders of Angora goats, and they have every reason to be, as the business is sure to become one of the very best on the continent. There is already a demand exceeding the supply for such fleece, and it will increase faster than the supply can possibly.—Colorado Agriculturist.

Success with Sheep.

There have been indications for some time, and from various quarters, that wool is going to advance in price. The demand appears to be heavy in England, and this affects our own market. We have watched the sheep and wool business for twenty years, during which time there were several panics, sheep being butchered for their pelts and tallow; but immediately after, prices rose, and then every sheep was saved. Meanwhile, those who kept on steadily and sold at the going prices have done well; while those who held wool over a year thereafter were well paid. The truth is, there is no better business, year after year, than that of sheep husbandry, and for the reason that the increase of our population is so constant and great as to keep up a steady demand for all kinds of woolen fabrics. As it has been in the past, so it is quite certain to be in the future, and those who have sheep may safely get more. But let not inexperienced men rush in, for complete knowledge is required and constant attention. The best way to get a good flock of sheep is to raise them, because there are but few chances to buy such sheep as will pay to keep unless at a high price. He who has good sheep knows it as

well as anybody else; and, as a general thing, if he offers to sell sheep, they will be culls.

A beginner should buy a few good American Merinos, say from twenty to fifty; and if they are really good—that is, young and free from disease—there is more increase and money in them than in a flock of 500 culls, old, scabby and otherwise unsound. In fact, such sheep are not worth the feed required to winter them, and the best use to make of them is to send them to the butcher, if that is allowable. By commencing with a few sheep a pains-taking man can learn how to manage them as fast as they grow; being like some school teachers, who learn as fast as their scholars do. It will take from three to five years to learn the sheep business, and by that time the flock should be of respectable size. We hardly know of any instance of young men going blindly into the business with 500 head who had not lost their whole investment.—N. Y. Tribune.

Wool Growing.

Each year the United States imports large quantities of wool and woolen goods. It is also a fact that while the population of the country is rapidly increasing, the amount of wool made each year is actually diminishing, especially in the Northern States. The cause of this is the high price of land, the cost of raising grain and hay to feed them through the long winter.

Australia transports wool thousands of miles, pays a high duty, and then undersells our Northern wool growers.

In our own State wool can be grown as cheaply as in Australia. The southern part of our State is admirably adapted to sheep raising; and, though thousands are now there, still there is room for thousands more.

Since our government has shown so little disposition to relieve the settlers on the Rio Grande from the Mexican depredations constantly being perpetrated upon the stock of that section, the stockmen have commenced paying more attention to sheep raising; as these robbers deem the sheep not worthy of their notice. Recent reports from that section demonstrate that sheep, though requiring more care, pay better than cattle, and that many of the leading stock men are contemplating this change of tactics.

As our population becomes more dense, and our pasture lands grow smaller, it appears to us that our farmers will find sheep much more profitable than cattle.—Texas Farmer.

THE VINEYARD.

California Raisins.

EDITORS PRESS:—I have seen several inquiries in the RURAL for information in regard to raisins. I send you a sample of those I raise and cure. The raisins are made from the "Malaga Muscat," or Muscat of Alexandria; and, after a long and close investigation, I am satisfied in my own mind that this is the raisin of commerce, and no other grape will make a raisin at all, but will simply be dried grapes when cured, except the "Royal Muscadine," which makes a fair raisin, though smaller and seed larger. I have had several hundred boxes of these raisins in market the last two years, and have had many letters of commendation and inquiry in regard to them.

I find it to be a profitable business. They have brought in the San Francisco market, this winter, 15 cents per pound, wholesale. I am extending my vineyard of them every year; grow them on hill slopes. What cuttings I don't use I have been giving away for several years. I paid \$12 per hundred for the first I set, and then cultivated for raisins. The habit of the grape will have to be closely observed by the cultivator.

I have been prompted to write these lines because it is too bad for a person to set out vineyards for raisins, and cultivate them for four years, and then have nothing but dried grapes, that he can hardly sell at any price. C. D. BROOKS.

Diamond Springs, El Dorado Co., March 5th, 1874.

[A fine sample of raisins accompanied the above, giving ocular demonstration that El Dorado county can produce a good quality of this valuable article of commerce.—EDS. PRESS.]

GRAPE CUTTINGS.—If any of our readers who have bearing grape vines wish to raise a few more, they can save cuttings when they prune their vines. These cuttings should be three eyes in length, and only the ripe, firm wood should be used for such purposes. Our method is to save the best wood, cutting it into suitable lengths, each cutting or slip having three eyes, and then bury in the ground, where they can remain until spring, when they should be taken up and set out in beds to grow. The bed should be dug to the depth of ten inches to a foot; and, if the soil should be stiff, quite an amount of sand should be added to it. The cuttings should be set two-thirds of their length below the surface, and the ground be well trodden about them. Nearly all of the same will make plants, and the strongest of them will be fit to transplant the next season. In this way plants can be secured at small cost. Every owner of even a rod of land should have some grape vines. They take but little room, and yield large crops of luscious fruit.—Exchange.

Grape Culture.

We have never yet heard of rot appearing in grapes of the first or second years bearing. We believe that it is because, up to this time, there has been but little pruning done. You disturb the functions of the vine by close pruning and over cropping. It gives the vine too much root.

If you have a large root power, a great quantity of crude, unripened sap is taken up. It is the raw material to make sap of. It goes to the foliage and is there elaborated and changed into true sap, so as to be made into fruit, wood and root in the proper and healthy way. Suppose you have a vine, and confine it to a stake, say six feet high, year after year, or to a trellis which is six feet high, with lateral arms six feet long, and you have root power sufficient to carry it forty feet in every direction, it is clear that if you do not give it extension you cannot have the foliage to elaborate that crude sap into the true sap. What happens? Why, this crude, unripened sap surcharges the grape. When this crude sap has once got to the grape, the circulation of the sap in the vine, and all its natural processes, are impeded for want of foliage, and the berry is engorged with unripe sap from the surface of the grape, it is surcharged with unripe juice, which, when the finer functions of the grapes come into play, charges the tissue, rots it, and the grape perishes and falls.—Texas Farmer.

Manure for the Grape.

The following, taken from a work on "Manuring the Vineyard," is good advice. We are of the opinion that the application of a compost thus made, will benefit a vineyard, however rich or poor the soil may be.

"It is neither desirable nor necessary to impart to the vine too much luxuriansness. As a general thing, not enough importance is attached to a rational method of manuring, often required to assist the growth of the vine, though an excessive system of manuring will delay the ripening of the grapes, and impair the quality and quantity of the wine produced.

"It is very important that the manure used should not only furnish to the vine nourishment, but also impart to it warmth. Further, no manure should be used which assist the growth of the wood, but which does not promote the yield of the vine.

"Fresh animal manure is not suitable for vineyards, as it contains too much nitrogenous nourishment of excessive richness. It is therefore advisable to mix with it masses of ground, for the purpose of properly dividing the manure. Good ground is mixed with animal manure; horn shavings, ashes, bones, sawdust, dry leaves, muck, etc., in heaps; which must be moistened frequently with water, etc., and frequently stirred or mixed together."

GRAPES IN ITALY.—Prof. Gregory, in a letter to the *Prairie Farmer*, says: Journey where you will, you are never out of sight of the vineyards. Even the fields devoted to grass and grain are made to produce their harvest of grapes, upheld by the trees; and the hill-sides are thick with vines. In Germany the vine is planted in rows and squares two or three feet apart, and trained to short stakes. In Italy, until I reached the vicinity of Rome, I scarcely saw a stake in a vineyard, the supports being almost exclusively growing trees. The vines run from tree to tree, but are not left to spread over the tops. Living trees seem to be preferred throughout Italy for supporting the vine. Mildew is prevented by sprinkling the fruit with powdered sulphur.

USES OF GRAPES.—Men can live and work on grapes and bread. The peasantry of France, Spain and Italy, make many a satisfying meal in this way; and, of the wholesomeness of the diet, there can be no doubt. Medical men constantly recommend the use of grapes for their patients. Scarcely any plant can equal the vine as regards the beauty of its leaves and fruit. As a covering for bare walls, and for affording shelter and shade, it is a climber of the first rank. To sit under one's own vine, has in all ages been considered the acme of rural happiness, an emblem of peace, a symbol of plenty, and a picture of contentment. That pleasure, though perhaps not in all its fullness, may become the heritage of thousands in these temperate climes.—London Garden.

GRAPES.—EDITORS PRESS:—Under head of "Grapes—Best Varieties," in your issue of Feb. 28, Pentland Bros. state that the Muscat should be planted five feet apart, each way. I am intending to plant several acres of Muscat vines this spring; had decided on seven feet each way. Am deeply interested in starting out right. Would Pentland Bros. favor your readers with a more extended communication, giving every reason for planting Muscat vines only five by five feet, while favoring eight by eight for Morocco? Also how they would plant Flaming Tokay and Black Hamburg. T. F. CROFT.

Los Angeles, March 8th, 1874.

GRAPE TRELLIS.—For a few years past, I have used a spiral spring, made of No. 8 or 10 wire, fastened to the ends of the horizontal wires. This allows for all the strain which can be made by the changes of the weather. And this method requires no fixing or adjusting, as the method recommended by Mr. B. M. Soule, —Fruit Recorder.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

Music in the Grange.

DEAR PRESS:—Reading your inspiring columns, to-night, has given me an impulse to say something in favor of our Grange song book, which, by the way, deserves notice at abler hands than mine. I have no doubt that many Granges have made good use of it the past winter, and enjoyed the thrill its spirited songs are sure to produce, when well sung.

But some of the new Granges may not have attempted singing, perhaps for want of some one to lead, or the too common complaint of not being able to sing. The book is expressly prepared to meet these cases, for the "Opening Ode" is the old, time-worn, but here, singularly appropriate song, "O Come, Come Away." I notice that in our Grange, even those who refuse a book, can't help humming the tune, which often gives us a very respectable accompaniment of male voices, if it isn't legitimate bass. After this beginning, one does not expect to find the music either new or difficult, and turning the pages, verifies the anticipation of meeting old and tried friends, too good ever to wear out. "America" stands next, with words adapted to the Grange:

"Come thou who mad'st this earth,
And to mankind gave birth,
Bless us to-day."

Then follows a song adapted for closing, set to an air so familiar that its name will suggest itself as soon as sung. Many of the songs are written by our best and favorite authors, and for the most, the air and words are well suited to each other. Page 87, "Speed the Brotherhood," is an exception, however, the tune compelling an improper accent upon the words, and giving them a sort of doggerel rhythm, distressing to hear.

On page 9 is a "Parting Hymn" in which "And Lang Syne" is made the musical vehicle for appropriate words. It is a favorite, because, like the first, everybody can at least hum it. Then follow songs suited to initiation—good and appropriate—and right here I must say, that after once enjoying the addition of music to these ceremonies, Patrons will consider it indispensable, and be willing to make some effort to secure it. So be sure to learn the songs for initiation and try the effect for yourselves.

The pleasantest evenings we have spent, the past winter, have been those in which we gave private concerts, rehearsing Grange songs; are the practical lessons they contain as wholesome for the family as the Grange. They are suited to the kitchen and the field, where at least, practice may render perfect what we are to execute in public.

If something stirring is desired, be sure and learn "Heartily Let us Join in Singing," page 32, and nobody will feel drowsy during the remainder of the exercises. The sentiment of the song on page 36 is one to live by:

"Do not harshly judge your neighbor,
Do not deem his life untrue,
If he makes no great pretensions;
Deeds are great, though words are few."

Which teaches a lesson of charity that we are very likely to need. Another piece on which a good deal of force may be expended, is "The plow, Spade and Hoe." The air, "The Red, White and Blue," enables us to give all desired emphasis to the sentiment:

"The Farmer is the chief of the nation,
The oldest of nobles is he!" etc.

Be sure and sing the last stanza if others are omitted:

"Then sing me the life of a farmer,
With comfort and health in his train,
And heed not the voice of the charmer
That whispers of speedier gain."

There is a good parting song on page 47, set to a pleasing and familiar air:

"Come Patrons let us join our hands
Around our sacred shrine;
We pledge to each fraternal love,
As sacred and divine."

"Fraternal love." Do we consider the need we have to strengthen that golden band, and that everything that tends to weld its links more firmly together, renders it more certain that our Order is to be indefinitely perpetuated? The 49th page will repay our notice, short as the tune is:

"We must not hope to be mowers,
And to gather the ripe, golden ears,
Unless we have first been sowers,
And watered the furrows with tears."

On page 23 is a song of kindred import, teaching a lesson it is especially fitting that Patrons should study:

"Are we sowing seeds of kindness?
They shall blossom bright ere long.
Are we sowing seeds of discord?
They shall ripen into wrong."

It is probable that no indignity is meant in making the beautiful words of Lucy Lacombe, page 52, jingle to the tune of "Yankee Doodle," which has the not-to-be-despised merit of being familiar. "The Gleaner," on page 55, will carry singers of the "old school" back to days "Lang Syne," and will not displease those of the new.

Hymns appropriate for the funeral service

follow, and who of us would not be missed and mourned in the words of song by our fellow Patrons? We must not pass unnoticed, Longfellow's "Psalm of Life," page 60; the words of which were so indelibly impressed upon the memories of our childhood. It is good to sing with emphasis, the noble words:

"Let us then be up and doing
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait."

I suppose we must all learn the "Harvest Song," and it doesn't look very difficult; see page 62. The "Patrons Social Song," page 64, embodies good Brother Garretson's ideas of the prime object of the Grange.

I wish that every Granger in the State could have heard his exhortation, to sociality and brotherly love last October, at San Jose. And is it not almost a "fulfilling of the law?" "To love our neighbor as ourself" would indeed, be a dawn of the millennium. Then let us sing for Brother Garretson's sake:

"Brothers and Sisters, Patrons dear,
We've met for sweet communion;
For 'tis the social tie that binds,
And makes a perfect union."

On page 68 is a favorite, from being sung so often during the last session of the State Grange. Words adapted to the air, "The Sweet Bye-and-Bye." So we shall sing that for old association's sake. But it is reserved for page 74, "The Hand that holds the Bread," to excite the highest musical enthusiasm. Let us all learn it before the next State meeting, and we will make the good town of Stockton ring with

"Brothers of the Plow! the power is with you,
The World in expectation waits for action prompt and true."

"Rally round the Grange," (page 80), is the old familiar song of the Union boys, with words adapted to that Grange. I think almost any of us would forget that we were "not much of a hand at singing," if some one would lead off in that. "Pomona," (page 82), is spirited and excellent as it should be.

More funeral hymns.

On page 86 is another opening song—air "Bonnie Dundee." If it isn't familiar already, better learn it. "Hail to the farmer," page 88, looks as if it might be good; the sentiment certainly is. Another closing song on page 90. We learned it to please the Master of our Grange. It will repay any one the trouble to do the same.

This does not bring us quite to the end, but if we learn all the foregoing, we shall not have to sing "The Yellow Corn," page 98, quite as often at the next meeting of the State Grange as at the last.

HANNAH,
Nord, Butte county, Cal., March 10th, 1874.

Address.

[Read Feb. 28th, before the Potter Valley Grange, P. of H., at their Harvest Feast, by Mrs. C. I. H. Nichols, and by vote of its members requested for publication in the RURAL PRESS.]

WORTHY MASTER, BROTHERS AND SISTERS:—I do not propose in this brief paper to discuss the oppressions of monied monopolies or filching middlemen, nor yet to reconnoiter the financial "corners" where "bulls" and "bears" lie in wait to devour each other in default of other prey.

It is enough to say that the ostensible object of the Patrons of Husbandry is the stopping by just legislation, and economic measures, of ruinous leakages and waste, by organized effort to save to its members in several ways, means won by them in honest and persistent toil.

But, while such is the exterior bond of our organization, it is in its interior uses, that our organization breathes and becomes a living soul. Thorough-bred in its inception, it tolerates no mongrel issues, and already foreshadows a glorious social supremacy of simple manners and intrinsic worth.

Within the last twenty-five years a significant change has been wrought in the social relations of the working classes; a change undoubtedly initiated by that political equality which stimulates proper self-respect to strive for the social equality made possible through an intelligent and legitimate use of political rights.

The common school—that "right bower" of our Republican Government—has whetted the intellectual appetites of the sons and daughters, aided by books and periodical literature, till the cosy kitchens and living rooms of the industrial classes have become nurseries of learning and miniature forums, where the gravest questions of social science and political economy are debated as earnestly, as the caricatures of Nast or the latest fashions.

Of the industrial classes, the agriculturists are by far the most numerous; and, being the food producers for all other classes of citizens, their prosperity is identical with the general good. On this class ultimately depends the destiny of the State. Its financial prosperity must assure the credit of the State; its virtue and intelligence guarantee the perpetuity of its free institutions.

In discussing the uses of the Grange in the direction I have chosen for the subject of this paper, it will be necessary to briefly review the past and present relations of the farming population with other industrial classes. Within the last twenty-five years the agriculturists have gradually awakened to the fact, that instead of advancing with the classes dependent for subsistence upon the productions of their labor, instead of enjoying equally with these classes, the fruits of their own hard toil, they were being left behind in the social progress of the age, impoverished financially, and esteemed

light weights in the political balance. In the early days of the republic, the highest offices of State, from the Presidential down, were, to a noticeable extent, filled by practical farmers, which class was also in the ascendant in legislative bodies; but all this gradually changed, and how?

The first departure was evidently an educational one—a general neglect of the knowledge which is power—power to cultivate their own interests, and command the respectful consideration of the classes dependent upon them for bread and the raw material wherewith to be clothed. The fault was not entirely with the farmers. Living on farms the population was necessarily sparse, the *per capita* school tax comparatively small. The result was short school-terms, poorly qualified teachers, and long distances for the farmers' children, who, at an early age, are so useful in the light work of a farm as to tempt parents to keep them at work when they should be at school. On the other hand, children of merchants, mechanics and business men living in villages and towns, enjoyed long school terms, superior teachers, and instruction in branches adapted to fit them for the callings of their father's, or to enter upon the study of the professions. The occupations of these classes being eminently social, developed general business capacities, sharpened their combative wits, cultivated the power of expression, and made it of practical use to them in getting up, and on in the world. And they improved these advantages to their financial and political advancement. Representative men among them—grown rich on credit, on government contracts, on "fancy stocks," on fat salaries or exorbitant professional fees—took possession of legislation, and eventually put the bars up behind them, by incorporation and endowing gigantic monopolies, to prey upon labor, and defeat the ends of rightful self-government. Such as had axes to grind, labored to elect men who would grind them, men who would shift the burdens of taxation from their business interests to the lands, improvements, and growing crops, even of the farmer; and the result to him has been pecuniary embarrassment, and loss of social and political influence.

"God made the country, man made the town." So the classes living in populous towns and villages, buying, selling and manufacturing, rubbed against each other and grew wise in man's wisdom—the wisdom of self-aggrandizement—while the farmer, communing and co-operating with the silent forces of nature, in the culture of his fields, walked and talked with the Great Unseen, grew humble, self-distrustful, cautious and reticent. The difference extended to his apparel, and his manners, even. Both his work and his income forbade expensive dress. His simple tastes were averse to the greedy and unnatural, and his intercourse with his kind, being almost exclusively limited to the friendly relations of family and neighborhood, cultivated the simple and direct in speech. Swinging the axe, following the plow, sowing and hoeing, reaping and binding, he necessarily acquires habits of locomotion, in marked contrast with the quick, restless movements of townsmen, whose business, full of uncertainties and snap-chances, keeps them ever on the alert, disciplines all their faculties for competitive effect, and makes their speech a fascinating plea for profitable bargains.

"There is yet another phase of this subject which demands our best thought," said a thrifty and observant German. "Mrs. Nichols, what Kansas needs, is the children. When the farmers' children are of an age to help them, they will get ahead." Aye, "here's the rub!" The farmers' children make haste to get away from an occupation which, to their consciousness, means less education, less social consideration, more toil, more privation, bare homes, patches and hands and feet awkwardly in the way when they would fain exhibit ease of manners and grace of movement, or, "tripping the light fantastic toe," in social gatherings, break up the shambling-gait of the furrow.

It is in vain for us to represent to them, the necessity of submission to social disadvantages, which, as they see life, can be avoided by entering up on other pursuits. What then shall we do to keep our children on the farm? Emulate city manners and city fashions and ignore the superiority of a country-developed humanity to the empty shams, that may disguise, but never atone for wasted heart? God forbid that we should barter an iota of the enduring charm of well-trained minds, and honest, kindly hearts, for semi-barbaric adornment, and the superficial accomplishments and eclat of fashion's "rings." But clearly we must abate the grievances of which they justly complain; and, the first and indispensable step is educational. We must abjure the prevalent and mischievous idea, that for farmers and farmer's wives, "book-learning" is unnecessary. For, even though it were not necessary to the successful prosecution of farm and household duties, it is vital to the highest personal and social enjoyment, and arms and equips us to overcome the wrong and speed the right. To this end books, papers, periodicals, scientific and literary, historical and political and agricultural, must find place beside the Bible and Psalm-book in our homes.

Next in order, but not less important, we must act upon the significant fact, that the Master above, when he planted corn and potatoes, also strewed flowers with a liberal hand; and, in the rugged cañons and mountains, as bright and beautiful as on the prairies and the plains, or by the babbling brook. And reverently let us take to heart the divine truth, that

wherever it has been worth His while to bestow a taste or faculty, and create objects or means for their gratification, it is no less worth our while to gratify the taste and train the faculty for its legitimate uses. Time admonishes me that I may not dwell longer upon the educational topic, but I would suggest, that by increased economy—not privations—in our personal and household expenses, something may be saved to carry out my propositions for home education. We might expend less in the non-essentials of dress; save time, for reading and study, in making and remodeling, by purchasing more durable materials, choosing the neat and inexpensive, with an eye to personal becomingness in colors and fashions, that would commend us to good taste, whatever the vagaries of French fashion.

Socially there is a great deal which we desire to be saved from, and more yet from which we ought to be saved. It is said "there is a skeleton in everybody's closet." Some of us, I fear, have more than one. Let it be the work of the Grange to give them Christian burial. The skeleton of skeletons is Mrs. Grundy. Indeed, I am of the opinion, that if her cranky old bones were buried at some cross-road, all the other skeletons put together would not pay closet-room. It is fear of what Mrs. Grundy will say, that sets all the other skeletons rattling. For instance Mrs. B. has a sufficient "head of hair," but the fashion demands a bale additional, and at an expense of comfort, time and money, which she feels ill able to afford. But Mrs. Grundy rattles her bones, and poor Mrs. B. makes haste to obey, and puts another skeleton in her closet. "Oh dear!" sigh Mary and Alice and Sophy, "these new fashioned dresses are awful! Panniers indeed!" But Mrs. Grundy rattles again, and the panniers are mounted on their backs, and skeleton number two is packed away in the wardrobe closet to hold telegraphic communication with skeleton number three in the depleted family purse. "Heaven save us from Mrs. Grundy!" No, good friends, we must save ourselves. Singly we have not the courage to defy her, but as "rods in bundles" we can whip her out. In conclusion, let me say, we have the sick among us—sick of heart—(who among us is exempt from attacks of the malady) to whom "the face of a friend doeth good as a medicine." Let us make the Grange a grand dispensary for this most excellent curative administered in allopathic measure.

New Grange.

RUTHERFORD GRANGE, YOUNTVILLE, NAPA CO., was organized by State Secretary, W. H. Baxter, on the 14th inst., with 29 charter members. The following is the list of officers: G. S. Burge, M.; T. B. Eddington, O.; C. W. Smith, L.; W. H. Sanders, S.; Adda Carbb, A. S.; T. Chopson, C.; H. W. Crabb, Sec.; John Bateman, T.; J. R. Garner, G. K.; Elizabeth Crabb, Ceres; Candace Ross, Pomona; Malvina Eddington, Flora; Mary A. Smith, L. A. S.

THE LOS ANGELES GRANGE CO-OPERATIVE COMPANY have elected the following officers: President, G. D. Compton, of Compton; Vice-President, Thos. A. Garey, of Los Angeles; Secretary, L. M. Holt, of Los Angeles; Treasurer, J. E. McComas, of Compton; Executive Committee, Cyrus Burdick, of Spadra; Edward Evey, of Anaheim, and H. L. Montgomery, of Gallatin. The election of a General Manager was postponed until the election of the new Board of Directors, which will take place at the annual meeting of stockholders to be held in this city on Tuesday, May 5th. A majority of the stock is now subscribed and the Secretary has been instructed to get the necessary printing, a seal, etc., ready for business. The first payment, of five dollars per share, is payable to the Secretary on or before the first day of April next.

GRANGE WAREHOUSE AT MODESTO.—The Patrons of Stanislaus county, have completed the organization of an incorporate company. The name and title of the corporation is that of the Grange Company of Modesto; capital stock, \$100,000, divided in shares of \$100 each; object, to build a warehouse at Modesto, and transact a general commission business. The Directors are E. B. Beard, C. J. Cressy, Dr. T. E. Tynan, Theodore Turner, B. P. Hugin, G. Turner, R. B. Warder, C. C. Luther, J. B. Brigg, F. H. Ross and W. C. Collins.

THE SOLANO COUNTY PATRONS, it is reported, have resolved that Solano county ought to be divided, as the people of the northern and eastern portion of the county are almost exclusively engaged in agricultural pursuits, while those in the city of Vallejo are almost entirely engaged in commerce—the interests of both being in a great measure antagonistic.

THE SANTA CLARA COUNCIL, so it is stated, will memorialize Congress for a suspension of the duty on machinery and in the manufacture of jute, etc. By reference to another column it will be noticed that the San José Farmers' Club have also taken action in this matter.

ANTIOCH GRANGE, CONTRA COSTA, is reported to be in a prosperous condition, and increasing rapidly, Captain Kimball, Lecturer, has donated a lot in town for the erection of a Grange hall. Last Saturday six candidates received the first degree.

THE PATRONS OF OREGON are very generally organizing into county councils.

From the Granges.

TOMALES GRANGE, MARIN COUNTY.—Bro. A. B. Glover, Secretary of Bloomfield Grange, who sends us a word from that, also adds the following from Tomales Grange:—"I had the pleasure of meeting with the Tomales Grange, at their last harvest feast, and a feast it was, such a one as the ladies of Tomales know so well how to get up. The table was full and overflowing, decorated with beautiful flowers from the gardens of the sisters. There were more than twelve baskets left, after all had partook to their heart's content. This Grange is truly in fine working order. It has an efficient set of officers, and a membership that will compare favorably in point of intelligence, with any Grange in the State. I should not be surprised if it soon became the banner Grange of the State, both in numbers and discipline. It now numbers 87, with a class of about thirty more on the way. The Master, Wm. Vanderbilt, is one of the most energetic men of Marin county; whatever he undertakes, he does well, and the Tomales Grange may well be proud of their Worthy Master. Many thanks to our Worthy Sisters and Brothers of Tomales, for the many kindnesses extended to our Grange—Bloomfield—and may we continue to work, not only hand to hand, but heart to heart, until the sons and daughters of the farmers shall be united and interblended, to sow the seeds of purity for the benefit of the rising generation."

BLOOMFIELD GRANGE, SONOMA, CO.—A. B. Glover, Secretary, writes: "Our Grange is progressing finely. We found that our hall did not grow with our Grange, and were consequently obliged to procure a larger one. We had a harvest feast in our new hall last Thursday, the fifth inst., when fifteen persons were initiated to the fourth degree. We now number fifty-five, with a class made up for our next meeting. Our Tomales brothers and sisters are very friendly, and often come up to assist us in our new work. So, on we go, hand in hand, reinstating the farmer and his wife, as well as sons and daughters, to the position assigned them by the Grand Master of the universe. Every one takes hold with a determination to do all in his or her power to advance the interests of our glorious cause. We have to return many thanks to our Worthy Master, Wm. White, who first started the Grange movement here."

BAKERSFIELD GRANGE, KERN COUNTY.—Jerome Troy, Secretary of this Grange, writes: "Our Grange was organized on the 22d of December last, with 30 charter members; but not having any hall of our own, we have been much troubled to get a suitable place in which to meet. We have been obliged to move several times, thereby causing many inconveniences, and discouraging many members from coming out regular. At present, we have made arrangements to procure the use of Town Hall, which will give us more room, and we hope that members will take more interest in attending our meetings. We meet every other Tuesday in each month." [We are much obliged for the efforts of Bro. Troy in behalf of the RURAL PRESS.]

SUNOL GRANGE, ALAMEDA COUNTY.—C. J. Vandervoort, Lecturer, writes that a movement is on foot for the erection of a hall for this Grange, at Sunol Station. The Alameda County Council met at the hall of this Grange, on Tuesday last. In giving the names of the officers of this Grange, last week, several errors having occurred, we here re-print them correctly: E. M. Carr, M.; B. F. Cooper, O.; C. J. Vandervoort, L.; Leon E. Jones, S.; D. W. Baker, A. S.; S. W. Millard, Sec.; Chas. Duorr, T.; Peter Canavan, C.; Geo. Gregory, G. K.; Mrs. A. M. Hadsell, Ceres; Mrs. Baker, Pomona; Mrs. Blake, Flora; Miss Lena Baker, L. A. S.

FRANKLIN GRANGE, FRANKLIN, SACRAMENTO COUNTY.—Amos Adams, Master of this Grange, writes as follows: Our Grange is situated in a neighborhood where there is a large amount of dairy carried on. Several persons who are extensively engaged in the dairy business are members of our Grange; all express the wish that some one acquainted with the business would start a cheese factory, at or near this place. Liberal inducements would be offered to those desirous to engage in cheese making here. The milk from five to eight hundred cows can be obtained.

THE SEWING MACHINE QUESTION.—We have received notices during the past week from Centerville Grange, Centerville, in Alameda county, from Buckeye Grange, Yolo county, and from Florin Grange, Sacramento county, announcing that each of these Granges have passed resolutions in response to the circular from Dixon Grange, in relation to the sewing machine matter. In each case a request accompanied the resolutions, asking their publication in the RURAL PRESS; but, as they all refer to the same matter, in essentially the same language, our correspondents will excuse us for merely making a general notice of such action, as above.

HOLLISTER GRANGE.—We see it stated that Hollister Grange proposes to double its membership in a short time. Doubling will give them a membership of 200.

THE ORDER IN COLORADO.—Some of our exchanges report 1,200 Granges in Colorado. We think this number must be greatly exaggerated.

Constitution and By-Laws of Solano County Council.

At a meeting of Solano county Council, Patrons of Husbandry, held in Suisun City, March 10th, 1874, the following Constitution and By-Laws were adopted:

ARTICLE 1. This Association shall be known as the Solano County Council, Patrons of Husbandry.

ART. 2. The objects of this Association, are for the purpose of facilitating the transactions of business, in buying, selling and shipping, and for such other purposes as may seem for the good of the order.

ART. 3. This Council shall be composed of delegates from the Subordinate Granges, as follows: One for each Grange, and one for each thirty members, and one for each fraction of thirty, equal to fifteen or over, who shall be elected by the Subordinate Granges, for one year. Each Subordinate Grange may also elect an equal number of alternates, who may, in the absence of the regular members of the Council representing such Grange, act as representative alternates, and may at any time take part in the deliberations of the Council, but shall not be allowed a vote, except in the absence of regular delegates.

ART. 4. The officers of this Council shall consist of a Master, Overseer, Chaplain, Lecturer, Secretary, Treasurer, Steward, Assistant Steward, Gate Keeper and one Trustee from each Grange represented; neither of whom shall receive pay for services rendered, excepting the Secretary, and neither of the Trustees shall be Secretary or Treasurer.

ART. 5. Each delegate shall have one vote but no proxies shall be allowed except as prescribed in Art. 3 of this constitution. No delegate shall be allowed, under any circumstances, to cast the vote of any one or more absent delegates.

ART. 6. Each Subordinate Grange represented in this Council shall pay to the Treasurer an annual due of one dollar for each representative. And members of Subordinate Granges doing business through the agent appointed by this Council shall pay to said agent such a percentage as the Council may prescribe.

ART. 7. This Council shall hold regular meetings at such place as may be designated by the Council on the second Tuesday in January, April, July and October, of each year, and at such other times as the Council may adjourn to. This Council may be convened at any time upon the written request of a majority of the trustees. Upon the receipt of such request, the Master shall order the Secretary to convene the Council by giving at least one week's notice to each one of the members of this Council. At such called meetings the Council may do any business except amending or altering this Constitution which shall be done only at a regular meeting.

ART. 8. Nine members shall constitute a quorum for the transaction of business.

ART. 9. The officers of this Council shall be elected by ballot, at the first regular meeting in each year.

ART. 10. The duties of the Master shall be to preside at the meetings of the Council, sign all orders on the Treasurer, and such other duties as usually devolve upon this office.

ART. 11. It shall be the duty of the Overseer to preside in the absence of the Master.

ART. 12. It shall be the duty of the Secretary to keep an accurate record of the proceedings of this Council, and the account with the members, and draw and countersign all orders on the Treasurer, and have his books ready at all times for inspection by the Trustees or any member of the Council, and shall convene the Council when ordered to do so by the Master.

ART. 13. It shall be the duty of the Treasurer to receive all moneys due the Council, giving duplicate receipts for the same, one of which shall be sent to the Secretary by the party receiving them, pay all orders signed by the Master and countersigned by the Secretary, and allow the Trustees or any member of the Council to examine his books at any time, and shall give bonds in such sums as the Trustees may require.

ART. 14. It shall be the duty of the Trustees to employ an agent when deemed necessary by the Council, and who shall be confirmed by the Council, and shall give bonds in such sums as deemed necessary by the Trustees, and whose duties shall be defined by the Trustees, and who shall receive such compensation as may be allowed by the Council. The Trustees shall also have a general supervision over the business of the Council.

ART. 15. No person shall sit as a member of this Council, or act as Trustee, unless they are fourth-degree members in good standing, in some Subordinate Grange entitled to representation in this Council.

ART. 16. The rules of order for this Council shall be those prescribed in the Constitution and By-Laws of Subordinate Granges.

ART. 17. Any person who may be elected to any office in this Council, and who shall fail to attend three successive regular meetings without sufficient excuse, shall be deemed to have resigned his office, and the Council may proceed to fill the vacancy.

ART. 18. This Constitution shall be in force from, and after, its adoption by this Council.

ART. 19. This Constitution may be amended or revised at any regular meeting of the Council, by a vote of two-thirds of the members present, provided notice of such change was given at the last preceding regular meeting.

ANOTHER COUNCIL.—The Patrons of Sacramento, El Dorado and Placer, are taking steps for the organization of a District Council, to embrace the three counties named.

SANTA CRUZ.—The Sentinel office has recently been moved into new and commodious rooms. It is now one of the largest weeklies in the State. A lively interest in the wellfare of Santa Cruz city and county is manifested by its proprietors. Railroads and other improvements are destined to hasten the permanent growth of Santa Cruz.

RAY GRASS.—The Gilroy Advocate refers to a new kind of grass, called the "Ray" grass, grown in that section. It says of a specimen, that it is of this year's growth and stands nearly three feet high. It is perennial, and has the advantage over alfalfa, that squirrels, gophers or frost do not molest or affect it, while the yield is nearly, if not quite as abundant.

WALLA WALLA WHEAT.—From our best sources of information, we are led to believe there is at least 11,500 tons of surplus wheat in this valley. There is about 800 tons stored at Wallula, and there is thought to be about 10,700 tons still on the farms. Last fall wheat was worth \$2 per cental in Portland—now only \$1.65.—Union.

FARMER'S WAREHOUSE AT YUBA CITY.—The stockholders of the Farmer's co-operative Union, of Sutter county recently met at Yuba City yesterday, to consider the matter of erecting a farmer's storehouse, where grain can be stored safely and shipped from, without handling or hauling a second time.

FARMERS IN COUNCIL.

San Jose Farmers' Club.

The Club met at the usual hour Saturday, March 14th, and was called to order by President Casey.

The Committee on the proposed jute memorial reported as follows:

The Committee appointed by your honorable body to investigate the propriety of asking Congress to repeal the duty on sacks, and the raw material for making sacks, and also to suspend the duty on the machinery to manufacture jute into sacking, beg leave to make the following report: The farmers of California have to labor under the oppressive system of a high protective tariff. The mechanics, day laborers and farmers, are consumers, and have to pay as such, the immense revenue collected by the Government.

You will readily see the magnitude of this subject when we state that the estimated wheat crop of 1873, is not less than thirty millions of bushels, requiring at least fifteen millions of sacks for its shipment, besides those required for barley and oats, and sacking for wool. The carriers refuse to ship our grain in bulk—they offer some reasons as an excuse, which we think are unsound; the leading reason, we think is, they think the farmers are helpless, and will stand more fleecing, and that this treatment will continue in the future as in the past, for there is money in it. The question of the day, with the farmer, mechanic and laborer, is: how are we to get rid of this oppression—look for a moment how many we have to pay tribute to. Jute, (the principal fibre that sacks are made of), is raised in the British Possessions, in India; it is shipped mainly to Dundee, Scotland, there it is manufactured both into cloth and sacks; then shipped to New York, thence to California. After the wheat is sacked, it is shipped either to New York or Europe. Now the duty on burlap is forty per cent., and on sacks thirty-two.

Now, we would ask, after the farmer has passed through the hands of all these Eastern speculators, and still have to contend with wheat kings of California, is it not an easy matter to guess that the farmer has fallen in the contest? And these are the causes why our farmers are poor; and it is no wonder that our homes are mortgaged to our merchants and bankers. The features in all our wrongs, most to be deplored, are those forced upon us by the government, that we pay millions of dollars to annually. The farmer is discriminated against from the cradle until he is housed in the tomb. Talk about railroads discriminating against the farmer, they are but a speck in the horizon compared to the tariffs. Every thing that we use, or consume, that is imported, we pay an indirect tax on. Then on every thing that we use or consume that is produced or made at home, that the tariff protects, we pay an indirect tax. This theory is practiced upon the laudable plea that the manufacturer must be protected against the cheap labor of Europe; and we, boasting of forty millions of inhabitants, asking for protection. Now, we ask, what is the effect of this protection? None other, but to make slaves of six millions of toiling farmers. Are they protected as other industries? We answer no. They are forced, after the home demand is supplied, to seek a foreign market. Can we sell in that market and purchase other commodities, that we use or consume, and bring them home free of duty? No; we are treated as aliens. Again, look at the accumulated capital in the manufacturing States, (Where did it come from? Out of the hard earnings of the consumer), so vast in its proportions that it controls legislation, proportions the tariffs to suit themselves. They build railroads and run them, issuing their freight and passenger rates like kings, and none dare to molest. They own a large portion of the untaxable bonds of the government—in fact their moneyed influence and arrogance has reached that point, that they propose and do rule the government. Let a crisis come in money matters, and the first news that comes over the wires is that the Secretary of the Treasury has been to New York or Boston, or both places, to consult the moneyed lords as to how the government shall be run; as a matter in course their advice will be impartial.

It may be said that the consumer has no right to complain, that these gentlemen are operating with their own money. That may be legally true. But there is another fact equally true, that we have been legally robbed out of this vast capital, through this unnatural tariff.

The true theory of all governments should be equal and direct taxation. Now, suppose our government should undertake to levy by a direct tax to the amount that is now raised by indirect taxation. Would the people stand it for a single day? We think not. Then the present mode is unjust, and discriminates against the farmer. And as farmers of the Pacific Coast, we still have a right to set forth our grievances by way of petition to Congress, and we recommend that you do, setting forth that the duty on jute and sacks is oppressive, and ought to be repealed. But if that boon can not be granted, we then ask that the duty on the machinery for manufacturing sacking be suspended for two years, for the Pacific Coast; and that you ask the members in both houses of Congress to see that our wishes are promptly attended to. We now ask the ques-

tion: How long will the farmers suffer these wrongs? Will the present organizing of farmers in this and other States, take hold of this, and other great questions, that deeply interest us, and see that justice is meted out to the producer and consumer; or, will they waste their time and strength on less important ones?

We ask the farmers all over the State to join us in asking Congress to do us justice in this matter.

COLEMAN YOUNGER,
A. C. EKERSON.

After some discussion the report was adopted. Action in relation to appointing a Committee to memorialize the Legislature to bring the matter of suspending the duty on jute machinery for two years, before Congress, was postponed.

The Committee on the school question made a majority report of progress which will come up for discussion next week, no action being taken in the matter by the Club, owing to the slim attendance.

The report, which was in the form of a petition to the Legislature, asked that the office of State Superintendent be merged in that of the Governor's, without raising the Governor's salary or the addition of a single deputy or clerk; that the office of County Superintendent be merged in that of County Auditor. The petitioners believed that much of the present school law is complicated, works unequally and oppressively, and should be subjected to a thorough revision. The Trustees should not only be empowered to employ teachers, but to pay them by drawing warrants direct on the County Treasury. The petitioners suggest that money for the erection of school houses should be raised by a tax based on the last year's assessment, instead of incurring the expense of a special assessment; and that the money be paid out on the warrant of the Trustees, and without the intervention of County Superintendent; also, that the Auditor, with two competent citizens elected by the people, compose the Board of Examiners of teachers. The petitioners protest against the policy of appropriating the school moneys as per school census, and also against the passage of the Tuttle bill.

Mr. Holloway desired to have incorporated in the above report, that school trustees be allowed to select text books.—Mercury.

Fares and Freights.

As we have all along intimated, Freeman's bill, regulating fares and freights, has been strangled in the Senate Committee, and a substitute introduced, with a recommendation for its passage, which gives the railroad management all it asks. The general merchandise rates under this bill are about fifty per cent. greater than under the Freeman bill; but it is probably all that can be got through the Senate at its present session. If it passes the House and becomes a law, it will serve as a precedent for similar legislation two years hence, when the people, irritated by two years' longer infliction, will be in far less favorable temper for moderate legislation than now.

The result, as we stated last week, will probably be all the worse for Stanford & Co. Moreover, as another result, we may look for a more general agitation in favor of cheap, narrow-gauge railroads throughout all the great producing valleys of the State, roads that shall be so constructed as to put them forever beyond the control of the managers of the Central Pacific. A beginning has also been made in this direction by the introduction of a bill on Monday last, providing for the construction of a railroad from Marysville to Knight's Landing, in Yolo county, intended as a competing line to the California and Oregon. The county of Yuba subscribed \$100,000 in bonds to the California Pacific, in the hope of obtaining a railroad from Marysville in connection with the road first named. The road was built but transferred to Stanford. Two years ago the flood carried away a portion of the road, and the same has not subsequently been rebuilt; thus Marysville is to-day without any benefit from her \$100,000. As now contemplated, the projected road will be a narrow-gauge, and that it may not ultimately be gobbled by the Central Pacific, the franchise is to be given to prominent citizens of Marysville. The road will be twenty-five miles in length, and that will bring it to the Sacramento, from whence freight can be transported to the bay by water.

In addition to the new bill already alluded to, the same committee has also introduced a bill providing for a State Board of Transportation, and recommended the passage of the same.

GUMMING IN FRUIT TREES.—Recent investigations by M. Paul Sorauer confirm the theory that this phenomenon is due to the conversion into gum of the secondary layers in the cells and vessels. Not only are the cellular membranes transformed into gum, but new gum is formed from the sap, which is thus diverted from its proper use. The gummy exudation is produced in consequence of the transformation of the secondary layers of the vessels into gum, and from the formation in the woody tissue (as happens normally in the bark) of an abnormal cellular tissue, which speedily becomes converted into gum. The tree so affected forms (by compensation) new wood on the side opposite to the diseased spots. The bark cracks, and hence the justification of the practice of incising the bark. But the cause of the disease—that which disturbs the balance—is unknown.



The Brave Daughter's Defence.

BY F. B. CALLAWAY.

It was a sad day for the neckers. William Necker, the good, honest man, who had risen up at his country's need, and by his wise counsel saved France from financial ruin, was to-day humiliated by the bitter reproaches of his sovereign and the nobility.

His notable corn-laws, which only a great financier could have conceived and executed, had lifted from the nation an enormous debt, and replenished her treasury. Louis XVI rested on Necker to support his tottering throne, and the people looked up to him as the only man who could save France from bankruptcy. Some of his recent acts, however, had excited clamor among the royalists, who were at heart his enemies, and with base ingratitude they now overwhelmed him with unjust censure.

Louise Germaine Necker, who sat in her little boudoir above her father's library, listened with aching heart to his slow, heavy step, as he paced his room wearily to and fro like one who bends under a great burden. Although only a girl of fifteen, she understood well the anguish of his soul. Her love for her father was one of the passions of her life, and all of his sorrows were her sorrow.

It was a stormy day; the rain pattered in a sorrowful monotone against the quaint, old mullioned windows; the winds wailed mournfully around the turrets and gables of the old chateau, and now tossed the branches of neighboring trees wildly against the casements, which rattled and shuddered as with pain.

Louise stood in an oriel window and gazed out fearlessly at the darkening sky and raving storm. It suited her fearless nature, and she loved to watch it in its wildest moods. Her imagination was so vivid that she would see in the flying clouds the *emil* of the storm, whose eyes flashed lightning, and whose chariot wheels rolled like thunder over the sky. She often fancied that she heard the carven gargoles under the eaves shriek when the storm was at the highest, and that the stony lions below crouched low as the foaming rain dashed over their shaggy manes.

At such times as these, beautiful thoughts would thrill her soul like strains of music, and she could dash off whole pages of rhymes which, in a few moments, she would give to the flames. Her father's guests, who were attracted to the bright young girl by her charming ways and sparkling sallies of wit, wondered more at her brilliant talents as an *improvisatore*. At a moment's warning, she would improvise the most charming little songs, accompanying them with music of such beauty and tenderness that her listeners were always enraptured.

But there was no poetry in her soul now. Her father's sorrow seemed to crush all joy out of her young life. Now and then, as the storm lulled, she could hear her mother trying in vain to comfort him. She threw herself on a low couch and sobbed passionately. Oh! if her father only had some true, noble friend, she thought, to stand up bravely and tell the people what he had done for them, what a preserver he had been to France in her hour of need! But who was brave enough to face the strong tide of the royalist's reproaches? None! no, not one could she think of in her sorrow.

She remembered the cruel words of malice which her father had read to them from the morning journals, and they seemed to burn themselves into her brain. She leaned her head on her hands and tried to think of something she could do to help her father. If she were a king, she would have his enemies banished to the farthest corners of the earth. If she were a general at the head of an army, she would destroy them. If she were only a soldier, she would make them answer for those bitter, unjust words at the point of a bayonet. But she was neither a king, a general, or a soldier—she was only a

little girl—there was only one weapon at her command. Would it avail?

Her whole face was illumined with a glorious thought. Springing to her feet, she ran to lock her doors, then wheeled a little writing desk into her favorite oriel window. For a few moments she sat leaning her face upon her hands. The wind rattled her casement, the rain hurried past; the flying cloud-genii peered curiously in, but none could divine her thoughts. She might have been asking help from Him who is a stronghold in the day of trouble. Her arm was weak, but His was strong.

She commenced writing. The first page was blotted with tears and thrown away. The second shared the same fate. The third page she commenced carefully, writing in a bold, masculine hand. As she wrote on, her father's wrongs rose up vividly before her; her indignation waxed hotter and hotter; bitter sarcasms flashed along her lines. The wild music of the storm, too, pouring in upon her soul, was breathed on every page that left her hand.

She was not a beautiful girl; her features were irregular; her complexion that of the French brunette. But an artist might have chosen to paint her as she sat there in the gray light streaming through the ancient window, her raven curls fastened carelessly back with knots of scarlet ribbon, her cheeks glowing with excitement, her large dark eyes sparkling with soul-fire. There was a radiance of more than beauty in her young face.

It was deep twilight before she finished her work and unlocked her doors. Ringing for a servant, she bade him mail a letter with all speed. "But, *Mademoiselle*," said Pierre, hesitating, "the night is dark and stormy. Must it go?"

"It must!" and Louise Germaine Necker stamped her little foot passionately. "Pierre, the house of the Necker family depends upon it."

"Pardon me, *Mademoiselle*, it shall go," replied Pierre.

"You have been a soldier, Pierre, and I know you are brave, so I trust you. But listen—no one in Paris must know that you come at a Necker's bidding. And hush!—no one, not even in our own chateau, must suspect your errand."

"You may trust me to keep a secret," said Pierre, bowing gratefully as Louise placed a purse in his hands. Laying her finger warningly on her lips, she then dismissed him.

It seems to Louise as if morning never would come, but it dawned, at last, clear and radiant. A bluer sky never bent over the purple hills and blooming vales of France.

Louise threw open her casement and leaned out to breathe the fresh morning air, fragrant from kissing "rain-awakened flowers." Little children were singing as they gleaned in the fields; distant bells were chiming for matins; and a lark, soaring from his lowly nest, thrilled her heart with his joyful carolings. She fancied that even the grim monsters under the eaves and over the windows of the old chateau, were grinning and leering in the sun-light.

Seeing her father in the garden, she ran down to him to say good morning, and join him in his walk. He smiled as he took her hand, and asked her if she could sing a song which would match that of the lark, for the lark was still soaring and caroling in the blue heavens.

Louise looked up and listened rapturously for a few moments to the blithe music falling upon her with the sunshine; then, as if her heart echoed the ecstasy of the heavenly minstrel, she caroled out this joyous little song:

"I have no wings to fly, birdie,
To soar like thee on high
So far and free.
But my song shall rise, birdie,
Above the sunny skies.
Tri-la! tri-le! tri-le!"

"We both will sing of love, birdie,
I on earth and thou above,
Songs of gloe.
The angels all will hear, birdie,
Our songs so joyous, clear.
Tri-la! tri-le! tri-le!"

"The lark could not do better than that, daughter," said the father, kissing her with pride.

The mail now arrived, and Louise, although a wild hope was beating madly in her breast, dared not trust herself to watch her father as he opened his letters and papers; so she strolled on alone over the lawn skirting a park. Dreamily she watched the golden clouds floating lazily through the blue above her, and commenced to build beautiful air-castles, for this was a favorite pastime of hers. In after years, when she became a great lady, she said to Napoleon once:

"Do you never build castles in the air, General? Do you never go and dwell in them? Do you never dream to charm away the monotony of life?"

"No, madame," said he, "I leave dreams to sleep and retain reason for my waking hours."

"Then," said Louise "you can never be either amused or surprised."

Presently she was called into the breakfast room, where she found her father and mother joyfully talking over some very good news. It seemed that an anonymous article had appeared in one of the morning journals, warmly defending Necker, indignantly reciting his wrongs, and, in beautiful and passionate words, proving that he had done right.

Louise changed color as her father commenced to read the article aloud. Necker paused once or twice as though in surprise, but it was not until he had almost reached the end, that he detected his daughter's style. Throwing the paper aside, he exclaimed, with trembling voice:

"Louise, my brave daughter, you are my defender!"

"Can it be true?" cried her mother, clasping Louise in her arms, while tears of joy sprang to her eyes.

Louise could scarcely answer for weeping. Oh! that was a glad morning for the Necker family. Well might her parents feel proud of Louise. Her eloquent defence struck even her father's enemies with shame. The people loved Necker more than ever before. His daughter had struck mightier blows with her pen than a general could have done with his army.

Louise Germaine Necker is now known as Madame De Stael, a great and wise woman, who loved freedom and stirred the hearts of her countrymen with her own heroic patriotism. Napoleon feared her burning eloquence, and the power of her pen more than the armed hosts of his enemies.

From a girl, she loved to talk of the wonders and beauties of nature, and the immortality of the soul, and she has left France and the world a rich inheritance in her works, so full of beautiful and sublime thoughts—thoughts which will "roll on from soul to soul, for ever."

Don't Do It.

Don't kill the fatted calf too often. Well fed prodigals seldom reform.

Don't poke fun at your wife's relations. Too much levity will disturb the quiet of your home.

Don't educate your children for Congressmen. Better let them "take things easy."

Don't imagine that there is any honor in dabbling in printer's ink. Every counterfeiter "writes for the paper."

Don't chase an idea. Too many of them are caught with another man's ammunition.

Don't commit suicide. There is no honor in taking the life of a fool.

Don't study devilment. It is a saving of time to learn it by intuition.

Don't punish too much bad whisky. It is wrong to injure yourself in order to get your enemy down.

Don't ask the Lord to forgive your enemies. Practice charity a little while on your own account.

Don't spend another man's money too freely. Self-constituted almoners are rarely appreciated.

Don't steal an editor's thoughts. It is wrong to appropriate a man's entire stock of trade, be it ever so small.

IN COOPERSTOWN they tell a story of an English joker who once visited Fenimore Cooper. Cooper was then the most conspicuous man in the little town. One day, while Mr. Cooper was dining with the Englishman, he poured out some native wine—wine from grapes raised in his own garden. Taking up a glass and looking through it with pride, Cooper remarked: "Now, Mr. Stebbins, I call this good, honest wine." "Yes, Mr. Cooper, I agree with you, it is honest wine—'poor but honest.'" Mr. Cooper went on telling his "injun" stories.

APPLES.—It is stated that by a careful analysis it has been found that apples contain a larger amount of phosphorus, or brain food, than any other fruit or vegetable, and on this account they are very important to sedentary men, who work their brain rather than their muscles. They also contain the acids which are needed every day, especially for sedentary men, the action of whose liver is sluggish, to eliminate effete matter, which, if retained in the system, causing jaundice, sleepiness, scurvy and troublesome diseases of the skin.

Debt.

Oh, what misery lies hidden in that one little word—debt. Three-fourths of the suicides are committed on account of pecuniary embarrassments; three-fourths of the defalcations are occasioned by debt; four-fifths of the misery and suffering in the world is brought about by debt. Debt is not always an evidence of extravagance, but extravagance is sure, sooner or later, to lead to debt, debt will lead to dissipation and speculation, which too often terminates in hopeless ruin. How many honest men, by fast living and extravagant habits, have become involved; and then with a hope of extricating themselves have engaged in reckless speculation, which ended in dissipation, shame and disgrace? We know it is almost impossible for some, and more especially the farmer, to live without going in debt at some season of the year; and, we also know that when buying on time, most of men are not half as self-denying as they would be if they were "paying as they go." Merchants know this weakness of humanity; and, if the party is responsible, often insist upon selling this, that or the other, with success, where they would fail if the purchaser had to pay cash up for it. Thus it is that many men unconsciously lay the foundation of their ruin; the end of the year rolls round; and, with it, comes the merchant's statement; his hogs did not bring as much as he expected, the corn or wheat crop was nearly a failure, he had some sickness in his family, and is not prepared to settle in full; the merchant must close his accounts, so he pays what he can spare, and gives his note for the balance; the first downward step is taken, and the chances are that the end of the next year will find him in a worse condition, and step number two in the great descent is taken, to be repeated, year by year, until his farm is mortgaged—sold—the man becomes depressed and changed, his friends are friends no more, and he is forever ruined. This may be considered an overdrawn picture, but to draw it too strongly is a difficult matter, and we feel our inability to do it justice. Debt is a monster, avoid it as you would the bite of the venomous reptile; teach your children to abhor it, "pay as you go," is the only true and absolute policy. We confidently look to the Patrons of Husbandry for a radical reform in this matter as well as in the extortionate rates of interest now charged for the use of money.—*MacComb Granger.*

ODD MINUTES OF WAITING.—While you are arranging the parlor, just have a thought for the visitors who must sometimes wait to see you, and carefully refrain from putting every object of interest beyond their reach. Of course, as a careful hostess, you never mean to keep callers waiting; but, if they come when the baby is on the eve of dropping to sleep, or you are in the midst of planning dinner with the cook, you must wait a little, while they are reduced to staring out of the window, or to an involuntary effort to penetrate some insignificant household secret. The family photograph album is usually regarded as sufficient resource in moments like these, but is there not something akin to indelicacy in allowing strangers and ordinary acquaintances to turn the likenesses of our nearest and dearest; perhaps to criticise them with the freedom of unfamiliarity, or the unsympathy natural to a lack of personal appreciation?

The late magazine, a book of good engravings, a household volume of poetry, a stereoscope and views, photographs of foreign scenes, and a dozen other things, are all good aids to the occupations of stray minutes. Moreover, they often suggest to the visitor and the host topics of conversation more profitable and interesting than the state of the weather or the history of the kitchen.

NOT REMARKABLE.—A Massachusetts farmer says: "My cattle will follow me until I leave the lot, and on the way up to the barn-yard in the evening, stop and call for a lock of hay." Smithson says there is nothing remarkable in that. He went into a barn-yard in the country one day last week, where he had not the slightest acquaintance with the cattle, and the old bull not only followed him till he left the lot, but took the gate off the hinges and raced him to the house in the most familiar manner possible. Smithson says he has no doubt that the old fellow would have called for something if he had waded a little while, but he didn't want to keep the folks waiting dinner, so he hung one tail of his coat and a piece of his pants on the bull's horns and went in the house.

How to Succeed.

The young man who thinks he can carry his boyish pranks into the serious business of life is not a man, and defrauds himself and his employer. "After work, play." That should satisfy the most sanguine. "Business before pleasure," is the motto of the prudent man, whose guide is experience, and it is sufficient for the novice in active life.

But it is despicable to see the young man just starting in life so wedded to his former enjoyments as to place them above present duties. Yet this is often the case. The young man, who, to steer his own bark, launches forth on the sea of life, too often looks back on the pleasures he leaves behind; and, forgetful of present duties, steers back to past enjoyments. There is no royal road to success any more than to knowledge. He who would succeed must work; and, after all, there is more real enjoyment in work; which has a worthy object, than in play or pleasure, intended to kill time. We remarked a few days ago, to a business man whose present means are amply sufficient, but who worked really harder than any of his numerous employes, that he ought to "take it easy." Said he: "I am never so happy as when I have more than I can do. I may wear out in working, but I dread to rust out in idling." He was right. His work was a part of himself, a part of his life, and it was always faithfully done. To apprentices, especially, this earnestness and interest in their work is necessary, if success is ever to be attained.

Laws for the Million.

- A note dated on Sunday is void.
- A note obtained by fraud, or from one intoxicated, cannot be collected.
- If a note be lost or stolen it does not release the maker; he must pay it.
- An indorser of a note is exempt from liability if not served with notice of its non-payment.
- A note made by a minor is void.
- Notes bear interest only when so stated.
- Principals are responsible for their agents.
- Each individual in partnership is responsible for the whole amount of the debt of the firm.
- Ignorance of the law excuses no one.
- It is a fraud to conceal a fraud.
- The law compels no one to do impossibilities.
- An agreement without consideration is void.
- Signatures in lead pencils are good in law.
- A receipt for money is not legally conclusive.
- The acts of one partner bind all others.
- Contracts made on Sunday cannot be enforced.
- A contract made with a minor is void.
- A contract made with a lunatic is void.

A GEORGIA PAPER tells of a queer sort of schoolmaster, named in the usual Southern style, "Colonel" D. B. Graham. He was admitted to the bar as a lawyer in 1832. Soon after he was stricken down with acute rheumatism. He then became paralyzed, his whole body being helpless, except his hands and arms up to the elbows. For a long time he has taught school while lying on his back. His school is in a flourishing condition, and he is making money. Many distinguished persons have graduated from Col. Graham's school. The Colonel was never married. He is about sixty-four years old. He is a fine scholar, and is cousin to Gov. Graham, of North Carolina.

It is as great a mistake for a woman not to care for the looks of what she wears, as it is for her not to care for the condition of the house she presides over, for it is a part of her business to be beautiful, and to present beautiful surroundings to the eyes of others; and, in doing this, in the right spirit, and within proper bounds, she is a real missionary. But very great and gross is the opposite mistake, which confounds good taste with lavish display, and puts appearance before personal comfort and hygienic consideration. Such error in dress matters is like building a fine house and ignoring drainage and the water supply.

A religious paper says that the only wages not reduced in panic times are those of sin.

He is the happiest, be he king or peasant, who finds peace in his home.

Young Folks' Column.

A Trusty Boy.

"A few years ago," says a New York paper, "a large drug firm in this city advertised for a boy. Next day the store was thronged with applicants, and among them came a queer-looking little fellow, accompanied by his aunt, in lieu of faithless parents by whom he had been abandoned. 'Looking at this little waif, the merchant in the store promptly said, 'Can't take him—place all full. Besides he is too small.'"

"I know he is small," said the woman, "but he is willing and faithful." "There was a twinkle in the boy's eyes which made the merchant think again. A partner in the firm volunteered to remark that he did not see what they wanted of such a boy; he wasn't bigger than a pint of cider. But after consultation, the boy was set to work."

"A few days later a call was made on the boys in the store for some one to stay all night. The prompt response of the little fellow contrasted well with the reluctance of others. In the middle of the night the merchant looked in to see if all was right in the store, and presently discovered his youthful *protege* busy scissoring labels. 'What are you doing?' said he. 'I did not tell you to work nights.' "I know you did not tell me so; but I thought I might as well be doing something."

"In the morning the cashier got orders to 'double that boy's wages; for he is *willing*.'"

"Only a few weeks elapsed before a show of wild beasts passed through the streets; and, very naturally, all hands in the store rushed to witness the spectacle. A thief saw his opportunity; and, entered in a rear door to seize something, but in a twinkling found himself firmly clutched by the diminutive clerk aforesaid, and, after a struggle, was captured. Not only was a robbery prevented, but valuable articles taken from other stores were recovered. When asked by the merchant why he staid behind to watch when all others quit their work, the reply was: 'You told me never to leave the store when others were absent; and I thought I'd stay.' Orders were immediately given once more, 'Double that boy's wages; he is *willing and faithful*.' In 1869 that boy was receiving a salary of twenty-five hundred dollars; and, in 1870, had become a partner in the establishment."—*Evangelist*.

"Tom, a word with you." "Be quick then, I'm in a hurry." "What did you give your sick horse 'tother day?" "A pint of turpentine." John hurried home and administered the same dose to his favorite charger, which died in a half an hour. His opinion of Tom's veterinary ability was modified. He met him the next day. "Well, Tom, I gave my horse a pint of turpentine, and it killed him." "So it did mine."

I know men who wouldn't shave on Sunday, but would black their boots. Then I know some who would shave on Sunday, but wouldn't black their boots. And I know of others who wouldn't do either on Sunday, but would shave their neighbors awfully on Monday.

A SUDDEN CLOSE.—A young beau, at his sister's evening party, began to sing, "Why am I so Weak and Weary?" when a little brother brought the performance to a sudden close by yelling out, "Aunt Mary says it's because you come home so late, and drunk most every night!"

FUSS works hard all day, and don't do enny thing, goes to bed tired at night, then gets up next morning, and begins again where she left oph.—*Billings*.

THERE is a time at which lamb becomes mutton. There is a time at which the mint sauce of flirtation has to be discarded for the current jelly of serious intentions.

A MAN was boasting that he had been married for twenty years, and had never given his wife a cross word. Those who know him say he didn't dare to.

BRET HARTE says that "while in the West the broadest humor is encouraged, in the East, outside of certain charming circles, it is dangerous to be funny."

EIGHT hours should be a day's work on a dog churn, the dog to be allowed one day in the week to himself. Let every dog have his day.

Good Health.

Goitre.

In reference to the epidemic of goitre which has broken out among the young soldiers at St. Etienne. Dr. Beigeret has just made a communication to the Académie des Sciences, pointing out the influence of the sulphates in the production of this disease. He states that before the year 1835 all the inhabitants of Saxon in the Valais were either goitrous or cretins. They then drank water derived from a bank of gypsum, which on analysis was found to furnish one gramme of sulphate of lime per litre, besides some sulphate of magnesia. In 1835 the notable water was derived from a spot situated far above the bank of plaster; and since then goitre has much diminished. The children are no longer subject to it, and before long the disease will probably have disappeared.

But how does this fact go to explain the occurrence of goitre at St. Etienne, where the water is of such excessive purity that photographers use it in place of distilled water? It is, in fact, rain-water which falls on the primary rocks of Mount Pilate. The cause is to be sought for in the excess of sulphates which gain access to the circulation through an exaggerated muscular "detrophia" induced by forced exercise. In fact, as long since observed by M. Chevreul, in order for the health of an adult to be maintained good he should weigh the same at the same hour every day—that is to say, that the anatomical elements, the tissues and organs, should receive assimilable principles of an equal weight to that of those which are destroyed, in order to maintain the animal heat and to execute the mechanical work imposed upon them. If what is received does not equal what is expended, consumption or anæmia takes place.

This is what is observed in the goitrous soldiers in barracks who are subjected to excessive work, and who are not fed proportionately to the amount of force they are called on to expend. It is a phenomenon which presents some analogy to what was observed among the French laborers engaged during the construction of the Du Nore Railway, and later in certain factories. On the other hand, we know that when a muscle is employed with force and continuity, or when it is submitted for a certain time to the action of a continuous electrical current, such muscle, burning its own substance, becomes acid, and that the acids produced are the sulphuric and phosphoric, at the expense of the sulphur and phosphorus contained in albuminoid principles. Under the conditions of excessive work, then, a man has circulating in his blood an abnormal amount of sulphates, absolutely the same as if he had drunk water loaded with gypsum. This is what has occurred to the soldiers in the barracks suffering from goitre. In support of this theory M. Bergeret cites analysis of urine, showing that the sulphates precipitated are three or four times more abundant during the existence of goitre than in the normal state.

M. Larrey, in relation to goitre in young soldiers, observed that it, as well as enlargement of the cervical glands, were formerly of much more frequent occurrence than at present, the cravat having been substituted for the stiff military stock formerly in use.—*Druggists' Circular*.

PHYSIOLOGICAL CLASSIFICATION OF FOODS.—The most rational and practical classification is: 1st. Carbonaceous food. 2d. Nitrogenized food. 3d. Phosphorized food. 4th. Fresh vegetables. Of the first bread and butter is the type, and to it belong in general all articles in which starch or flour, fat and sugar predominate. They are the fuel, serving chiefly to sustain the animal heat by the slow combustion of the carbon, given off as carbonic acid in the act of respiration. Consumptive people must use this class of food in abundance. Of the second, roast beef is the type; and, in general, the flesh and blood of quadrupeds, which, when taken in one's stomach, is rather simply absorbed than digested; because, being already muscular ingredients, it needs no elaborate change to be appropriated into our muscular tissues in order to supply their waste. Hard-working people need this in abundance. To the third class belong oysters and fish, especially to be recommended to persons using their brain much. Of the fourth class, lemons and lemon-juice is the type, good for everybody, for reason of the purifying, medicinal effect of fresh vegetables and fruits, stimulating the secreting organs, keeping the system pure, and counteracting all tendency to scrofula, eruptions, indigestion, constipation, etc.—*Manufacturer and Builder*.

DIABETIC BREAD.—M. Dannevy proposes the use of bread made from roasted flour for diabeto patients, instead of gluten biscuit. He asserts that roasted starch cannot be converted into glucose, and that bread made out of the various farinas so torrefied is greedily eaten by patients who have been restricted to the ordinary preparation of gluten until they have become thoroughly disgusted. Moreover, under it use the thirst lessens, and the digestive derangements are markedly ameliorated.

A WRITER in the London *Lancet* thinks that the climate of Southern California is unrivalled in the world for softness, dryness and equality of temperature.

An Ingenious Operation.

We find in the Richmond and Louisville *Medical Journal*, an account of a most ingenious surgical operation, designed to remedy the turning of eyelashes upon the eyeball, in a case of twenty years' standing. The irritation of lashes thus turned in was so great, that the patient had been accustomed to relieve himself by pulling out his lashes. The perpetual irritation had, however, produced opacity of the cornea of one eye, and it was evident that this sad result would have taken place with the other in a short time, had not the following operation been performed: "A very fine curved needle was threaded with a double strand of fine silk; the point of the needle was then entered upon the tarsal border of the lid, at the very spot where the respective hairs emerged from the lid-surface, and, being pushed outward, the front of the needle made its appearance through the skin just above the row of eyelashes. When the needle had traveled the lid, the double thread, with a noose at its free extremity, was drawn upon until the noose was ready to disappear in the lid-tissues. The wild hair was now pushed gently through this noose, and, as the thread was drawn upon until it escaped from the cutaneous surface of the lid, it drew the vicious hair in the same direction, leaving it still attached to its hair-bulb (for this is all-important), but drawn completely through the free border of the lid in a passage made for it by the needle, the point of the hair sticking out in front through the needle puncture. The rationale of the operation is, that the hair drawn through the lid will, by constant traction in its growth, change the position of the hair-bulb, and in this way correct the wild direction which it formerly took, to the serious injury of the patient." The ingenious surgeon who performed this operation was Professor Julian C. Chisholm.

CLOTHING OF INFANTS.—In the first stage of infancy warmth depends on clothing alone, for there is no muscular movement.

Avoid a degree of warmth which produces sensible perspiration.

Flannel and calico are the best materials in all seasons.

Dress the child loosely, and fasten with strings, not with pins.

The umbilical cord, navel, and belly band, require much attention.

Avoid keeping the child's head too warm, or its feet cold.

Avoid chilling the child, or taking it abroad in cold weather.

Attend to the form and size of the child's shoes, so that the feet shall not be cramped.

The practice of plunging infants into cold water, to render them hardy, is exceedingly dangerous.

Let a child's washing be very completely and carefully performed. Keep the child always perfectly clean and neat.

Be very attentive to ventilate the apartment where a child lives, but never expose it to draughts of air.

Begin early to form habits of personal cleanliness and delicacy.—*Ex.*

WHAT IS IN THE BEDROOM.—The importance of ventilating bedrooms is a fact in which everybody is vitally interested, and which few properly appreciate. If two men are to occupy a bedroom during a night, let them step upon weighing-scales as they retire, and then again in the morning, and they will find that their actual weight is at least a pound less in the morning. Frequently there will be a loss of one or two pounds, and the average loss throughout the year will be more than 1 pound; that is, during the night there is a loss of a pound of matter, which has gone off from their bodies, partly from the lungs, and partly through the pores of the skin. The escaped material is carbonic acid and decayed animal matter, or poisonous exhalations.

RAW TURNIPS.—Some one writes the *Herald of Health*: "I have always let my children eat as many raw turnips as they like. I heard a city woman say the other day they were not healthy, and I believe they don't hurt anybody. Will you please settle the dispute for us?" The editor answers: "Generally children are fond of raw turnips, of the flat, white, strap-leaved variety, if taken fresh from the field before very old and tough. If they are scraped with a knife they will not harm healthy, active children. If simply chewed they are not easily digested. As a rule, country children have better appetites and stronger powers of digestion than city children. They get more fresh air and exercise. There is more waste and more want, hence the same rule will not apply to both classes."

CURE FOR CORNS.—The safest, the most accessible, and the most efficient cure of a corn on the toe, is to double a piece of thick, soft buckskin, cut a hole in it large enough to receive the corn, and bind it around the toe. If in addition to this the foot is soaked in warm water for five or more minutes every night and morning, and a few drops of sweet oil, or other oily substance, are patiently rubbed in on the end after the soaking, the corn will almost infallibly become loose enough in a few days to be easily picked out with a finger nail. This saves the necessity of paring the corn, which operation has sometimes been followed with painful and dangerous symptoms. If the corn becomes inconvenient again, repeat the process at once.—*Hall's Journal of Health*.



PUBLISHED BY
DEWEY & CO.
A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.
PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, March 21, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Theatrical Machinery; Tubular Iron Harrows; Tree Planting; Part's Cube Sugar Process, 177. New Patent Butter; More About California Wild Coffee; Legislative Report—State University; The Legislature, 184. Hints on Hop-Growing—No. 2; Lands in the U. S. of Colombia; The Cactus, 185. Patents and Inventions, 185.

ILLUSTRATIONS.—Tubular Iron Harrows, 177. Tree Cactus of Tropical America, 185.

CORRESPONDENCE.—Farm House Chat; A Bachelor at the Cooking Stove; Letter from Marin County; Cottonwood Trees—Another "Interesting Fact;" Letter from Tulare County; Pasture Grasses; San Joaquin Valley Lands; Taxing Growing Crops; Home Industry; Gypsum, 178-9.

SHEEP AND WOOL.—Angora Goat Prospect; Success with Sheep; Wool Growing, 179.

THE VINEYARD.—California Raisins; Grape Cuttings; Grape Culture; Manure for the Grape; Grapes in Italy; Uses of Grapes, 179.

PATRONS OF HUSBANDRY.—Music in the Grange; Address; New Granges; From the Granges; Constitution and By-Laws of Solano County Council; Meetings, Etc., 180-181.

FARMERS IN COUNCIL.—San Jose Farmers' Club; Fare and Freight, 181.

HOME CIRCLE.—The Brave Daughter's Defence; Don't Do It; Apples; Debt; Odd Minutes of Waiting; Not Remarkable; How to Succeed; Laws for the Million, 182-3.

YOUNG FOLKS' COLUMN.—A Trusty Boy; Snadden Close, 183.

GOOD HEALTH.—Gout; Physiological Classification of Foods; Diabetic Bread; An Ingenious Operation; Clothing of Infants; What is in the Bedroom; Raw Turnips; Cure for Corns, 183.

USEFUL INFORMATION.—A Paper and Glass Debate; Ahate's Method of Decorating Wood; Deposits in Boiler Flues; The Preservation of Timber; A Simple Filter; Limpid and Flexible Varnish; Calico Printing; New Theory about Comets; The Action of Acids upon Zinc; Inland Navigation in Japan; Fly Brow; Moth Preventive; Improved Umbrella; Waterproofing Boots; Australian Method of Cooling Water, 186.

POULTRY YARD.—Among the Chicken Aristocracy, 187.

THE DAIRY.—The Cheese Market of 1873; Can't Find Him; Who will Do It, 187.

AGRICULTURAL NOTES from various counties in California and Oregon, 188.

ON FILE.—We acknowledge, with pleasure, the receipt of three articles on the Foothills—Resonances of the Foothills, Rural Homes amongst the Foothills, and Homes in the Foothills, Old Saws, Patty Men and Fireflies; communications from "Granger," Vallejo; S. B. D.; G. K. M.; "Old Kentucky," D. T., Anaheim; C. W. O.; "Farm Hand," Modesto; "San Joaquin Farmer," "Agricola," on Life in the Country; W. L. H., Walnut Creek; also, articles entitled Spurious Grasses, Artie's Prodigy and Ramblings in Napa Valley. We have, in addition, several Grange communications and letters of inquiry, all of which will receive attention.

A CORRESPONDENT at Rio Vista says: "We have had north winds for the last eight days, and it has dried the ground up very fast, and the farmers are out plowing. I took a trip around Swamp Land District, No. 148, last week. It embraces the lower end of Andreas and Brannan Islands. Grain that was sown that way six weeks ago, is up and looks well. It is only a matter of time, when all the tule land will be in a state of cultivation. The largest expense is in building levees and tide gates; when that is done, the land dries out, and the sod or turf can be burnt off, and leave the land ready to be seeded.

STEAM FOR THRESHING.—We learn that in Delaware, and some portions of Pennsylvania, portable engines have been tried for this purpose, and by a judicious arrangement of spark arresters, and exhaust steam in the smoke stack, they seemed to be free from all danger of setting fire to the straw. In this State, where farming is conducted on so large a scale, the use of steam for various purposes about a ranch, and more particularly for this purpose, seems especially to commend itself.

The beet sugar product of Europe was unusually large, and it is now proposed to enter into its manufacture in Ireland.

The New "Patent" Butter.

The public has been very much exercised this week over news from Washington, concerning a California invention, in the shape of churn, with which it was proposed to perform certain miracles in the way of butter making. The inventor, one Budd Smith, converted milk into butter in a few seconds, without the aid of any mixture, and with a loss of only a small quantity of water. One gallon of milk (which weighs a little more than eight pounds) was said to have been converted into 7½ pounds of butter in 30 seconds. The manner in which this was performed was kept a secret by the inventor; but the transformation of milk into butter, was believed to be caused "by galvanic action," and that there was a chemical combination of the different parts of the milk. It is rather remarkable, that whenever any process which develops unaccountable effects, is brought before the public, either electricity or galvanism has to take the blame of the unaccountable results. They are, however, convenient "scape goats" as there is something fascinating and mysterious in the mere name of electricity to the common mind. "Chemical combination of the different parts" is another convenient phrase, which not only mystifies the general public, but leads them to think that the writer is a chemist, which he isn't, or he would not use so vague an expression.

The inventor of the churn referred to, constructs it in three different parts, one fitting into the other, composed of a metallic combination which is kept a secret. The dispatch detailing the statements to which we refer, also stated that the "scientists of the patent office confessed themselves puzzled" and had not yet granted a patent. It is said the inventor has already disposed of rights (before he had any himself) to different parties for large sums varying from \$50,000 to \$80,000, and was only waiting for his patent to dispose of others. Senators and other distinguished men were invited to see the churn in operation and correspondents were writing about it all over the country. One scientific man, in examining it, thought the product, instead of being butter, must be a kind of soap, and he was probably right, as we shall endeavor to show.

We have met several parties in this city who had unbounded faith in the churn, the butter and the inventor. They had turned the handle of the churn themselves and made the butter, afterwards eating it—the butter, not the churn. They pronounced the product excellent butter, with no strange taste and no peculiar appearance. We had grave doubts on the subject, and questioned them closely, especially as to whether any substance was put into the churn. One of them had bought the milk at a corner grocery himself, poured it into the churn and made the butter. On consideration, we concluded that if the churn could make butter out of corner grocery milk it was a wonderful invention indeed; and might, with slight improvements, be able to make butter out of pure water.

The plan of making a pound of butter from a quart of milk is no new thing. Receipts for doing so were sold to confiding farmers, years ago, and companies were formed for making it. In this connection the receipt referred to may be interesting. Take four ounces pulverized alum, half an ounce pulverized gum-arabic, 50 grains pepsin, mix well together, and preserve in a bottle. One pint of good milk requires only one-third of a teaspoonful of this powder. This is put in with the yolk of one fresh egg for every pint of milk and then it is churned, and the result will be half a pound of a mixture of butter and casein for every pint of milk. In order to make a whole pound of butter for each pint of milk, half a pound of good butter for every pint is smuggled into the churn, and the resulting butter will be not only greater in quantity but also better in quality. Butter made by this means is not fatty, it will not stick together, as good butter does; it has not the proper greasy, smooth look, but a dry and crumbly appearance. Of course it is half cheese.

This is only one plan of the many offered to the public. When, however, it is stated that a pound of butter can be made from a pint of milk by simple churning, no ingredients being used, the statements can be taken with a large grain of salt. Milk contains: casein, 3.74 parts; butter, 4.43; milk-sugar, 4.83; water, 86.43, and a saline matter, 0.57. To make butter, therefore, from pure milk, and make bulk for bulk, a miracle must be performed, and water turned into butter.

Butter can be increased in weight or bulk as lard is adulterated. In adulterating lard, from 15 to 40 per cent. of pure water is saponified and made into a solid mass, which as it is incorporated with the lard, is put on the market as lard. It only requires some oil or fat, either animal or vegetable, combined with water and a small per centage of soda. By this means a large per centage of water can be made into butter or anything else, but it is more soap than butter. Any common oil can be used, or the butter particles in milk will answer the same purpose. This new patent churn was very probably made to effect its object by some such means as this. If two or three per cent. of common soda was added to the milk, or placed in the churn, it would saponify the mass, which would naturally take the color of the fatty matter, and in this case give it the color

of butter. There is no important increase of real butter in the churn, although the watery mass which looks like real butter weighs more. If the mass is put into a dish and heated, it appears to us that the true butter will separate from the bulk, or water with which it is blended.

It is stated in dispatches to the dailies that the peculiarities of the churn referred to, and certain things in connection with the sale of rights etc., led to a close investigation, when it was ascertained that the substance which they called butter was produced by placing one pound of butter and the yolk of two eggs into each gallon of milk, and washing the inside of the churn with nitrate of soda. The milk is caused to coagulate into a substance resembling butter by the churning process, and the hot and cold bath into which the churn is successively passed. If so, the whole thing is a fraud. It was the ingredients, not the churn, on which they had to get a patent, and probably these ingredients were already well known. At all events, our dairymen need not tremble lest their business should fall into the hands of the Spring Valley Water Company, any more than they need fear that oleomargarine, or "bull butter" will supersede the old-fashioned original article. Whether Smith makes his butter from one ingredient or another, matters very little, as none of these artificial butters are much better than other artificial products, when compared with the original article.

The Legislature.

If quantity instead of quality would serve the people in legislative matters, it might be said of the people's representatives that they have deserved well of their constituents. Up to the 17th instant 460 bills had been introduced into the Senate, and 670 in the House—making a grand total of 1,130. Nearly all these bills have been printed, and when put together form quite a book, and a good job for the State printer.

The progress made on the question of "Fares and Freights," as well as the report of the Committee on Education, so far as it relates to the State University, will be found alluded to at length in separate articles in another column.

THE REMOVAL OF RAILWAY TRACKS.—An interesting and somewhat lengthy discussion was held in the House, on Monday, in relation to an amendment of the Political Code, so as to declare that railroad companies shall not remove tracks laid, except for the purpose of straightening the line of the road. It was argued that a railroad is a public highway, and not a piece of private property, to use at will, and to destroy at pleasure. The evils which might result from any other theory must be patent to every intelligent person. The privileges acquired by a railroad corporation extend to the building of the road, operating it, and collecting freights and fares at certain fixed rates, to be regulated the same as tolls on an ordinary highway. Such a highway cannot be closed. Otherwise property rights all along its line might be jeopardized, or utterly ruined by the action of persons owning the road. If the owners of a toll road decline to further operate it, such a road becomes public property. It should be the same with a railroad. The bill affixes a heavy penalty on the removal of tracks, for any other purpose than straightening a line. It passed the Assembly by a vote of 38 to 27. The people will watch closely the vote on this bill in the Senate.

"LOCAL OPTION"—WHAT IT MEANS.—The Local Option Bill has passed both Houses, and will become a law by the signature of the Governor. This bill may be considered the first fruits in California of the present woman's crusade in the temperance cause. Under this bill, it will be in the power of a majority of the voters in any township, county or incorporated city, to stop the sale of spirituous liquors, etc. Under this bill, whenever one-fourth the number of the legal voters of any township, incorporated city, or town shall petition the Board of Supervisors of such county, or the county wherein such township, incorporated city, or town is situated, to call a special election, to vote upon the question of "Liquor License," or "No Liquor License," the Board of Supervisors of the county, receiving said petition, are required, within one month after said petition is filed with the Clerk of said Board, to make proclamation for the holding of an election in the township, incorporated city, or town, to decide whether or not any license shall be issued for the sale of liquors within said precinct.

APPROPRIATION FOR THE "GRAND STAND."—The bill appropriating \$15,000 for the construction of a "Grand Stand," on the Agricultural grounds at Sacramento, passed the Senate on Saturday last. We shall soon know what the House will do with it.

GAMES OF CHANCE.—Mr. Norton has done a good thing, in introducing a bill, making it a misdemeanor for a minor to play any game of chance in a saloon, and the house is deserving of much credit for promptly passing it. If we must have saloons, let us at least keep our boys out of them. If we can effect that, an important inroad will be made into the ranks of candidates for hoodlumism.

A TRAINING SHIP.—The bill to provide a ship for the port of San Francisco, in which to train boys for a sea-faring life, has been signed by the Governor, but will not become a law until the Navy Department furnishes the necessary "ship," properly equipped for carrying out the enterprise.

More About California Wild Coffee.

EDITORS PRESS:—I saw in a late number of your valuable paper an article on wild coffee, stating that it was to be found in this, among other counties of California. There are large quantities of the bushes in this town. I carried a quantity of the berries to the editor of the *Amador Ledger*, who wished me to send a few berries with leaves to you. These were picked up under the bushes and were thick on them late in November. I came here last November, and bought a place, a few weeks ago, of 120 acres. I should say there were from two to three hundred of the bushes on it, some over six feet high. As I was accustomed to the cultivation of it for the three years that I resided in Porto Rico, West India Islands, I shall see what I can do with it here. Men who have lived in this town over 20 years did not know the tree, and were surprised when shown the berry. I shall set out some near water and with some irrigation, I see no reason why they won't grow to their full size and be profitable to raise here. The only name I have heard for it here is "cat berry."

Since writing the above, I have been plowing among some of these bushes and find some sprouting from old stumps, six or eight inches in diameter, apparently cut off for fire wood, years ago, by miners. Yours respectfully,
L. W. SPAULDING.

Jackson, Amador county, March 7th.

[The package referred to above came safely to hand. On referring the leaves sent, to illustrations of the leaves of the genuine coffee plant, the similarity is almost perfect. Both the leaves and berries have been examined by Mr. Folingsby, the gentleman who furnished us with the data from which we prepared our article of the 14th ult., and Mr. Morales, Consul at this port for the Republic of Columbia, both of whom, being intimately acquainted with the cultivation of coffee in South America, express an unqualified opinion as to the shrub being a genuine coffee plant, and capable of producing the coffee of commerce. They moreover state that the variety appears to be very superior. The seed having remained upon the ground, through all the rains of the past four months, have lost much of their substance, but are generally perfect in shape. If our correspondent will gather and forward a pound or so at the proper season for gathering, next fall, he will greatly oblige us, and perhaps still further aid in utilizing what appears to be a valuable native product. —EDS. PRESS.]

Legislative Report—State University.

The Committee on Education, A. Higbie, Chairman, has made a report, giving a detailed statement of their visit to the State University, to the Deaf, Dumb and Blind Institution, and to the Normal School at San Jose. The Committee expresses itself as much pleased with the appearance of the new site and grounds of the University, the buildings erected, the class rooms, etc. They also report that the Professors appear to have been faithful in the discharge of their duties.

They recommend that suitable buildings should be erected at Berkeley for the accommodation of the Professors, with their families, and such of the students as choose to remain permanently near the University. The present necessity for spending the day at the University and the night at Oakland, five miles away, is both inconvenient and expensive. In addition to these improvements it is considered very important that arrangements should be made at an early day for practical operations in farming, which would involve the erection of suitable farm buildings, the provision of teams, implements, tools, etc.

The committee say that "the time has come when the farmer and mechanic, and their sons must have equal opportunities, and be as thoroughly educated in their honorable and responsible calling as the lawyer, the physician or the clergyman in their professions." "These facts," adds the Committee, "are realized in Europe."

The Committee appears to differ from the opinion expressed by President Gilman, in his late address before the Legislature, that the Agricultural Colleges in the various States have come short of what should be considered a success. They say:—"We think we are warranted in saying that these colleges may be regarded, everything considered, not only a gratifying success, but as a means of lessening the distance in the educational work between the high and low, the richer and the poorer classes of the community."

The report favors the suggestion contained in the memorial of the Patrons of Husbandry, that the Board of Regents should more fully represent the entire State, by being selected from its different sections, etc.

The Committee hold that the Professor of Agriculture, especially, should have his residence upon the University grounds, and be supplied with the means for imparting practical instruction in the field. They say that those who had authority have "failed to carry into effect propositions made two or three years ago, by which the Professor of Agriculture might carry out this plan," which the Committee think would have been of great advantage to the University. The Committee, however, expressly disavow attaching any fault in the matter to any one connected with the management of the general affairs of the University. "No body to blame," of course.

Hints on Hop-Growing—No. 2.

Adverse Chances.

People who are about embarking in a new enterprise, will hardly expect to have their attention called to the most forbidding features of the undertaking by those who wish them God speed. But we are confident that our hop-growing friends will, at the close of even one year's experience, thank us for pointing out the breakers ahead.

Taking it for granted that money is the chief incentive in the undertaking, we will first glance at the

Commercial Aspect

Of the subject. We here find that the hop market has, through its whole history, presented an irregular record. Probably no farm product has been so utterly unreliable as to its marketable value. In 1867 the hop-growers of Wisconsin received, from eager buyers, 50 to 55 cts. per lb; while, in 1868, their hops went begging purchases at 8 cts. per lb. Only a remarkable concurrence of fatuitous circumstances could have produced this ruinous fall in prices, and the like may never occur again;

Those who make money out of hop-growing, will do so, not really at the expense of their neighbors, but in consequence of their misfortunes.

It will be noticed that some of the hop-growers of California are working with a view to send their hops to England; but, unless the foreign crop fails, in England and Belgium, more especially, there will be little demand there for American hops. During the hop panic in Wisconsin, in 1868, parties who were disgusted with the state of the home market, shipped their hops to England, to be sold on commission. The returns from some lots afforded one cent per pound above costs of transportation, commission, etc., while others fell a few cents short of this bill of costs.

The cost of producing this crop should be considered in connection with the financial aspect of the subject. The expenses will vary but little from year to year. The poles form the most expensive item; but, when these are once provided, they will last for a term of years, longer or shorter, according to variety of wood, and nature of soil. The labor of planting roots, setting poles, cultivating, tying and baling, is no more pressing in its demands

charge of "sermonizing," for religious, political, educational and financial, are among the responsibilities that are thus "shirked." We may, however, be allowed to call the attention of the farming community, and especially those engaged in hop-growing, to the necessity of closely scrutinizing the financial aspect of the enterprise.

Whether the hop-crop of California is to be disposed of by its producers, by middle-men, or by cooperative arrangement, it must be handled judiciously and economically, or the acknowledged fact that we grow the best hops in Eastern or foreign markets will be of little avail.

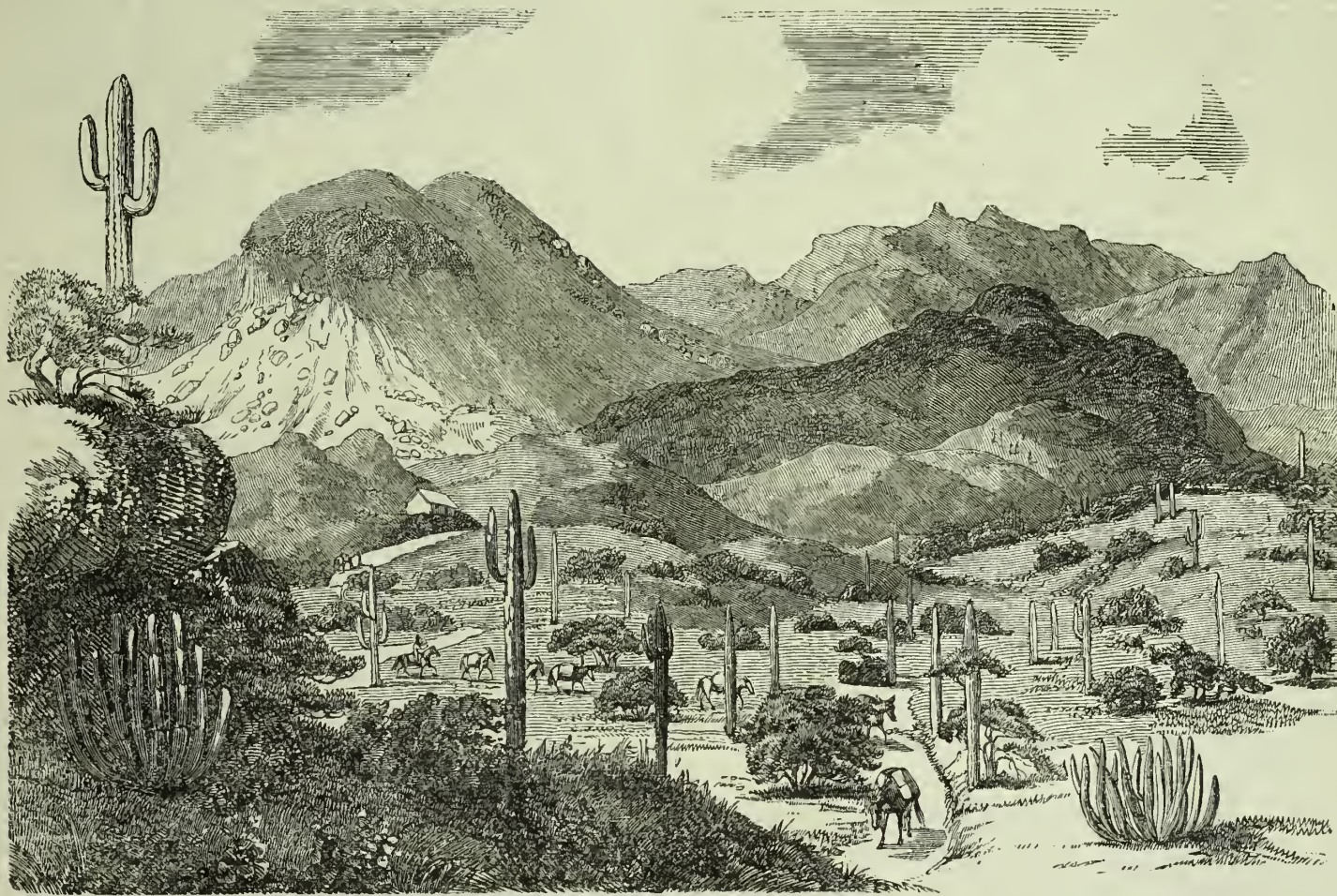
Lands in the U. S. of Colombia.

A number of persons in San Buenaventura, desiring to obtain some information in relation to the Cauca valley, in the State of the same name, in the United States of Colombia, have addressed a letter to the Colombian Consul, in this city, asking certain questions, the answers to which are of public interest. Señor Morales,

The Cactus.

The botanical name for the whole of this most interesting family of plants is *Cactaceæ*. "Indian fig" is a name which is sometimes given to the whole series, from that of a variety. There is a wide difference in appearance between the members of the family; the size ranging from very small plants to that of the huge tree-cactus, figured in our engraving.

Many of the cactuses bear edible fruits, useful as febrifuges, which would seem to be most appropriately placed where they are, in the tropical regions of America. It is remarked of the seeds of the cactus that they are without albumen. The succulent stems of some varieties are, during the dry season, relished by the cattle of certain districts in South America, and, we believe, in our own continent. In Mexico one member of the order is largely cultivated for the sake of the cochineal insects which it nourishes, just as the mulberry trees are for the silkworm, and in many gardens and conservatories of our city can be seen the strange forms of some of the smaller kinds,



TREE CACTUS OF TROPICAL AMERICA.

still, those who have had the most experience in the hop business will, we think, most readily admit that it is the most fluctuating in price of all farm products.

This fluctuation is not owing to variations in the demands of the hop-market; for this demand is particularly unvarying. It is well known how many hops will be wanted for each season, and nothing above what is wanted will be bought; for, although the consumer is ready to lay in a full supply at desirable rates, a much lower scale would not tempt him to provide for wants beyond the coming season, hops being a

Bad Stock to Carry,

Either by consumer or producer. They are not liable to actually spoil and become utterly worthless, but there is a gradual and invariable deterioration produced by age, affecting their strength, flavor and color. Producers, especially, should bear this in mind, and be careful how they attempt to "hold on for better prices." A casual glance at the hop-market reports will convince them of this gradual, but sure depreciation in value which age causes. And we would remark here, that no market requires closer watching than this. The most ready, and also most reliable information on this point, is to be obtained from the *Weekly Hop Circular*, issued by Emmet Wells, New York. It has been accused, in rare instances, of favoring the buyer; but we consider the accusation unjust, and have confidence in its figures and suggestions. We find here that the prices given refer to the new crop, invariably; while the "Olds," the growth of the preceding season, are put at figures considerably lower; and those of still greater age, denominated "Old Olds," range still lower.

The fluctuations of the hop-market should not frighten the hop-grower, for he will often derive unexpected profit from them; for though he may sometimes be compelled to sell a light crop at prices that would scarcely be remunerative with an abundant yield, on the other hand, he will, probably, quite as often be able to dispose of an abundant crop at prices that would bring a good return with even a very poor one.

than ordinary farm labor; but, picking, when it is ready to be done, must be done quickly, the value of the crop depending largely on the hops being picked as soon as possible, after they are ready. This renders it advisable for each grower to procure as many pickers as he can provide for; and, though there is not really any "bidding up" on the prices of picking, a uniform price being generally agreed upon for the season, there is still a competition among growers to secure pickers, which sometimes adds materially to the cost of the product. Pickers become influenced by unwarrantable inducements, and thus becoming, in a degree, demoralized; the cost of procuring and providing for them is materially increased.

But, as we propose to make each of these departments the subject of some special hints, we will dismiss them for the present. We would, however, before taking leave of the financial aspect of hop-growing, urge, most emphatically, upon the farming community, the necessity of making this aspect of every department of agriculture their careful study. They have learned, at their cost, that a large portion of the profits of their products slip through their own fingers and go into the pockets of dealers; but, is this not owing somewhat to their own lack of strict business management? We apprehend that such is the case; and that farmers, while denouncing the greed of middle-men, may take to themselves a little self-reproach for allowing themselves to be thus overreached.

They should watch closely, not only the produce market, but all markets. They may thus be adepts in trade without being tricksters, and become so familiar with strictly business and financial matters, that when they are brought in contact with those who have hitherto taken the lion's share of farm profits, they will be enabled to "head them off," instead of being driven to exclaim, in their desperation: "Off with their heads."

Were we to point out the mistakes that society at large, and especially the working-classes, have made, by delegating their responsibilities, we should possibly lay ourselves open to the

Colombian Consul, has permitted us to see the answers to their questions, from which we condense the following:

The Cauca valley is divided into two parts—upper and lower; the former is elevated some 5,400 feet above the sea and is 90 miles long, (from north to south), by 12 miles in width. This part of the valley is specially adapted to the cultivation of cereals and to stock raising. The lower part is 3,300 feet above tide water, and is some 125 miles long by 15 to 20 wide. This splendid part of the valley is where the city of Cali is situated, containing 15,000 inhabitants; there are also other towns of less importance. This part of the valley is adapted to raising coffee, cocoa, indigo, sugar and, in fact, all tropical and semi-tropical products.

The lands are mainly agricultural, though some mining is carried on. The fertility of the Cauca valley is unparalleled, and the sugar-canes last, without replanting, one hundred years. The indigo gives four cuts a year and is everlasting. The Indian corn and other grains give two crops a year. The tobacco produced in the lower part of the valley equals that of Cuba. The coffee, cocoa and banana plantations yield very abundant crops. There is plenty of natural food for cattle the year round.

The price of land along the valley is from \$2.50 to \$5 per acre, according to the distance from the towns, and it is the opinion of the Consul that it will go higher, on account of the railroad, especially near Cali.

The climate is considered as excellent, and the temperature varies only between 63 degrees and 86 degrees.

The valley has now some 200,000 inhabitants, and, of course, is not yet fully settled up, there being plenty of room for more.

The railroad from Buenaventura to Cali, is being built slowly, but will be finished within two or three years.

THE HOMESTEAD, at Oakland, is now published by Dora Daramore—one of the finest and best of California writers in prose or verse.

grown on account of the brilliancy of their flowers, or the eccentricity of their shape. In all, there are about eight hundred species of cactus, divided into sixteen genera.

The scene which the artist has pictured is one that may be often met with by the traveler in Mexico, and Central and South America. The rugged, bare stems of the tree-cactus, which rise bristling from plain and hill-side, are, in themselves, suggestive of barrenness, and fitting accompaniments to the arid desolateness of the spot. Frequently it happens that the much enduring cactus forms the only vegetation which can exist, and in such places it not only grows, but flourishes, notwithstanding long seasons of uninterrupted dryness. Over vast tracts of country in the lower part of this State the smaller varieties of cactus grow in great profusion. Miles upon miles, unrelieved by other vegetation, may be traversed in our southern counties, until one grows weary of the monotonous uniformity which everywhere meets the eye.

FLAX.—One of the largest producers of flax seed in the State writes under date of March 13th: "This is the only good flax season that I have seen in California. If last year had been like this, it would have been thousands of dollars in my pocket. There are thousands of acres in California that can not be put in wheat or barley, that would bring large crops of flax if sown within a month."

IMPORTANT SALE.—In our last issue an announcement was made of the auction sale of Angora goats, May 6th, by Mr. Robert Beck, which contained two errors—one in the name of the owner, Mr. A. Euytichedes, and another in the use of the word Siberian, instead of Silesian, as applied to a famous brand of the Merino sheep.

SOME one lately sent an order to this city for a dozen pounds of Blue-gum seed, but concluded that an ounce or two would be sufficient when informed that he would have to pay \$1.50 per ounce.

USEFUL INFORMATION.

A Paper and Glass Debate.

A correspondent sends a couple of interesting questions, which he informs us are to be the subject of a debate, relating to the merits of paper and glass. The first is: "Providing we had no paper, what other substances may be mentioned that would take its place?" And, second, "Providing we had no glass, what are its possible substitutes?" Of course, the idea is to bring out, in the present connection, not names of substances, which may be advantageously used instead of the above-named almost indispensable materials, but of such as we probably would employ, (and of many of which in fact our ancestors did avail themselves), did glass or paper cease to exist or become unattainable. The case is imaginary, but leads to much instructive thought.

In lieu of glass, we can find material suitable for window panes, for drinking vessels, and, in some cases, even superior to it for small lenses, but nothing that combines all its properties, or is capable of its ready manipulation into desired forms. For windows, perhaps the best substance other than glass is simple mica, which may be readily split from the rock in thin, translucent sheets. It is now used for doors of stoves, to protect paper shades around gas lights, and in other common employments. The Romans filled their windows with *tapis specularis*, a fossil of the class of mica, which is readily cloven into thin smooth laminae. The same substance is found in the Island of Cyprus, in masses a foot in breadth, and three inches in thickness. It is used for the construction of hot houses, and for the protection of delicate plants. Up to the present day it is also much employed in Russia, in place of glass for windows.

Horn cut into sheets is still used for lanterns, and for drinking vessels; and, if made sufficiently thin, would answer for illuminating purposes. Oiled linen, or other fabric, similar to that now used by draftsmen for tracing, would be also available, and so would very delicate sheets of india rubber. Skins, prepared like parchment, or vellum, would be translucent though not transparent. Gelatin, however, might be treated with bichromate of potash, so as to be insoluble; and, if it would stand the weather, would give quite clear window lights. Collodion films, we should imagine, if made thick enough, could also be used for the purpose, as also animal membrane.

In addition to mica, the mineral kingdom offers a variety of substances. There is the Brazilian pebble, a species of quartz, now used in an immense extent for spectacles and other lenses. We have seen perfect spheres of this material three inches in diameter, without a single speck or flaw to blemish its complete transparency. Rock crystal and other varieties of quartz might also be employed if means could be devised to cut them properly; so could plates of selenite, thin alabaster, or even of rock salt, though the latter would not be very durable. Some shells are sufficiently thin to be translucent, and ivory could be made into plates having the same property. Amber would be transparent enough, but difficult to obtain, while, like ivory, it would be rather costly. Large leaves of trees, if chemically treated, might have their texture preserved and serve to cover windows, if other means failed; or if the dwellings were located in polar latitudes, one might follow the example of the Esquimaux and use blocks of clear ice.

In recalling substitutes for paper, many of the materials suggested in place of glass, owing to their translucency, would, from their flexible nature, answer even more suitably for writing purposes. Such is evidently the case with parchment, membrane, cloth, horn, rubber, collodion, or gelatin sheets. We might go back to graven tablets, like the Moabite stone, or write with the stylus upon wax, as did the ancients; in fact, there are numberless modes of inscribing our thoughts on solid substances. But paper has a multitude of other uses, especially in these days of paper clothing, paper furniture, paper churches and paper money. Hence material is needed with more of its attributes than simply its use as a vehicle for the dissemination of our ideas. The same source of supply, open thousands of years ago, is still at hand, for the papyrus tree still flourishes in Egypt and Sicily. The bark of the common white birch may also be employed; or by ingenious machines we can cut shavings of fine grained wood to serve in place of hangings for our walls. Sheets of metal, rolled to almost infinite attenuation, would, however, probably form the most favored substitute. About two years ago the Upper Forest Tin Works, in Wales, rolled the most delicate sheet of iron ever made. The iron was worked in a finery with charcoal, and the usual blast, then forged into a bar, and finally passed through the tin rolling mills. When finished the sheet was 10 inches by 5½ inches in dimensions or 55 inches in surface, and weighed but 20 grains. It would take 4,800 such layers to make up a mass one inch in thickness. Letters have been sent across the Atlantic on iron thinner than ordinary paper and nearly as light. Steel, iron and copper, could thus be pressed into service; and where flexibility was necessary, alloys could be made to answer the purpose. — *Scientific American*.

DRYER FOR OIL COLORS AND VARNISHES.—Water, 100 parts; gum lac, 12 parts; borax, 4 parts.

ABATE'S METHOD OF DECORATING WOOD.—A sheet of veneering is exposed for a few moments to the fumes of hydrochloric or sulphuric acid. Strong hydrochloric acid, commonly called muriatic acid, of the shops is probably the best for amateurs, as it is more readily obtained than fuming (nordhouse) sulphuric acid. Ordinary sulphuric acid may, however, be used if the wood be slightly wet with the acid, instead of being exposed to the vapor. After the exposure or wetting, the acid should be carefully wiped from the surface. A piece of white calico or paper or common wood may be used, upon which to produce the pattern of the veneer. Whichever of these materials is employed the reproduction is obtained by pressing the prepared veneer strongly upon the surface of the material which it is desired to ornament, a suitable press being employed for this purpose. For amateur work a common copying press will answer very well, if the surface to be decorated be not too large. After the impression is taken, the material to be decorated must be exposed to a strong heat to bring out the pattern, which is invisible before heating. About twenty impressions may be taken before the effect will cease, when the pattern will have to be prepared over again in the same manner as before. The impressions after exposure to the heat show a general wood-like tint, which is very natural for the light colored wood, such as walnut, maple, etc., but for mahogany, rosewood, and others of dark color, the articles to be decorated must be dyed the light color of the wood.

DEPOSITS IN BOILER FLUES.—Professor Hayes gives, in the *American Chemist*, the following opinion regarding the formation of these deposits: They are of two kinds, both of which are capable of corroding the iron rapidly, especially when the boilers are heated and in operation. The most common one consists of soot (nearly pure carbon) saturated with pyro-ligneous acid, and contains a large proportion of iron, if the deposit is an old one, or very little iron if it has been recently formed. The other has a basis of soot and fine coal ashes (silicate of alumina) filled with sulphur acids, and containing more or less iron, the quality depending on the age of the deposit. The pyro-ligneous deposits are always occasioned by want of judgment in kindling and managing the fires. The boilers being cold, the fires are generally started with wood, pyro-ligneous acid then distils over into the tubes, and, collecting with the soot already there from the first kindling fires, forms the nucleus for the deposits, which soon become permanent and more dangerous every time wood is used in the fire-place afterward. The sulphur-acid deposits derive their acids from the coals used, but the basis material, holding these acids, is at first occasioned by cleaning or shaking the grates, soon after adding fresh charges of coal. Fine ashes are thus driven into the flues at the opportune moment for them to become absorbents for the sulphur compounds distilling from the coals, and the corrosion of the iron follows rapidly after the formation of these deposits.

THE PRESERVATION OF TIMBER.—*Engineering* has had an opportunity of examining some specimens of timber preserved by a new and very promising process, invented by Mr. J. B. Blythe, of Bordeaux, of which our contemporary speaks as follows: Mr. Blythe treats the timber with carbureted steam—that is, with steam having mixed with it a small proportion of hydro-carbon vapor—the result being an evolution of acetic acid, and the formation between the fibers of the wood of a peculiar gummy substance, which hardens by time, and which appears to materially increase the resisting powers of the material. When first treated, the timber is so softened that it can be rolled to give it an even surface, or its form can be altered to a considerable extent by pressure, and it can be thus molded to many forms, which are at present only producible by the action of cutting tools. The forms thus given to the timber in a soft state are retained permanently. As far as can be judged from experience gained on the Northern Railway of France, on which line sleepers, treated by this process, have been down for some time. Mr. Blythe's system of treatment is an effectual preservative, while it has the great advantage of enabling green timber to be seasoned in a few hours. In fact, the sap-wood, when "carbureted," appears practically equal to the heart-wood in durability and powers of endurance.

A SIMPLE FILTER.—We find in an English exchange the description of a very simple filter, called "The Poor Man's Filter." It consists of a common garden flower-pot, of some nine inches diameter and ten inches depth. The drainage hole is stopped (not too tightly) with a piece of clean sponge. A layer of about two inches of animal charcoal is first placed in the pot, then a second layer of clean sand, upon which a layer of three inches of clean coarse gravel is placed. The pot can be set over an earthen jar, into which an abundant supply of pure water will filter for all drinking purposes.

THE reason why common salt sometimes becomes moist when exposed to the atmosphere is because it is not pure. Chloride of calcium and chloride of magnesium are impurities generally present in salt, and they absorb moisture from the air.

LIMPID AND FLEXIBLE VARNISH.—Anhydrous alumina stearate, dissolved in turpentine, is the article recommended for this purpose, and it is said to be unalterable at elevated temperatures.

Calico Printing.

In all the appliances of chemistry to the requirements of man, there is none more interesting than that of dyeing. Almost everyone knows something of the art; and yet he would be very much surprised could he but see a little of that which he knows not. The dye house is generally a very uninviting-looking place, the air being filled with condensed steam, and the woodwork covered with moisture, which often collects on the floor in quite large pools, and with stains of different dyes; the vats are filled with dirty-looking liquids, the color of which it would be difficult for an inexperienced person to tell. Where the goods have simply to be dipped in the requisite solutions, and the colors, if need be, afterwards brightened by being soaped, etc., we are apt to look upon it as a mere matter of course, however great may be the skill necessary to make the solution, or perform the different manipulations. That which strikes the stranger most with wonder is, that the prints that he sees in the shops among the commonest kinds of dress goods, undergo by far the most complicated process of dyeing. In the first place he has seen them pass the cloth over a red hot plate, or through a gas flame in a manner which, he thinks, would damage it beyond redemption; but it simply removes the fuzz, which would interfere with the printing. When, after bleaching, he sees it on the printing machine, and remarks that the colors are not very pretty, he learns that they are not the intended colors of the goods, but simply used to tell the printer if the pattern fits properly. After printing it is left in a warm, moist atmosphere, and afterwards passed through a bath of cow dung, or dung substitutes, and washed until, in some cases, the goods cannot be told from those just blacked. It is then passed through the dye-vat, and when taken out, is found to be dyed in different colors, according to the pattern which has been printed upon it. The reason of this is, that cotton will not take the dye like wool or silk, but must have another substance, called a mordant, used at the same time. Different mordants produce different colors with the same dye; thus acetate of iron will produce black with madder, while acetate of alumina will produce a red, and mixture of the two a chocolate. The mordants then are printed upon the goods, in the required pattern, which will appear after coming from the vat. This is by no means a modern idea, since Pliny describes it as being used in his day; but it is curious enough to be interesting to some of our readers who have never visited a dye house. — *Journal of Applied Chemistry*.

NEW THEORY ABOUT COMETS.—At a recent meeting of the Lawrence, Kansas, Academy of Science, a paper entitled "Speculations on the Nature of Comets' Tails" was read by Professor F. W. Bardwell, who took the ground that a comet's tail is no more a part of the comet than is a shadow a part of the object which gives it form. He supposes that the resisting medium surrounding the sun for a great distance is itself self-luminous in a degree, as indicated by the zodiacal light; that the nucleus of a comet is merely a large meteorite; that in its rapid motion through the resisting medium near the sun, great heat is thereby developed, increased by the heat of the sun, causing some of the elements of the nucleus to become volatilized, and thus to present the phenomena of the coma with its glowing gas; and, finally, that the bright train called the tail is merely an effect of an increased luminosity of the portion of the resisting medium behind the comet, caused by the action of the sunlight and passed through the glowing gas of the coma, and projected beyond in a form usually approached that of a conical surface. He predicts that, on the appearance of a comet with a bright train, the tests of spectrum analysis will show that this train is not nebulous, as Bessel and others have supposed, and not of a meteoric character like that of the nucleus, as Schiaparelli and Le Verrier suppose, but chiefly of a zodiacal nature, and probably, in a slight degree, reflecting sunlight.

THE ACTION OF ACIDS UPON ZINC.—At the recent meeting of the French Association for the Advancement of Science, M. Gourdon, of Lyons, described some novel facts which he had observed in the action of acids upon zinc covered with certain metals. Zinc plunged into dilute solutions of sulphuric, hydrochloric and acetic acids, is attacked only at the points where other metals are present. The metals which produce this phenomenon with most intensity are cobalt, platinum, nickel and iron. Ammoniacal chloride of cobalt renders it possible to perforate zinc with water containing only one 10,000th part of sulphuric acid. M. Gourdon applies these results to various procedures for engraving. By writing directly upon zinc with different metallic inks, making use of the most active, containing salts of cobalt for the blackest parts, and passing it then into acidulated water, an engraved plate is obtained. To reproduce leaves or plants, they are soaked in solutions of metallic salts and applied to the zinc, which is then treated with weak acids. The author has discovered a new kind of heliographic engraving by transferring the silver from an ordinary photographic proof upon the zinc, which can be attacked by the acids on the parts where the silver has been deposited.

HEAVY.—Krupp's last big gun is 21 feet long, and throws a ball of 600 pounds, with a charge of 120 pounds of powder, and the last great ingot of steel forged under his 120,000 pound steam hammer, weighs 105,000 pounds.

Inland Navigation in Japan.

Quite a considerable number of the rivers of Japan are navigable for short distances by vessels of light draught and small dimensions, and the Japs are not slow in introducing steamboats wherever practicable. Of course these Lilliputian leviathans are of the cheapest and flimsiest style of naval architecture, and quite in accordance with the usual baby-play style of things in use by the natives. On Lake Biwa, at the present time, no less than seven steamboats ply between various points. One of them is so small that the "saloon" cabin is but ten feet long, six feet wide and three feet high. A platform occupying half the saloon and covered by a rug, is "first class," the matted floor is "second class," while a sort of black hole in the "forecastle" is assigned to "third class" passengers. The cabin is furnished, beside the rug and matting, with a once handsome mirror, two feet square, with the gilt rubbed off. The boat, in spite of its gorgeous mirror, is not calculated to soothe nervous people, as it has the heart disease badly, i. e., the boiler leaks in several places, and the machinery jars and wobbles, in a manner more lively than secure. In fair weather, the length of the lake, about 54 miles, is made in eight or nine hours. When contrary winds blow, two days are required. It is not wonderful that such steamers come to grief occasionally. Though the way is smoothed for explosions, yet a genuine blow-up is shy of intruding itself upon the owners of such craft; or, if victims lose their lives, we do not hear of them.

The oft-repeated assertion (by themselves as well as others) that the natives of Dai Nippon are a brave people, seems to have some truth in it, when we consider with what nonchalance they go on board of these floating traps; and the perfectly native manner in which the Japanese play with steam, and machinery forces the suspicion that they do not consider themselves highly civilized unless they have a few first-class explosions. If there is an inspector of steam-engines and boilers in Japan, we have not yet heard of him. — *Japan Gazette*.

FLY BLOW.—It is a common idea that the appearance of maggots in meat, cheese, etc., is the cause of the taint which is always found when they present themselves; but it is just the contrary, for the odor caused by the commencing decay is that which guides the parent insect to the depositing of its eggs in situations where its offspring will find congenial nourishment, and where they will exert a beneficial influence by reconvertng into a living structure much that would otherwise pass into utter decay, and by thus diminishing, if not entirely checking, the obnoxious effluvia that would be given off during the process. The voracity of these larvae is enormous, and the rapidity of their growth and complete development is most wonderful. They have been found to increase in weight as much as two hundred times in the course of a single day, and a few days are sufficient for them to go through all the stages of their growth and transformation, and to produce another generation. Three flesh-flies and their immediate progeny (each female giving birth to at least 20,000 young) would devour the carcass of a dead horse with greater celerity than a lion would accomplish the same feat.

MOTH PREVENTIVE.—The following recipe for keeping moths out of clothing is a favorite in some families: Mix half a pint of alcohol, the same quantity of spirits of turpentine, and two ounces of camphor. Keep in a stone bottle, and shake before using. The clothes or furs are to be wrapped in linen, and crumpled-up pieces of blotting paper dipped in the liquid are to be placed in the box with them, so that it smells strong. This requires renewing about once a year. — *Jour. of Chemistry*.

IMPROVED UMBRELLA.—A new invention consists of an arrangement of an umbrella top, so as to revolve upon the handle to relieve it when strong gusts of wind blow against it quivering, or when the top strikes against other umbrellas, or other objects in crowded places. The said arrangement consists of a notched revolving ring for the ribs, between two collars on the handle, and a revolving notched ring on the runner, also between two collars.

To correct the weight of a platinum crucible, Dr. F. Mohr recommends that a brass or leaden weight be prepared a little heavier than the crucible. This is placed on the right hand pan of the balance, and the crucible exactly counterpoised by a rider on the left hand side of the beam. Some advice is also given as regards the correction of the weight of the crucible after the weighing.

WATERPROOFING BOOTS.—Paraffine is recommended for this purpose in an English journal. The writer says: "Melt thoroughly the paraffine, and, having well warmed the boot, apply the paraffine with a brush or piece of flannel before a fire, to allow of the leather absorbing the liquid. I have tried the above, and it answers admirably, resisting snow-water during a week's shooting."

AUSTRALIAN METHOD OF COOLING WATER.—The water is placed in large cloth buckets 1.2 metre deep, and 0.4 metre diameter, covered with a flannel strainer, and furnished with a siphon and cock for drawing off. The bucket is hung up in a tree in a shady place, and the evaporation from the moist surface cools the water several degrees below the air.

POULTRY YARD.

Among the Chicken Aristocracy.

Determined to keep our readers thoroughly informed as to the condition of this interesting department of husbandry, we have just devoted a large portion of a day to a visit to the poultry yards of M. Fallon, of Oakland, where we were introduced to some of the "first families" in the country. From our knowledge of Mr. F.'s experience and high position among the poultry dealers of this coast, we selected his establishment as offering as good returns to those seeking information on poultry matters as could be obtained.

We were first shown a trio of Bronze turkeys, recently imported from Yorkville, N. Y., purchased from George H. Warner of that place. The fowls forming this trio, present in an eminent degree, the distinguishing characteristics of this valuable family; the glistening plumage of the male rendering the term "Bronze" scarcely adequate to express its beauty. They are at present only about half grown. When matured they are expected to weigh 60 pounds to the pair.

White Cochins were the occupants of the next house at which we called. Five specimens of a family of fowls possessing many good traits; the most conspicuous of which is the reliability of the females as mothers. By-the-by, this merit is of little account among the fowls of Mr. F.'s establishment, as he uses capons for this purpose; and, having arranged for another visit to this community, when these male mothers will have some of their little foundlings in charge, we will reserve for a future number a description of this unique and economical process.

We will, therefore, pass on to the yard of the Light Brahmas, who are admitted to be good layers, their eggs being particularly large for the size of the hens. They are also good and attentive mothers; but their awkward movements, in consequence of standing so high upon their legs, renders them exceedingly liable to trample upon their broods. In fact these, with all our Asiatic fowls, are inclined to "run away to legs" in this country. This is a mark deteriorative, and should be obviated if possible. Here is a small family of Silkies, extremely uniform in appearance. They are retained here principally to experiment with in producing new breeds.

We have next some splendid Dark Brahmas, recently imported from Australia by Mr. Fallon. They are not as prolific layers as the Light Brahmas, but their most abundant laying comes at a season when the latter are "holding up."

A remarkably fine group of Black Spanish fowls were found in their appropriate yard. This is a fowl that during its earlier stages of growth needs more care and attention than is required by fowls generally; but, when matured, is healthy and hardy; especially in California; and those under inspection exhibited spirit and animal vigor to a remarkable degree.

Next we have Silver Spangled Polands. These fowls are more celebrated for their beauty than for other qualities. They would be an ornament to any lawn.

They are, however, very good layers, but their small size renders them of little account for the table. They are also non-setters.

But here is a yard of fine Golden Spangled Polands; a class of fowls which Mr. Fallon considers the most desirable of all fowls. They are quite hardy and very regular layers, commencing early in the season.

Here are some Houdans. These are of French origin. They are non-setters; and, though they may not lay quite as many eggs as some fowls, the large size of their eggs will compensate for this lack of numbers. We were shown samples of the eggs, direct from the nest, which were productions of which any hen might well be proud.

The Silver Spangled Hamburgs are small fowls, but wonderful layers. Mr. F. thinks they have not yet become thoroughly acclimated.

A family of fowls now becoming quite popular is the Brown Leghorns. Mr. Fallon has some fine specimens recently imported by him from Taunton, Mass. Some fine White Leghorns are also to be seen here. These also lay larger eggs than their size would indicate.

A recent importation of Golden Hamburgs was next shown us. Mr. F. informed us that he had procured this new trio to take the place of his former stock; which, though of unquestioned pedigree and fully up to the general market standard, had deteriorated in one minute point which he considers a sure test of purity of blood in this fowl. This test is the white ear-lobe. A cock belonging to the farmer stock was compared with the new-comer. In the former the white had nearly disappeared from the ear-lobe; though we were assured that when he was imported it was as conspicuous for its whiteness as that of his new rival whose ear-lobes were of brilliant whiteness. This change is supposed to be caused by our climate; and, though it may not detract from the actual merits of the fowl, is closely watched by the strict adherents to purity of stock.

The Partridge Cochins are considered better layers than the Buff Cochins. They are also finer meated. They are indifferent breeders, the hens being poor setters, and the cocks being quite indifferent in regard to the hens; so much so that it is sometimes necessary to place more than one cock among a small circle of hens to inspire a spirit of jealous rivalry.

Silver Gray Dorkings. These Mr. Fallon does not hesitate to endorse as the "fowls of all fowls" for the table. They "meat" rapidly and have small bones.

The yards of the Rouen Ducks and Aylesbury Ducks were visited. The former present a remarkable uniformity of appearance. They are great layers, but do not commence as early as the Aylesbury Ducks. These latter are bred largely for the London market. They often weigh six pounds when six months old, averaging eight or nine pounds when full grown.

It may be thought by those in "the trade" that we have given undue time and space to the classification of the fowls here described, but it is for the benefit of purchasers from all sources, and to interest the general reader that the above is written. And, if this numerous class will but pay attention to the poultry department of our paper, and make their purchases of those advertising in our columns, it will be both to their gratification and interest.

THE DAIRY.

Conducted by J. H. HEGLER, Manager of the Dairy Department of California Granges.

Reports of Experiments, Communications, Hints, Suggestions and all Facts that will be of interest to Dairy-men are particularly solicited for this Department.

The Cheese Market of 1873.

The following summary of the dairy news and reports for 1873 we clip from the Utica Herald. It will be of interest to every farmer who is engaged in the production of butter and cheese. These statistics show a rapid increase in the amount of product for each year. The demand for butter and cheese for foreign export is much larger than it ever has been before. England, which formerly depended on her home supply, is each year demanding more and more from America, and the prospects are that we will in time supply a very large proportion of that which is consumed in the United Kingdom.

The situation may be taken in a glance. New York city is the great gathering place for the dairy products of this country. Cheese can claim eminence as an international dairy product, and we take it to indicate the dairy increase. A review of the last three years will be sufficient for our purpose. The receipt of cheese in New York, in 1871, was \$1,454,721 boxes; in 1872, 1,666,070 boxes; in 1873, 1,997,776 boxes. The increase of receipts during 1873 over 1871, it appears, was more than half a million boxes, or more than thirty-two and one-half millions of pounds. This is but a single indication of growth; it affords but a partial indication of the extent of the industry in the West, where the cheese-makers have not only cut off the western demand for eastern-made cheese, but have forwarded large surpluses for export from our eastern coast.

The figures do not indicate the rapid growth of the factory system in some of our outlying regions, as in Maine, where, according to the report of the State Board of Agriculture, during the year just closed twenty factories were erected, and wide preparations are making for a large building up in the spring in various sections of the State. Maine is a new dairy region, and the industry is sprouting there with much promise of great yield. In the northwest the extension of the dairy manufacture is marked, and propositions are continually coming to central New York for men competent to guide the new enterprises. But, while proofs of great annual increase in production and indications of proportionate increase during the coming year are received, the fact of the increased demand for the product comes to cheer those who fear that there may be an over-production. The English markets have behaved nobly in stowing away the enormous amounts of American cheese which have been placed upon them during the last year. England is our great present hope; and, dangerous as trust in such a foreign demand may seem when viewed in the certain lights, England promises well, and there is little present alternative but to trust her. It is interesting to note how the English consumption keeps pace with our increased production. From the official tables of the imports and exports of the United Kingdom, which we have just received, for the first eleven months of 1873, it appears that there were imported 126,089,200 pounds of cheese. The importation of cheese for the corresponding eleven months of 1872, was 98,208,400; an increase during the months of 1873 of 27,880,800 pounds. The declared valuation of cheese purchased abroad by England during the first eleven months of 1873 is given by the official returns as \$18,846,620.

As to the art and science of disposition, it is necessary to speak more definitely. A mark of dairy progress appeared in the organization of the New York Butter and Cheese Exchange, which sprang from the demand for its labors, into quick and wide utility. It is an achievement of the past year, and it sends a delegate to the convention to contribute items of its knowledge concerning the best disposition of dairy products. Able essays have been laid before former conventions on this subject, but none bore with it such weight as lies with the communications of the Butter and Cheese Exchange. We hope and trust that in its utterances it will be but true to the fact of its existence; it will then be practicable and its recommendations valuable. It is certain, beyond a

doubt, that much value is sacrificed by unwise package, untimely shipment and insufficient curing, or by all these combined in certain cases. It is well that they who have the handling of the products at a great center like New York, should give their experience to the men whose province lies mainly in the division of production. Besides, the details of preparation for sale, the whole matter of marketing the manufactured article, should be better understood. Great progress has been made since the old blindness gave way to the interior Boards of Trade, and the spreading of the newspaper, but progress can yet be made. Something must be done to remove the elements of suicide which are too often pushed into the cheese box and butter package, or which force themselves upon them at certain times and seasons. It is the part of the manufacturer to render his product safe and durable; it is the part of the manufacturer and dealer to compare notes and work together to straighten and make smooth the channels of trade, and to see to it that safety and durability have free course to do their perfect, profitable work. Dairy-men and dealers have made great advance in their understanding of each other, but there will be opportunity to increase the knowledge, to perceive that the interests of each other are closely allied.

CAN'T FIND HIM.—Who? Why, the man that makes poor butter. We have hunted high and low for that man, but he has not shown his face. Every man makes the best butter in the State, and would black the eye of the man who says he don't. But, somehow, there is a wonderful difference in butter. We have it all grades and shades, from the sweet, rich palatable, golden hues, that is as tempting as are the twenty dollar pieces, behind the counter of a bank, to the cheese-green and white colors of a pot of soap grease, with a smell about as inviting as that of a barrel of whale oil, and a taste—well, we don't know the taste—we have not been able to get that far along yet.

WHO WILL DO IT?—Bro. Amos Adams, Master of Franklin Grange, in Sacramento county, writes that the Dairy-men farmers in his vicinity are desirous of establishing a cheese factory in their midst, and offer any one wishing to engage in the enterprise a good lay. Our neighbors of Franklin Grange are right, the heat of the interior valleys will not allow them to make the best butter, but cheese will do better in a warm climate, and is perhaps more profitable even in a climate suitable for butter making.

DAIRY PRODUCE DEPARTMENT

OF THE
CALIFORNIA STATE GRANGE,
P. OF H.,
414 & 416 Sansome St., Cor. Commercial,
SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

ATTENTION, DAIRYMEN!

RALPH'S PATENT
ONEIDA CHEESE VATS,
TO HOLD FROM
One Hundred to Five Thousand Gallons.
CHEESE HOOPS,
FROM SMALLEST TO LARGEST SIZE.
PRESSED MILK-PANS,
PIECE MILK-PANS,
STRAINER PAILS,
CREAM PAILS,
MILK PAILS,
ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairy-men will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,
614, 616 and 618 Battery St.,
25v6-3m SAN FRANCISCO.

PURCHASERS please say advertised in Rural Press.

DEWEY & CO.,

American and Foreign

Patent Agents.

No. 338 Montgomery St.
SAN FRANCISCO.

Patents Obtained Promptly.
Caveats Filed Expeditiously.
Patent Reissues Taken Out.
Patents Secured in Foreign Lands.
Assignments Made and Recorded in Legal Form.
Copies of Patents and Assignments Procured.
Examinations of Patents made here and at Washington.
Examinations made of Assignments Recorded in Washington.
Examinations Ordered and Reported by TELEGRAPH.
Interferences Prosecuted.
Opinions Rendered regarding the Validity of Patents and Assignments.
Rejected Cases taken up and Patents Obtained.
Every Legitimate Branch of Patent Agency Business promptly and thoroughly conducted.
SEND FOR CIRCULAR.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.


Brittan, Holbrook & Co., Importers of
Stoves and Metals, Tinners' Goods, Tools and Machines,
111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission
St., S. F. O. H. Gruenewald & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Sitsby Manufacture all kinds of Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,
For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warro street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.



HEALD'S
BRYANT & STRATTON
BUSINESS COLLEGE
24 POST ST. SAN FRANCISCO
SEND FOR CIRCULARS

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,
2v6-tf President Business College, San Francisco.

SANTA BARBARA COLLEGE,
SANTA BARBARA, CAL.
A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to ELWOOD COOPER,
22v6-1y President Board of Directors.

McLAREN, BRYDGES & CO.,
DEALERS, MANUFACTURERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.
Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.
—ALSO—
Real Estate and General Business Agency.
NO. 605 CLAY STREET, SAN FRANCISCO, CAL.
ja10-hp-3m

FOR SALE.
ONE HOADLEY STEAM ENGINE, 8x12.
One SEPARATOR, 36-inch cylinder; one SAW FRAME, STRAW STACKER, BELTS, TOOLS, WATER BARRELS, Etc., in fair order. Price, \$1,200, if applied for before May 1st. Apply to
A. R. WOODHAMS,
Santa Clara, Cal.

OUR SPECIALTY: "BEYOND THE MISSISSIPPI"
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required? Nerve and Honest Industry.
THE FAR WEST,
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFUTT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chromo, "AMERICAN PROGRESS," free to each subscriber.
Two sample WORLDS sent for 10 cents. Agents wanted.

Geo. A. Crofutt, Publisher, New York, N.Y. P.O. Box 3435, P.O. Box 9776.

AGRICULTURAL NOTES.

California.

AMADOR.

CROP OUT-LOOK.—*Ledger*, March 14: Never in the history of foot-hill farming has the prospect of abundant crops been more flattering than at present. Copious rains have fallen almost daily during the past week, giving the young grain a vigorous start. The fields in the vicinity, as well as the hills generally, are clothed in green, and vegetation under the genial influence of the warm rains is, rapidly springing up. Our farmers who have added to their cultivated lands during the past year, will reap a just reward for their industry and enterprise: not only will the hay and grain crops prove unusually large, but appearances indicate the fruit crop will be abundant. From the present advanced growth of the young grain, it is thought no untoward after season can to any extent affect the contemplated yield.

EGYPTIAN CORN.—We have enough of this new grain to plant perhaps an acre of ground, which we wish to intrust to some farmer who will pay attention to its cultivation. The grain is new and but little understood, but we believe will prove of great value. This we have, was raised on a small piece of ground in our garden, and from the quantity produced from a few grains, we feel satisfied, with proper cultivation, it will yield 150 bushels to the acre; besides the stalk and blades will make most excellent fodder for stock. The grain itself, from appearances, will make as fine flour as can be produced from any wheat grown. The stalks will grow to the height of 12 or 14 feet, with from one to three large heads containing grain, each large head composed of 200 or 300 smaller heads, resembling our ordinary wheat.

CALAVERAS.

THE WEATHER.—*Chronicle*, Mar. 14: The most notable occurrence that has transpired for several months past is the remarkable fact that we had a day or two of tolerably decent weather this week. For some unaccountable reason the rain ceased falling, and at intervals the sun was absolutely visible. Alas! for the frailty of human hopes. The sad-colored sky opened its gates and poured down upon us a deluge that speedily washed away the remembrance of everything except the flood. The rain came down in splashes, as though the heavens were one vast sponge, squeezed in the mighty hand of Jupiter Pluvius. We have given up all hopes, but still there is comforting consolation in the reflection that ranchers, if any survive, will spare us their customary mournful complaints about "drouth" the coming season.

MARIN.

Journal, March 12: The weather continues so full of change and shadows of turning, that it may be said not to change at all. It is fitful, shiny, showery, blustery, just as it has been all the season, with only one uniform feature, and that is, cold. It has been a good winter for rain, but the low degree of the temperature, and the prevalence of cold winds, have kept back vegetation, and there is comparatively no feed for stock now, where ordinarily the grass is several inches high. We think there will be amends later in the season, when the crop can take advantage of its thick body and good root. Probably the ground was never more thoroughly saturated than now, for, while over three feet of rain has fallen, the streams have been much lower than usual all winter, showing a very gradual fall. The rainfall this month, to yesterday morning, was 2.40 inches, and for the season, 37.36 inches.

NAPA.

PRUNING.—*Reporter*, March 14: Most of the vineyard men in the county, profiting by last year's experience with the frost, have delayed pruning their vineyards until quite late; but now, most of them are either done pruning or busily engaged in the same.

Tobacco.—Parties in this city are experimenting with tobacco seed, with a view to planting the same in this county. Should any party be desirous of imitating their example, we shall be happy to furnish them with two varieties of seed, the Havana and the Connecticut, gratis, as we have several packages left.

POPE VALLEY.—The farmers in this section have nearly all got their crops in, and are satisfied with the present prospect of an abundant harvest. Nearly all the valley is sown in grain this year, though what ground has been reserved for hay, will, by its present appearance, turn off an abundance.

Not so HERE.—The apricot blossoms were nipped in Napa on Monday night, following the almond blossoms, which wilted under the cold of the night previous. We have no frost in San Jose yet, severe enough to nip fruit blossoms of any kind. Almonds have been in blossom several weeks, and apricots and peaches are coming out finely.

ORANGES.—The noted Wolfskill Vineyard in Los Angeles county, is being up-rooted to make room for an orange orchard.

SAN JOAQUIN.

MORE RAIN.—San Joaquin Valley *Argus*, March 14: During the week we have had a continuance of warm, showery weather, during which time a large amount of water has fallen upon the valley, and a considerable accession has been made to the winter's deposit of snow in the mountains. The rains falling at this time will prove a positive blessing, as the moisture and warm atmosphere have given

vegetation a good start, and the land is left in good condition for summer fallowing.

Sowing WHEAT.—*Stockton Independent*, March 13: During the present week, wheat has been sowed on black land, within a distance of two miles from the city. A farmer informed us yesterday that he would have completed the work of sowing yesterday, had he not been prevented by the rain. The condition of the crops on sandy lands and light soils has never been more promising.

The sugar factory at Alvarado run through the last heats of the season on Saturday last. The factory will continue in operation about three weeks longer to re-boil the surplus syrups that have accumulated during the present run of about six months.

A resident of San Jose claims to have invented a process by which he can make four pounds of butter from one gallon of milk.

A company has been formed on Bear river, Humboldt county, for the purpose of manufacturing butter from the fat of the seal or sea lion.

SAN JOAQUIN RAISINS.—*Leader*, March 14: Last Saturday a member of the Stockton Grange, placed us under obligations for several bunches of raisins, of immense proportions, and fully equal in appearance and quality to any foreign raisins we ever saw or tasted. The gentleman, Mr. D. A. Learned, produced these raisins from foreign vines cultivated on his farm a few miles from this city; and designs calling the attention of the horticulturists of this vicinity, (particularly Grangers), to the fact that grape culture can be made more profitable, by converting the grapes into raisins, than for the manufacture of wine, the morality of which latter is, to say the least, questionable. We trust the matter will receive the careful attention of the Patrons of Husbandry.

SANTA CLARA.

THE WEATHER AND BUSINESS.—*Gilroy Advocate*, March 14: We have had more rain, more frost and more unpleasant weather this season than for many years before. The two seasons previous were very mild and agreeable compared to this, and there is no one who has not now had a surfeit of rain. It has been, in many respects, a detriment to this section, as the unpleasant weather and great amount of rainfall have prevented the farmers from working to advantage, and consequently there will not be as large an area sown to grain as otherwise would have been. Much of the low land has been too moist to plow, and in some places where grain was sown it has been washed out. On the higher lands good crops are now almost absolutely certain, for the ground has been wet to such a depth as to prevent the possibility of its drying out until the grain is beyond the influence of such an event.

SANTA CRUZ.

ARROA.—*Cor. Sentinel*, March 14: During the fine weather of the past week, work has been going on in earnest on the farms. Teams with plows and harrows may be seen busy in every direction, while the farmers are all gay and happy, well knowing that they will receive large returns for their labor. Messrs. Spreckles & Co., have this year put in six hundred acres of grain. They will also cultivate one hundred acres of sugar beets for the sugar manufactory.

SUTTER.

GROWING GRAIN.—*Sutter Banner*, March 14: Take Sutter county as a whole, she stands ahead of all the northern counties in the splendid condition of her growing crops. Much of the grain is so forward and rank, that farmers are turning stock upon it to eat it down.

During the past ten days a considerable amount of hay has been hauled from this county over into Yuba, most of which was bought up by farmers of that county, paying from \$25 to \$30 a ton for the precious article.

Several bands of cattle from neighboring counties have been drove into this county during the past week for pasturage, of which we have an abundance. Our county has also been furnishing hay to the needy farmers of Yuba. The secret of the prosperity of Sutter, is that we have superior land and practical, wide-awake farmers to till it.

SALE OF A LARGE FARM.—Last Saturday, J. M. Crum purchased of Charles Meyers, seven hundred and thirty-six acres of land, situated in Live Oaks, for the sum of \$20,000. Land is advancing rapidly in value in Sutter.

TEHAMA.

Independent, March 7: A severe hail storm passed over the northern portion of this county on Tuesday forenoon. At Red Bluff hail fell and laid on the ground to the depth of several inches. The storm did not reach further south than Red Bank Creek.

YOLO.

CLOSE OF SEED TIME.—*Mail*, March 12: Our farmers have finished their wheat and barley sowing, and many of them are busy at work putting their clover seed in the ground. Clover seed will do well if sown any time this month, provided the ground is thoroughly prepared. The weather still continues cool, and the young wheat does not grow very fast; but, we presume it is taking root while awaiting the warm sunshine. There is no doubt but that a much larger area of wheat has been sown than ever before in this county, and the prospects are extremely good for a splendid crop. The news we receive through our exchanges from all parts is of the same cheering character, and it is probable that the farmers are all satisfied this time.

OREGON.

FARMING ITEMS.—*Oregonian*, March 7: The last few days rain stopped a great many plows which had been turning up the soil in the valley.

Yamhillers are on the war path, after the wolves which have been killing their sheep lately.

Yearling calves are selling in Linn county for \$4.50 each, and good cows are offered at \$12 a head.

From parties down from Rogue river the *Times* learns that little stock has died, though some of it is looking rather thin. Should the weather not be unusually severe, nearly all of it will come safely through.

Farmers are actively engaged in the Puyallup valley, W. T., planting hops. A large crop is anticipated the present year, and, if the market value continues high, the county will receive a snug sum from that source alone.

Stock in Grant county has suffered and a few died from the inclemency of the weather. The fatality, however, was confined mostly to old cattle, or those which were driven in late in the season. The danger now seems past, and stock of all kinds have taken to the hills, where an abundance of grass awaits them.

A Yamhill paper says: "Farmers from the different parts of the county inform us that plowing is going on now to the fullest extent among them. The ground is in excellent condition for the plow, and every available implement is now in use, making the best of the favorable time. Farm hands are in demand."

A letter from Willow Forks, Umatilla county, dated February 17th, says: "Stock looks rather rough, and generally poor, but the season is more favorable now. People here are plowing and putting in grain, and the prospect is favorable for a good crop, as the ground has had a much more thorough wetting than common. This is necessary for grass on the hills and plains, as well as for grain and vegetables on the creek flats, where the rich soil can produce with any country."

Willamette Farmer, Mar. 6: A letter from Liukville, dated Feb. 23d, says: "Weather clear and cool, with no indications of thaw yet. Stock suffering. Loss of sheep already very heavy. Cattle dying in the different valleys, as far as heard from, and fears are entertained that the loss will be heavy unless the winter soon breaks."

STOCK SUFFERING.—*Mountaineer*, March 7: From a number of stock raisers that have called on us during the past week, we learn that the cold and disagreeable weather that has visited this section of the county for the past four or five weeks, has been hard on the cattle and sheep, and many have died. The loss this winter, will, we fear, be much greater than it was last year, although the winter has been much milder. Last year the warm spring weather commenced much earlier than it apparently intends to this, and at this time the new grass was from six to eight inches high, and live stock of all kinds had commenced to recover from the effects of the winter. The difference now, is that although the first month of spring is already here, the cold weather of winter is still with us, and the grass in most localities is very short.

COTTON CULTURE.—A correspondent writes from Merced that he and some others will have 600 acres of cotton, in one field, this year. At date of writing they were plowing ten inches deep and intended to plow again. Last year our correspondent tried cotton on a smaller scale, and his success has induced the present move, and leads him to think that in time cotton will be one of the most important staples of the great San Joaquin valley.

Tobacco and Hops in ALAMEDA.—Mr. Wm. Meeka, of San Lorenzo, intends to plant forty acres of tobacco this year. J. T. Ward, of Hayward, will put in one acre of tobacco and forty acres of hops. The hops are for curing by the Alden process for the European market.

THE EPIZOOTY is killing off horses rapidly in Round Valley, Oregon, especially in the vicinity of Union.

EVEN in New York State it is argued that farmers have too large farms.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Mar. 17, 1874.

FOR WEEK ENDING Mar. 3d, 1874.

WATER METER.—Harvey R. Leonard and Amie P. Dennison, Portland, Oregon.

APPARATUS FOR MANUFACTURING CUBE SUGAR.—August F. W. Partz, Oakland, Cal.

REVERBERATORY FURNACE FOR ROASTING ORE.—James O. Stewart, Georgetown, Colorado.

"The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue."

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

New Lard Package.

Mr. John Molloy, provision merchant at No. 54 Clay street in this city has shown us a rather unique package for holding lard, which he is now using in his business. The package is simply the bladder of a hog, cleaned and prepared until it is like so much satin paper. It looks rather like adding insult to injury to kill a hog for his meat and fat, and then use a part of his internal organization for the purpose of carrying the fat around in; but when we consider the number of hogs slaughtered every year, we can understand what a saving it would be to pork packers and the public if this method of packing lard were adopted. This package does not cost one-third the sum that ordinary wooden or tin packages cost, and being so very much lighter is an advantage to the consumer, on whom all packages are weighed.

The principal reasons to recommend the new package is, as we are informed, that no adulterated lard can be put up in it without at once being perceived, as the prepared bladder is quite transparent. Mr. Molloy informs us that in the Eastern States, what is left of the lard after the oil is pressed out, is largely adulterated with water, over ten per cent of which is often driven in by hydraulic pressure, and put on the market as pure lard, in nice pails or tins. This it would be utterly impossible to do with these packages as the lard is put in in such a manner that it will admit of no water being introduced, and other foreign substances can be seen through the package. These packages can be bought for one cent each in Chicago, St. Louis, or any of the large pork packing cities, and taking into consideration their cheapness, convenience, and saving in weight, will meet with general approval. As the mouth of the bladder is tied up with a string and can easily be opened, the package can be used more than once if necessary.

THE *Contra Costa Gazette* says the protracted wet weather of the season has so retarded the work of the farmers that much less than the usual breadth of land will be sown in that section of the county west of the Mount Diablo meridian.

C. FIELDSTED, of San José, is experimenting with the cocoanut, pineapple and banana. He is confident of success.

SAN DIEGO county is raising an immense crop of potatoes this season. New potatoes have already made their appearance.

WALNUT TREES.—Dr Barton of San Bernardino, has walnut trees three feet high, grown from nuts planted in March, 1873.

THE noted Wolfskill Vineyard, in Los Angeles county, is being uprooted to make room for an orange orchard.

THE Walla Walla Union says that Nooksack valley, W. T., produces tobacco that can not be excelled by the famous Kentucky leaf.

TULARE grain fields are everywhere looking finely, and promise the largest crop ever grown there.

A LARGE amount of wheat changed hands at Corvallis, Oregon, last week at 85 cents per bushel.

DR. BARTON is experimenting in tea-culture at San Bernardino. The young plants seem to be thriving.

CITIZENS of Dixon are organizing a joint stock company for the purpose of starting a \$10,000 flour mill.

THE Los Angeles Tobacco Company have now seeded ninety acres with some of the best varieties of tobacco.

THEY were sowing wheat in the vicinity of Lewiaton, Idaho, last week. About Centerville, W. T., the farmers are busy ploughing.

THE vegetable ivory of Ecuador is being largely exported to Europe for manufacturing purposes.

CHICO farmers have finished seeding for the season, and now have every team engaged in summer-fallowing.

RAMIE AND EUCALYPTUS.—E. E. Moore & Co. have on hand no less than 100,000 plum gums and 50,000 Ramie plants.

LOS ANGELES is reported to be devoting more attention than ever to orange culture.

SOQUEL farmers are putting in large quantities of the sugar-beet.

SANTA CLARA farmers are devoting much attention to ramie.

OFFICE OF THE AGENT OF CALIFORNIA STATE GRANGE, }
SAN FRANCISCO, February 6th, 1874. }
MESSRS. TREADWELL & Co.—Gentlemen: In answer to your inquiry as to the satisfaction given by the purchases I have made of your house for members of the different Granges of Patrons of Husbandry, I will state that so far the machines and implements purchased have given the best satisfaction; and permit me to add that of the thousands of dollars worth bought by me of your firm the prices were in all cases satisfactory. Respectfully yours, G. P. KELLOGG,
Late State Agent of California State Grange.

ONLY three cent postage stamps for all the songs headed "Songs for the Million." See Advertisement.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

(By our own Reporter.)

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, Mar. 18, 1874.

The Produce market has not changed materially since our last. The Cereals have not yet recovered from the depression already so long continued. The Exchange is unusually quiet, there having been no remarkable rises or falls in the leading staples, though some changes have been experienced in such articles as Beans, Potatoes, etc.

Crop reports from the country are, on the whole, very favorable. The general tone of our exchanges is confident, and large crops are freely predicted. From some sections the complaint is made that too much rain fell, and at the wrong time; the area intended to be sown to wheat in several counties has been necessarily curtailed.

Receipts

Of Bay Produce during the past week have been as follows: Flour, 19,333 quarter sacks; Wheat, 22,551 cents; Barley, 9,400 cents; Oats, 100 cents; Buckwheat, 10 cents; Corn, 2,100 cents; Beans, 1,182 sacks; Castor Beans, 5 sacks; Potatoes, 8,400 sacks; Peas, 520 sacks; Onions, 460 sacks; Flax Seed, 5 sacks; Mustard Seed, 42 sacks; Alfalfa Seed, 59 sacks; Wool, 350 bales; Hops, 17 bales; Hides, 1,694; Pelts, 63 bundles; Skins, 15 packages; Leather, 151 rolls; Hay, 695 tons; Straw, 77 tons; Oranges, 340,380; Lemons, 52,750; Butter, 1,002 cents; Cheese, 540 cents; Tallow, 746 cents; Beet Sugar, 311 half barrels; Tobacco, 80 lbs.; Wine, 11,789 gallons; Brandy, 1,920 gallons, S. P. Lumber, 13 M feet.

Barley

Is moderately active. There are considerable shipments being made East.

Beans.

Prices are as high as ever, with no immediate prospect of a decline. Lima and Butter Beans are particularly in request.

Broom Corn.

Many of our farmers are going quite extensively into Broom Corn raising. They should understand, before calculating on the profits of prospective crops, the true reason why Broom Corn has ruled so high here during the past fall and up to the present time. The bulk of last year's crop was secured in advance by parties in this city—more particularly two firms—who bought up all they could lay their hands on, and refused to sell, except at almost prohibitory rates, from the fear of extensive rivalry in the manufacture of brooms. They now have full stocks on hand, and will have at the time this year's crop is received, say in November, quite a large surplus to hold over the next season. Raising Broom Corn is a fairly profitable business, where the farmer has patches of land suited for such culture, but the enormous profits expected are not to be relied on. There is room, for export, for much larger crops than have heretofore been gathered, but it is hardly likely that circumstances will soon again render it possible to force up prices so high. There is little being done now. Stocks are held, if anything, a little more firmly. A sale, a few days ago, of quite a large lot of medium quality was made, at \$200; and perhaps there is none on the market which can be had at our lowest figure, \$100 per ton. Fine Corn is sought for, and \$250 offered, but very few sales are made, for the reason stated above, that the holders wish to keep the manufacture to themselves. In New York prices are reported steady and unchanged.

Dairy Produce.

As the weather grows warmer supplies come in more freely. The receipts of Butter during the week were very large, and though it is in fair activity, prices are lower. Nothing but the finest Point Reyes will now bring the extreme of 37¢. There is not yet any marked decline from the rates which have ruled during the last two weeks, but the expectation is that prices will still further fall off. Cheese is steady. It is anticipated that the latter article will soon become a much more important object of trade in this State. From different localities we learn that Cheese factories are talked of. It is certain that Cheese is the best form in which to put milk, for dairymen operating at a distance from market, as it always is in condition for selling.

Eggs

Are more plenty and weaker, though it would seem that there is not much room for a further drop.

Feed

Is steady, with the usual range of \$3.50 in Hay. The mill price of Oil Cake Meal is \$32.50 per ton. Straw is selling at \$1.00 to \$1.10 per bale—ton as in our table. Bran is a little stiffer; millers are asking an advance of \$2.00.

Flour

Has again declined. The Extreme for extras, jobbing rates, is now \$6.25. Superfine is in some request, for shipments to China.

Fresh Meat.

Choice Beef is in especial request, and its price has been raised another couple of cents. Pork is also higher, both for dressed and undressed.

Hops

Are a little stronger. Dealers are selling Californias at 37½ cts., and Eastern, including New York, which now run with the average, at 50 cents.

Potatoes

Have made another start upward, and have reached to-day almost the highest price of the year. Some weeks ago a lot of choice Humboldts were taken at \$2.00 but the rate did not hold. The stock of old Potatoes is rapidly diminishing, and the new crop is coming forward slowly, on account of backward weather. To meet the requirements of this city drafts have been made

upon the southern counties, Oregon and even Washington Territory. It will not be long, however, before the new are in sufficient supply to alter the present state of things.

Poultry.

Turkeys are still very low, but Chickens are in better demand, and Ducks have advanced \$1.00 per dozen.

Provisions.

California Bacon is in better demand; the price now ranges from 10c. to 13c., according to weight. Hams and Lard are steady.

Wheat.

There is no improvement in the Wheat market. A further decline is telegraphed from Liverpool, but prices have not changed here for several days. At one time during the week \$2 was given by the millers, for choice sample, but that figure would be unthought of, to-day.

Wool.

There is nothing new to report of the Wool trade in this city. Business is slack, and our quotations are almost nominal. There is no very encouraging news from the Eastern States. Wool is reported to have been quite active at the recently reduced rates. We have Walter Brown, Son & Co.'s Wool circular for March, which says: The only class of Wool of which there has been a surplus in the market is Fall Clip California. These wools have accumulated to considerable extent in New York and Boston; and, with the receipts much larger than the sales, prices have yielded about 10 per cent. from the extreme values of a month ago. In regard to the future, we are of the opinion that during the next few weeks there will be no material change in prices; but that we may expect a fair, steady demand, causing, without excitement, the natural and gradual reduction of stock, which is desirable at this season of the year.

From the Bulletin's telegraphic commercial letter of the 14th, from Boston, we extract the following: The Wool market has been quiet during the week, but some round lots of fine fleeces were disposed of, the total sales footing up 1,468,350 pounds, foreign and domestic. There has been no material change in prices. The stock of fine and desirable fleeces has again been considerably reduced, and manufacturers have none but a small assortment of this description to select from; but outside of fine fleeces there is not much of an encouraging character to report about the market. Wool not fully up in condition is very difficult to sell, either fleece or pulled. California Fall is very dull, as previously noted. For combing and delaine fleeces there is a firm feeling, and full prices are readily obtained for desirable lots. The trade on the whole has been rather unsatisfactory. Sales of the past week embrace: Fall, 20@28c.; Spring California, 30@32c.; Lambs, California, 28c.; scoured, 64c@81 05; superfine and extra pulled, 40@58c.

DOMESTIC PRODUCE.

WEDNESDAY M., March 18, 1874.

Beans, small white, 5 @ 54	Chile Walnuts, 12 @ 12½
do, butter, 5 @ 54	do, Hickory, 9 @ 10
do, large, do, 7 @ 16	do, Brazil, do, 15 @ 16
do, bayo, 2½ @ 24	do, Cane, 100, 7 @ 8.00
do, pink, 2½ @ 24	do, Almonds, 10 @ 12½
do, pea, 5¼ @ 5½	do, soft, 22½ @ 25
do, Lima, 5 @ 5½	do, Filbert, 18 @ 20
BROOM CORN.	
Per ton, \$100@250	
DAIRY PRODUCE.	
Butter, Cal. choice	
do, good, 35 @ 37½	
do, inferior, 20 @ 25	
do, firkin, 27½ @ 32½	
do, pickled, 18 @ 18	
do, Eastern, 14 @ 18	
EGGS.	
Eggs, Cal. fresh, 25 @ 27½	
do, Oregon, 22 @ 22½	
do, Eastern, 20 @ 21	
do, Duck, 30 @ 30	
FEED.	
Bran, per ton, 18 @ 20	
Middlings, 27 @ 30	
Hay, 13 @ 16	
Straw, 9 @ 10	
Oil cake meal, 35 @ 37.50	
Corn Meal, 35 @ 37.50	
FLOUR—Superfine & Extra.	
Alvies Mills, 50 @ 62.50	
California, 50 @ 62.50	
Santa Clara Mills, 50 @ 62.50	
Genesee Mills, 50 @ 62.50	
Golden Gate, 50 @ 62.50	
Golden Age, 50 @ 62.50	
National Mills, 50 @ 62.50	
Santa Clara Mills, 50 @ 62.50	
Genesee Mills, 50 @ 62.50	
Oregon, 50 @ 62.50	
Valley Star, 50 @ 62.50	
Venns, Oakland, 50 @ 62.50	
Stockton City, 50 @ 62.50	
Lamb, 50 @ 62.50	
FRESH MEAT.	
Beef, fr quality, 10 @ 12½	
do, second do, 7 @ 8	
do, third do, 5 @ 6	
Mutton, 7½ @ 8	
Lamb, 7 @ 8	
Pork, undressed, 7 @ 8	
do, dressed, 8 @ 9	
GRAIN, ETC.	
Wheat, Cal. 1.10 @ 1.90	
do, shipping, 1.85 @ 1.92½	
do, milling, 1.90 @ 1.95	
Barley, Feed, 1.55 @ 1.75	
do, Brewing, 1.60 @ 1.85	
Oats, good, 1.45 @ 1.75	
do, common, 1.55 @ 1.60	
Corn, White, 60 @ 1.24	
do, Yellow, 60 @ 1.24	
Buckwheat, 3.00 @ 3.25	
Rye, 1.50 @ 1.80	
HOPS.	
California, 1873, 37½ @ 37½	
Eastern, 1873, 50 @ 50	
do New York, 50 @ 50	
MISCELLANEOUS.	
Beeswax, per lb., 25 @ 32½	
Honey, choice, 17 @ 25	
do, choice Mt, 30 @ 30	
do, Loe Ang, 20½ @ 21½	
do, choice N. H., 15 @ 20	
do, Good, 12 @ 12	
do, Strained, 8 @ 15	
Pulu, 8 @ 8½	
Onions, 2½ @ 3	
Cal. Walnuts, 13 @ 14	
canuts per lb., 7 @ 8	

Alvies Mills, 50 @ 62.50	Chile Walnuts, 12 @ 12½
California, 50 @ 62.50	do, Hickory, 9 @ 10
Santa Clara Mills, 50 @ 62.50	do, Brazil, do, 15 @ 16
Genesee Mills, 50 @ 62.50	do, Cane, 100, 7 @ 8.00
Golden Gate, 50 @ 62.50	do, Almonds, 10 @ 12½
Golden Age, 50 @ 62.50	do, soft, 22½ @ 25
National Mills, 50 @ 62.50	do, Filbert, 18 @ 20
Santa Clara Mills, 50 @ 62.50	
Genesee Mills, 50 @ 62.50	
Oregon, 50 @ 62.50	
Valley Star, 50 @ 62.50	
Venns, Oakland, 50 @ 62.50	
Stockton City, 50 @ 62.50	
Lamb, 50 @ 62.50	
PROVISIONS.	
Cal. Bacon, Light, 13 @ 13	
do, Heavy, 10 @ 10	
Palm, 10 @ 10	
Cal. Hams, 12½ @ 13½	
do, Whittakers, 15 @ 15	
do, Duffield, ch, 14 @ 14	
do, Ham, 14 @ 14	
do, Lard, 11½ @ 15	
SEEDS.	
Alfalfa, 18 @ 20	
Canary, 5 @ 6	
do, Blue Grass, 40 @ 50	
do, Millet, 10 @ 12	
do, Mustard, white, 2 @ 3	
do, Brown, 3 @ 4	
do, Plantain, 25 @ 30	
do, Timothy, 15 @ 16	
do, Sweet V. Grass, 30 @ 35	
do, Orchard do, 30 @ 35	
do, Red Top do, 30 @ 40	
do, Lawn do, 50 @ 60	
do, Clover Red, 20 @ 20	
do, White, 60 @ 75	
do, Aleike, 10 @ 10	
do, Esparto Grass, 10 @ 10	
do, Packets, 10 @ 10	
WOOL, ETC.	
Spring, short, 15 @ 18	
do, choice No. 1, 18 @ 22	
do, choice No. 2, 14 @ 18	
do, choice No. 3, 10 @ 14	
do, choice No. 4, 10 @ 14	
do, choice No. 5, 10 @ 14	
do, choice No. 6, 10 @ 14	
do, choice No. 7, 10 @ 14	
do, choice No. 8, 10 @ 14	
do, choice No. 9, 10 @ 14	
do, choice No. 10, 10 @ 14	
do, choice No. 11, 10 @ 14	
do, choice No. 12, 10 @ 14	
do, choice No. 13, 10 @ 14	
do, choice No. 14, 10 @ 14	
do, choice No. 15, 10 @ 14	
do, choice No. 16, 10 @ 14	
do, choice No. 17, 10 @ 14	
do, choice No. 18, 10 @ 14	
do, choice No. 19, 10 @ 14	
do, choice No. 20, 10 @ 14	
do, choice No. 21, 10 @ 14	
do, choice No. 22, 10 @ 14	
do, choice No. 23, 10 @ 14	
do, choice No. 24, 10 @ 14	
do, choice No. 25, 10 @ 14	
do, choice No. 26, 10 @ 14	
do, choice No. 27, 10 @ 14	
do, choice No. 28, 10 @ 14	
do, choice No. 29, 10 @ 14	
do, choice No. 30, 10 @ 14	
do, choice No. 31, 10 @ 14	
do, choice No. 32, 10 @ 14	
do, choice No. 33, 10 @ 14	
do, choice No. 34, 10 @ 14	
do, choice No. 35, 10 @ 14	
do, choice No. 36, 10 @ 14	
do, choice No. 37, 10 @ 14	
do, choice No. 38, 10 @ 14	
do, choice No. 39, 10 @ 14	
do, choice No. 40, 10 @ 14	
do, choice No. 41, 10 @ 14	
do, choice No. 42, 10 @ 14	
do, choice No. 43, 10 @ 14	
do, choice No. 44, 10 @ 14	
do, choice No. 45, 10 @ 14	
do, choice No. 46, 10 @ 14	
do, choice No. 47, 10 @ 14	
do, choice No. 48, 10 @ 14	
do, choice No. 49, 10 @ 14	
do, choice No. 50, 10 @ 14	
do, choice No. 51, 10 @ 14	
do, choice No. 52, 10 @ 14	
do, choice No. 53, 10 @ 14	
do, choice No. 54, 10 @ 14	
do, choice No. 55, 10 @ 14	
do, choice No. 56, 10 @ 14	
do, choice No. 57, 10 @ 14	
do, choice No. 58, 10 @ 14	
do, choice No. 59, 10 @ 14	
do, choice No. 60, 10 @ 14	
do, choice No. 61, 10 @ 14	
do, choice No. 62, 10 @ 14	
do, choice No. 63, 10 @ 14	
do, choice No. 64, 10 @ 14	
do, choice No. 65, 10 @ 14	
do, choice No. 66, 10 @ 14	
do, choice No. 67, 10 @ 14	
do, choice No. 68, 10 @ 14	
do, choice No. 69, 10 @ 14	
do, choice No. 70, 10 @ 14	
do, choice No. 71, 10 @ 14	
do, choice No. 72, 10 @ 14	
do, choice No. 73, 10 @ 14	
do, choice No. 74, 10 @ 14	
do, choice No. 75, 10 @ 14	
do, choice No. 76, 10 @ 14	
do, choice No. 77, 10 @ 14	
do, choice No. 78, 10 @ 14	
do, choice No. 79, 10 @ 14	
do, choice No. 80, 10 @ 14	
do, choice No. 81, 10 @ 14	
do, choice No. 82, 10 @ 14	
do, choice No. 83, 10 @ 14	
do, choice No. 84, 10 @ 14	
do, choice No. 85, 10 @ 14	
do, choice No. 86, 10 @ 14	
do, choice No. 87, 10 @ 14	
do, choice No. 88, 10 @ 14	
do, choice No. 89, 10 @ 14	
do, choice No. 90, 10 @ 14	
do, choice No. 91, 10 @ 14	
do, choice No. 92, 10 @ 14	
do, choice No. 93, 10 @ 14	
do, choice No. 94, 10 @ 14	
do, choice No. 95, 10 @ 14	
do, choice No. 96, 10 @ 14	
do, choice No. 97, 10 @ 14	
do, choice No. 98, 10 @ 14	
do, choice No. 99, 10 @ 14	
do, choice No. 100, 10 @ 14	

Pork, unseasoned.	8	@	6½	SEEDS.			
do, dressed.	8	@	8½	Alfalfa.	18	@	20
GRAIN.	ET			Canary.	5	@	6
Wheat, California.	81	@	90	do, Blue Grass.	40	@	50
do, shipping.	85	@	192½	do, Millet.	10	@	12
do, milling.	90	@	95	do, Mustard, white.	2	@	3
Barley, Feed.	55	@	75	do, Brown.	3	@	4
do, Brewing.	60	@	85	do, Plantain.	25	@	30
Oats, do.				do, Timothy.	15	@	16
do, ch. loc.	155	@	175	do, Sweet V. Grass.	30	@	35
do, common.	145	@	160	do, Orchard do.	30	@	35
Corn, White.	160	@	72½	do, Red Top do.	30	@	40
do, Yellow.	160	@	72½	do, Lawn do.	50	@	60
Rutewheat.	300	@	100	do, Clover Red.	20	@	20
do, ch. loc.	160	@	72½	do, White.	60	@	75
Rye.	175	@	80	do, Aleike.	10	@	10
HOPS.				do, Esparto Grass.	100	@	100
California, 1873.		@	37½	do, Packets.			
Eastern, 1873.		@	50	WOOL, ETC.			
do, New York.		@	50	Spring, short, B.	15	@	18
MISCELLANEOUS.				do, choice No. 1.	18	@	22
Beeswax, per lb.	25	@	32½	do, choice No. 2.	14	@	18
Honey, choice.	17	@	20	do, choice No. 3.	10	@	14
do, do.	17	@	20	do, choice No. 4.	10	@	14
do, do.	17	@	20	do, choice No. 5.	10	@	14
do, do.	17	@	20	do, choice No. 6.	10	@	14
do, do.	17	@	20	do, choice No. 7.	10	@	14
do, do.	17	@	20	do, choice No. 8.	10	@	14
do, do.	17	@	20	do, choice No. 9.	10	@	14
do, do.	17	@	20	do, choice No. 10.	10	@	14
do, do.	17	@	20	do, choice No. 11.	10	@	14
do, do.	17	@	20	do, choice No. 12.	10	@	14
do, do.	17	@	20	do, choice No. 13.	10	@	14
do, do.	17	@	20	do, choice No. 14.	10	@	14
do, do.	17	@	20	do, choice No. 15.	10	@	14
do, do.	17	@	20	do, choice No. 16.	10	@	14
do, do.	17	@	20	do, choice No. 17.	10	@	14
do, do.	17	@	20	do, choice No. 18.	10	@	14
do, do.	17	@	20	do, choice No. 19.	10	@	14
do, do.	17	@	20	do, choice No. 20.	10	@	14
do, do.	17	@	20	do, choice No. 21.	10	@	14
do, do.	17	@	20	do, choice No. 22.	10	@	14
do, do.	17	@	20	do, choice No. 23.	10	@	14
do, do.	17	@	20	do, choice No. 24.	10	@	14
do, do.	17	@	20	do, choice No. 25.	10	@	14
do, do.	17	@	20	do, choice No. 26.	10	@	14
do, do.	17	@	20	do, choice No. 27.	10	@	14
do, do.	17	@	20	do, choice No. 28.	10	@	14
do, do.	17	@	20	do, choice No. 29.	10	@	14
do, do.	17	@	20	do, choice No. 30.	10	@	14
do, do.	17	@	20	do, choice No. 31.	10	@	14
do, do.	17	@	20	do, choice No. 32.	10	@	14
do, do.	17	@	20	do, choice No. 33.	10	@	14
do, do.	17	@	20	do, choice No. 34.	10	@	14
do, do.	17	@	20	do, choice No. 35.	10	@	14
do, do.	17	@	20	do, choice No. 36.	10	@	14
do, do.	17	@	20	do, choice No. 37.	10	@	14
do, do.	17	@	20	do, choice No. 38.	10	@	14
do, do.	17	@	20	do, choice No. 39.	10	@	14
do, do.	17	@	20	do, choice No. 40.	10	@	14
do, do.	17	@	20	do, choice No. 41.	10	@	14
do, do.	17	@	20	do, choice No. 42.	10	@	14
do, do.	17	@	20	do, choice No. 43.	10	@	14
do, do.	17	@	20	do, choice No. 44.	10	@	14
do, do.	17	@	20	do, choice No. 45.	10	@	14
do, do.	17	@	20	do, choice No. 46.	10	@	14
do, do.	17	@	20	do, choice No. 47.	10	@	14
do, do.	17	@	20	do, choice No. 48.	10	@	14
do, do.	17	@	20	do, choice No. 49.	10	@	14
do, do.	17	@	20	do, choice No. 50.	10	@	14
do, do.	17	@	20	do, choice No. 51.	10	@	14
do, do.	17	@	20	do, choice No. 52.	10	@	14
do, do.	17	@	20	do, choice No. 53.	10	@	14
do, do.	17	@	20	do, choice No. 54.	10	@	14
do, do.	17	@	20	do, choice No. 55.	10	@	14
do, do.	17	@	20	do, choice No. 56.	10	@	14
do, do.	17	@	20	do, choice No. 57.	10	@	14
do, do.	17	@	20	do, choice No. 58.	10	@	14
do, do.	17	@	20	do, choice No. 59.	10	@	14
do, do.	17	@	20	do, choice No. 60.	10	@	14
do, do.	17	@	20	do, choice No. 61.	10	@	14
do, do.	17	@	20	do, choice No. 62.	10	@	14
do, do.	17	@	20	do, choice No. 63.	10	@	14
do, do.	17	@	20	do, choice No. 64.	10	@	14
do, do.	17	@	20	do, choice No. 65.	10	@	14
do, do.	17	@	20	do, choice No. 66.	10	@	14
do, do.	17	@	20	do, choice No. 67.	10	@	14
do, do.	17	@	20	do, choice No. 68.	10	@	14
do, do.	17	@	20	do, choice No. 69.	10	@	14
do, do.	17	@	20	do, choice No. 70.	10	@	14
do, do.	17	@	20	do, choice No. 71.	10	@	14
do, do.	17	@	20	do, choice No. 72.	10	@	14
do, do.	17	@	20	do, choice No. 73.	10	@	14
do, do.	17	@	20	do, choice No. 74.	10	@	14
do, do.	17	@	20	do, choice No. 75.	10	@	14
do, do.	17	@	20	do, choice No. 76.	10	@	14
do, do.	17	@	20	do, choice No. 77.	10	@	14
do, do.	17	@	20	do, choice No. 78.	10	@	14
do, do.	17	@	20	do, choice No. 79.	10	@	14
do, do.	17	@	20	do, choice No. 80.	10	@	14
do, do.	17	@	20	do, choice No. 81.	10	@	14
do, do.	17	@	20	do, choice No. 82.	10	@	14
do, do.	17	@	20	do, choice No. 83.	10	@	14
do, do.	17	@	20	do, choice No. 84.	10	@	14
do, do.	17	@	20	do, choice No. 85.	10	@	14
do, do.	17	@	20	do, choice No. 86.	10	@	14
do, do.	17	@	20	do, choice No. 87.	10	@	14
do, do.	17	@	20	do, choice No. 88.	10	@	14
do, do.	17	@	20	do, choice No. 89.	10	@	14
do, do.	17	@	20	do, choice No. 90.	10	@	14
do, do.	17	@	20	do, choice No. 91.	10	@	14
do, do.	17	@	20	do, choice No. 92.	10	@	14
do, do.	17	@	20	do, choice No. 93.	10	@	14
do, do.	17	@	20	do, choice No. 94.	10	@	14
do, do.	17	@	20	do, choice No. 95.	10	@	14
do, do.	17	@	20	do, choice No. 96.	10	@	14
do, do.	17	@	20	do, choice No. 97.	10	@	14
do, do.	17	@	20	do, choice No. 98.	10	@	14
do, do.	17	@	20	do, choice No. 99.	10	@	14
do, do.	17	@	20	do, choice No. 100.	10	@	14
do, do.	17	@	20	do, choice No. 101.	10	@	14
do, do.	17	@	20	do, choice No. 102.	10	@	14
do, do.	17	@	20	do, choice No. 103.	10	@	14
do, do.	17	@	20	do, choice No. 104.	10	@	14
do, do.	17	@	20	do, choice No. 105.	10	@	14
do, do.	17	@	20	do, choice No. 106.	10	@	14
do, do.	17	@	20	do, choice No. 107.	10	@	14
do, do.	17	@	20	do, choice No. 108.	10	@	14
do, do.	17	@	20	do, choice No. 109.	10	@	14
do, do.	17	@	20	do, choice No. 110.	10	@	14
do, do.	17	@	20	do, choice No. 111.	10	@	14
do, do.	17	@	20	do, choice No. 112.	10	@	14
do, do.	17	@	20	do, choice No. 113.	10	@	14
do, do.	17	@	20	do, choice No. 114.	10	@	14
do, do.	17	@	20	do, choice No. 115.	10	@	14
do, do.	17	@	20	do, choice No. 116.	10	@	14
do, do.	17	@	20	do, choice No. 117.	10	@	14
do, do.	17	@	20	do, choice No. 118.	10	@	14
do, do.	17	@	20	do, choice No. 119.	10	@	14
do, do.	17	@	20	do, choice No. 120.	10	@	14
do, do.	17	@	20	do, choice No. 121.	10	@	14
do, do.	17	@	20	do, choice No. 122.	10	@	14
do, do.	17	@	20	do, choice No. 123.	10	@	14
do, do.	17	@	20	do, choice No. 124.	10	@	14
do, do.	17	@	20	do, choice No. 125.	10	@	14
do, do.	17	@	20	do, choice No. 126.	10	@	14
do, do.	17	@	20	do, choice No. 127.	10	@	14
do, do.	17	@	20	do, choice No. 128.	10	@	14
do, do.	17	@	20	do, choice No. 129.	10	@	14
do, do.	17	@	20	do, choice No. 130.	10	@	14
do, do.	17	@	20	do, choice No. 131.	10	@	14
do, do.	17	@	20	do, choice No. 132.	10	@	14
do, do.	17	@	20	do, choice No. 133.	10	@	14
do, do.	17	@	20	do, choice No. 134.	10	@	14
do, do.	17	@	20	do, choice No. 135.	10	@	14
do, do.	17	@	20	do, choice No. 136.	10	@	14
do, do.	17	@	20	do, choice No. 137.	10	@	14
do, do.	17	@	20	do, choice No. 138.	10	@	14
do, do.	17	@	20	do, choice No. 139.	10	@	14
do, do.	17	@	20	do, choice No. 140.	10	@	14
do, do.	17	@	20	do, choice No. 141.	10	@	14
do, do.	17	@	20	do, choice No. 142.	10	@	14
do, do.	17	@	20	do, choice No. 143.	10	@	14
do, do.	17	@	20	do, choice No. 144.	10	@	14
do, do.	17	@	20	do, choice No. 145.	10	@	14
do, do.	17	@	20	do, choice No. 146.	10	@	14
do, do.	17	@	20	do, choice No. 147.	10	@	14
do, do.	17	@	20	do, choice No. 148.	10	@	14
do, do.	17	@	20	do, choice No. 149.	10	@	14
do, do.	17	@	20	do, choice No. 150.	10	@	14
do, do.	17	@	20	do, choice No. 151.	10	@	14
do, do.	17	@	20	do, choice No. 152.	10	@	14
do, do.	17	@	20	do, choice No. 153.	10	@	14
do, do.	17	@	20	do, choice No. 154.	10	@	14
do, do.	17	@	20	do, choice No. 155.	10	@	14
do, do.	17	@	20	do, choice No. 156.	10	@	14
do, do.	17	@	20	do, choice No. 157.	10	@	14
do, do.	17	@	20	do, choice No. 158.	10	@	14
do, do.	17	@	20	do, choice No. 159.	10	@	14
do, do.	17	@	20	do, choice No. 160.	10	@	14
do, do.	17	@	20	do, choice No. 161.	10	@	14
do, do.	17	@	20	do, choice No. 162.	10	@	14
do, do.	17	@	20	do, choice No. 163.	10	@	14
do, do.	17	@	20	do, choice No. 164.	10	@	14
do, do.	17	@	20	do, choice No. 165.	10	@	14
do, do.	17	@	20	do, choice No. 166.	10	@	14
do, do.	17	@	20	do, choice No. 167.	10	@	14
do, do.	17	@	20	do, choice No. 168.	10	@	14
do, do.	17	@	20	do, choice No. 169.	10	@	14
do, do.	17	@	20	do, choice No. 170.	10	@	14
do, do.	17	@	20	do, choice No. 171.	10	@	14
do, do.	17	@	20	do, choice No. 172.	10	@	14
do, do.	17	@	20	do, choice No. 173.	10	@	14
do, do.	17	@	20	do, choice No. 174.	10	@	14
do, do.	17	@	20	do, choice No. 175.	10	@	14
do, do.	17	@	20	do, choice No. 176.	10	@	14
do, do.	17	@	20	do, choice No. 177.	10	@	1

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado county,
California.

11v6-eow

U. S. LIVE STOCK EXCHANGE.



S. E. COR. FIFTH AND BRYANT STS., S. F.

CATTLE SOLD ON COMMISSION,
—OR—
Bought on Farm for Cash.

WANTED—43 MILCH COWS, 24 WORK HORSES, 470 HOGS, 260 BEEVES.

Address, DAWSON & BANCROFT,
612 Fourth street, S. F.

Special Rates to Members of the Grange. 10v7tf

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull,
"DANDY JIM,"

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured. 4v7-3m

Angora Goats at Auction.

ON WEDNESDAY, MAY 6TH, AT 2 O'CLOCK P. M., I will sell to the highest bidder Seventy Head of Thoroughbred Angora Goats, imported by their owner, Wm. A. Eustichedes, from Asia Minor. Sale Positive. Terms cash, in U. S. Gold Coin. ROBT. BECK.

I have also the best imported Alderney, Jersey and Ayrshire Cattle; Spanish and Silesian Merino Sheep at private sale. R. B. Sacramento, March 10, 1874. 11v7-5t

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, Imported last year, and bought of Hammond. J. H. DODGE.

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal. 12v24-tf



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the

MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 8 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the



THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

10v7-eow

HIGHEST HONORS AWARDED TO THE WEEB SEWING MACHINE!

AT THE

Vienna Exposition, '73.

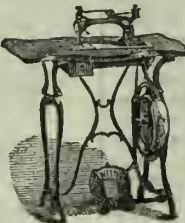
Grand Medal of Progress!

Grand Medal of Merit!

AND TO OAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

CYRUS JONES. GEN. GILES A. SMITH. L. H. HICKS.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Dutchess, Rose of Sharnou, Booths, Miss Wileys, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara avenue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO.,

San Jose, Cal.

2v7-3m

CALVERT'S



CARBOLIC

SHEEP WASH.

Sole Agency on the Pacific Coast at

T. W. JACKSON'S,

416 Sacramento Street, San Francisco.

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m

304 California Street.

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily operated Sewing Machine in the market.

Always in order and ready for work.

In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m

Grand Hotel Building, S. F.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 827 Sacramento St., bet. Montgomery and Kearny Sts., S. F.

ds27-1f



PRICE, \$50.

The New Wilson SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market

G. A. NORTON, Gen. Ag't for the Pacific Coast.

337 Kearny St., S. F.

2v7-eow-hp-ly

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callons Lumps and Blemishes of all kinds are speedily removed by it.

3v7-3m

WILLIAMS & MOORE, Prop'rs.

Stockton, Cal.

AGRICULTURAL ARTICLES.

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m

MATTESON & WILLIAMSON,

Stockton, Cal.

O. CREGO.

S. O. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Buggies, Skeleton Wagons, Basket Phaetons of the very latest style and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey; Helfield & Jackson, Rahway, New Jersey;

Gregg & Bow, Wilmington, Delaware;

And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harnesses, of the most celebrated makers:

C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, 24v6-3m San Francisco.



LINFORTH, KELLOGG & CO.,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with Dropper.
World Reapers, and Mowers with Dropper and Hand Rakes—side delivery.
Clipper Mowers and Reapers, with Dropper.

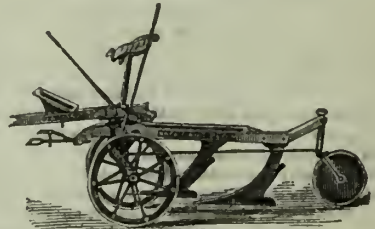
Cayuga Chief Mowers and Reapers.
Sulky Rakes—Furst & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

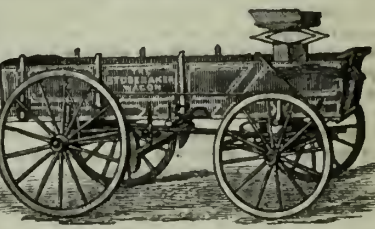
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps; Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators, Mortise Head Hay Rake, Scythes and Snaths,

Soule, Ketsinger & Co.'s First-Class Farming Tools,

Gold Medal Forks, Hoes and Rakes, Batchellor's Forks,

Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,

Road Scrapers, Canal and Garden Barrows,

Hay Cutters—Burdick's National, Belcher & Taylor's

Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

NURSERY NOTICES.

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale.

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.

Send for Price Catalogues.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address **THOMAS MEHERIN,**
516 Battery Street,
SAN FRANCISCO.
P. O. Box 722. 24v6-3m

METROPOLITAN NURSERY.

MILLER & SIEVERS, Prop'r's.

We can now offer for sale a fine assortment of
NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,
(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.

Nurseries on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.

Letters by Mail or express will reach us.

ja10 **MILLER & SIEVERS.**

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;
ORANGE TREES, SEEDLINGS;
LEMON TREES,
LIME TREES,
CITRON,
SHADDOCK,
POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.
Send for priced Catalogue. 24v6-6m

SUPERIOR
FRUIT TREES,
TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSEYMAN.

T. CORLEY,
4v7-3m No. 315 Washington st., S. F.

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental Trees, Shrubs, Roses, GREEN HOUSE PLANTS, ETC.

We are constantly adding to our varied stock the NEWEST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call.

LANDSCAPE GARDENING attended to. ja24tf

PEPPER'S NURSERIES,
PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, **W. H. & G. B. PEPPER,**
21v6-1y Petaluma, Sonoma Co., Cal.

MULBERRY TREES,

(JAPONICA AND GRAFTED ROSE-LEAVED.)

For Sale at Felix Gillet's, Nevada City, Cal.

Japonica, 2 and 3 year old trees at \$10, \$8 and \$6 per hundred; cuttings at \$2 per hundred; grafted rose-leaved, standard trees, with heads at six feet from the ground, \$1.50 per tree; \$1.00 per tree; cuttings for budding and grafting, \$3 per dozen. Small packages of Japonica (3d-class trees) and cuttings, and rose-leaved sonoma, may be sent by mail in four pound packages, or by express; larger invoices with common freight. Send for more particulars. >1eo Bionasand Brianza Silk Worm Eggs. 6v7-6t



BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESASE AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Daphnes, Araucarias, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Eucalyptus, Acacias, Peppers, Cypress, Pines, Junipers, Cedar of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tulips, Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine. 2v7-3m

FOR SALE!

Valuable Fruit Orchard and Garden

Of ninety-two acres choice land, one mile from Railroad Depot; 10,000 fruit trees, grafted, best sorts, in full bearing; five acres vineyard, half foreign table; two acres best blackberries.

Three Artesian Wells supply an abundance of water. Seven-room Dwelling, hard-finished; barns, sheds, vineyard house, fruit-drying house, steam engine, boiler, saw for box making, and every requisite for raising, curing and shipping fruit on an extensive scale.

This property will be sold as a whole, or in two subdivisions of forty-six acres each, on easy terms. Title perfect.

For particulars, apply to
YOUNG & PAXSON,
No. 424 Montgomery St.,
San Francisco, Cal. 21-4

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN Trees, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good references must accompany all orders. Lombardy Poplars, 1 1/2 to 2 inch trees, 25 cts. each.

E. PARSONS & CO.,
Nurserymen and Florists,
K street, between 8th and 9th, SACRAMENTO, CAL. 4v7-3m

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES
Of Peaches and five of Plum. The Finley Peach, Georgia Freestone Seedling, the first offered in the State, its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

BRYAN & DOMINGOS,
4v7-2m P. O. Box 157, Sacramento, Cal.

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of the grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.
Or **C. J. CLAYTON**
Clayton, Contra Costa Co., Cal. 10v7-0m

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypressess, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses. Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrons Deodare, or Deavine Cedar Seeds.

L. M. NEWSOM,
East Oakland, 12th St., near Tubbs' Hotel. ja10
Send for Catalogue.

THOS. A. GAREY'S
Semi-Tropical Nurseries.
San Pedro street, two miles below the Court House, LOS ANGELES, CAL.

The Largest Stock of Semi-Tropical and Northern Fruit Trees in Southern California,

Grafted Orange Trees a Specialty.

14v6-6m **THOS. A. GAREY, Proprietor**

Priced catalogue sent free. Address P. O. Box 265.

AUSTRALIAN
GUM TREES.

250,000 on hand for this season, at rates to encourage forest culture. Also, 50,000 Cypress, in shipping order. Nursery on 12th street, one block north of Tubbs' Hotel, East Oakland, Cal. Or address, Box 30, Oakland.

BAILEY & CO., Proprietors.
Beautiful fresh Cypress Seed, \$4 per pound, sent by mail, warranted pure and of the finest quality. 25v6-3m

THE FINEST COLLECTION OF PINES, Cypress, Australian Eucalyptus,

EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices.

Send for priced Catalogue to

8v7-3m **A. D. PRYAL, Oakland, Cal.**

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT TREES for sale, from three to five years old. The five-year-old Orange Trees are the largest ever offered for sale in this county. For Price, address,

MILTON THOMAS,
P. O. Box 304, Los Angeles, Cal. 6v7-2m

HOP ROOTS FOR SALE.

I have a lot of choice HOP ROOTS, and also healthy BLACKBERRY SETS, for sale at LOWEST RATES. Orders may be addressed through DEWEY & CO., of the Rural Press, San Francisco; ROBT. WILLIAMSON, Capital Nurseries, Sacramento; or to me,

CALVERT T. BIRD,
San Jose, Cal. 25v6-3m

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California.

My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural Fruit, Shade, Ornamental and Fruit Tree

SEEDS—

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnice & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass, Red Clover, White Clover, Musquit Grass, Timothy,

Redtop Grass, Orchard Grass, Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the Interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk. My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO. 1v7-3m

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100,000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in this line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 21v6-1f

THE BEST SEEDS

AT WHATEVER COST,

ARE ALWAYS THE CHEAPEST IN THE END.

No person, Gardener, Amateur, or Farmer, can afford to plant any but the BEST. We make a specialty of furnishing, for Market Gardeners' use, choice grown, extra selected Seeds, of varieties having their special approval.

Also, for Family Gardens the finest and best varieties introduced up to the present time. With us QUALITY stands first, all other considerations secondary to this.

Our Catalogue, with prices for Spring of 1874, contains full information. We mail it free to all who send for it.

SCHLEGEL, EVERETT & CO.,

BOSTON, MASS. mr7-3t

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco. 19v6-1f

THE ALDEN

Fruit Preserving Company

OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

11v7-6m

G. W. DEITZLER, President.

W. M. WHERRY, Vice President.

FRANK PYLE, Sec'y and Supt.

BANK OF CALIFORNIA, Treasurer.

H. K. CUMMINGS. 1858.

H. H. RALSTON. 1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1y

LANDS & HOMES FOR SALE

RANCHOS
FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho.

Apply to
ALFRED ROBINSON, Trustee.
542 MARKET STREET,
N. E. corner of Montgomery.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,
311 Montgomery street, San Francisco,
Or Pacific Rural Press Office.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. hptf

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

DAVID CROCKETT.....BURGESS, Master,

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to **E. E. MORGAN'S SONS,**

320 California Street,
San Francisco.

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.

San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,

Subscribed, \$3,000,000. Paid in, \$1,500,000.

Remainder subject to call.

DIRECTORS IN LONDON—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Schollfield, Isaac Seligman, Julius Sington.

MANAGERS:

R. G. SNEATH and IGNATZ STEINHART,

SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v27-cowbp

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,

OIL Cakes and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.

Office, 3 and 5 Front street.

Works, King street, bet. Second and Third. fel5-cow

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and

Kearny, SAN FRANCISCO. 21v2-1y

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street,

Agents for the Pacific Coast. 11v7-3m

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White Faced Black Spanish, Light and Dark Brahmas, Buff Cochins, Houdan, Crevecoeur and Games. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. State where you saw this advertisement. **P. J. PHILIPS,** 11v7-1m 608 Clay street, S. F.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

L. P. McCARTY—General Agent.
A. C. KNOX, City Soliciting and Collecting Agent.
W. H. RATTENBERRY—California.
J. C. EWING—San Mateo County, Cal.
CHAS. W. ORIS—Marin County.
C. M. DALY—Solano, Sacramento, Yolo, Sutter and Colusa Counties.
D. BRUNER—Bloomfield, Sonoma County.
CHAS. F. BELL—Alameda, Santa Clara and Santa Cruz Counties.
J. W. ANDERSON—Orange, Santa Ana and Los Angeles Counties, Cal.
J. D. CAREY—Sonoma, Mendocino, Lake, Humboldt and Trinity Counties.

9 9 9 9 9 9 9 9 9 9 9
GROVER & BAKER'S
9
IMPROVED
9
LOCK STITCH
9
SEWING MACHINE.
9

**No. 9.**

9
SIMPLE, DURABLE,
9
LIGHT RUNNING, RAPID,
9
EASILY OPERATED,
9
Accurate and Perfect
9
in Principle,
9

9
Beautiful in Appearance.
9

9
In every respect the best and most popular
9
Lock Stitch Machine made.
9

9
R. G. BROWN, Agent,
9

9
116 Montgomery St., San Francisco.
9
25v6-1am-aa

9 9 9 9 9 9 9 9 9 9 9
BEST SHADE IN USE.

—THE—
RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture
IS FAST SUPERSEDING ALL OTHER STYLES OF
WINDOW SHADES IN USE

Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS

Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the
Bottom.

And forms a complete and THE ONLY SUBSTITUTE
FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the
slightest injury. Its fixtures are simple, work to per-
fection, and never get out of order.

Our facilities for the rapid manufacture of a perfect
article are now such that we defy competition in quality
and price with any window shade in the market. Or-
ders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.

6v7-16p-3m
EGGS FOR HATCHING,

—FROM—

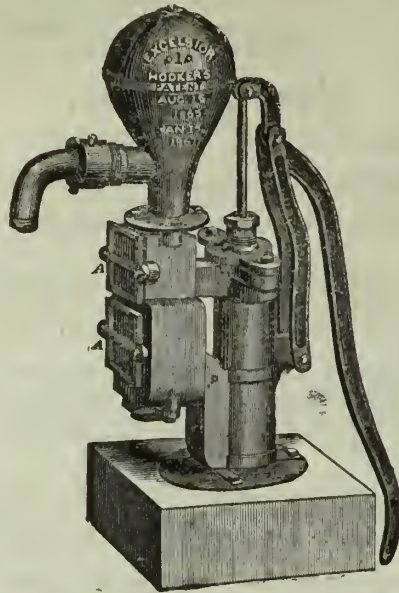
First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3
per doz; Buff Cochins, \$3 per doz; White Faced Black
Spaniels, \$4 per doz; White Leghorns, \$5 per doz. Buff
Cochins and Light Brahma Fowls for sale. Address:
G. A. DEAN, Pacific Straw Works,
335 Bush St., San Francisco.
12v7-3m-16p

WM. ZARTMAN & CO.,
CARRIAGE AND WAGON MAKERS,
COR. ENGLISH & HOWARD STS., PETALUMA.
Are prepared to fill all orders for Buggies, Family Car-
riages, Side and End-spring Ranch Wagons, etc. Ranch
Wagons, from \$100 to \$250; Spring Wagons, from \$150
to \$250. Having the advantage of a large brick drying
room for seasoning lumber, they will warrant their
work to stand the test of California Climate.
SPECIAL RATES TO GRANGERS.
12v7-3m

THE "EXCELSIOR" FARMERS' PUMP.

After Seven Years use proving itself the Best Pump on this Coast. and conse-
quently the CHEAPEST.

**BASE.**

We can advise all parties to buy the Pump to be
worked by hand, wind-mill or horse power. All sizes
for sale.

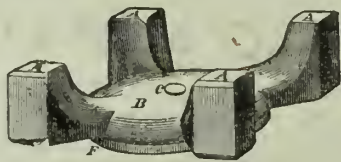
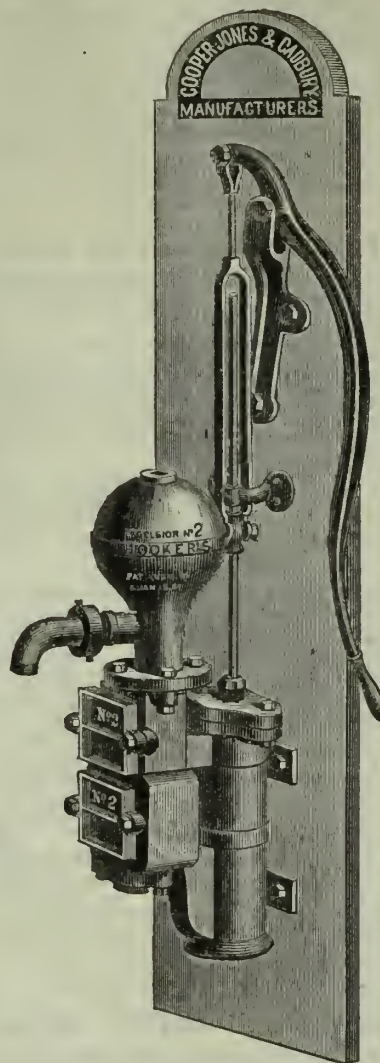
REMEMBER,

Every Pump is tested to 125 lbs. hydraulic pressure per
square inch.

Will pump water 250 feet high.

So simple every Farmer can keep it in order.

EVERY PUMP WARRANTED.

**VALVE.****MOUNTED.**

BRITTAN, HOLBROOK & CO.,

111 and 113 California street, San Francisco, (and also Sacramento.) General Agents.
Send for Circular. 6v7-cow-3m

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock;
one of the oldest and best yards of pure
bred poultry in the United States.



M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:
Light and Dark Brahmas,
Buff, Partridge and White Cochins.
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure Whitefaced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California
Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-tf-16p2

TO FARMERS.

WE ARE PREPARED TO CONTRACT FOR NEXT
SEASON'S CROP OF

FLAX SEED at 31-4 Cent per Pound,

Delivered at our works in this City. Will also fur-
nish Seed for sowing, to be paid for from the contracted
crop. Will also advance

Money Necessary for Harvesting Crop.

required. Farmers can ship direct to us, thereby
saving all

EXPENSES OF COMMISSION.

Now is time to sow. For further information apply
immediately to

THE PACIFIC OIL & LEAD WORKS,

3 and 5 Front Street, San Francisco.

mar14-16p-2t

W. M. BRANDON. JACOB W. ROGERS
BRANDON & ROGERS,
California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.
Buy and sell unimproved lands, farms and city property
throughout the state of California. Farms to exchange
for city property and city property for farms. Eastern
property to exchange for California property. Tracts
favorably located, furnished for Colonization. A large list of
property to select from. Money invested for other parties
on advantageous terms. Long experience in the business
and extensive acquaintance in California and the Eastern
States, enable us to effect speedy and satisfactory sales and
exchanges.
20v6-1y-16p

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,

26 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7

JOSEPH SEYMOUR & SON,

12v7-3m Syracuse, N. Y.

Songs for the Million.

Dublin Bay,
The Female Anctioneer,
Young Gal from Sonoma,
The Great Sentimental Song,
Shells of Ocean,
The Green and Gold,
Is there a Heart in Erin's
Isle?
Tramp, Tramp, Tramp,
The Bounty Jumper,
Nell Flaherty's Dhrake,
Rat-Catcher's Daughter,
The Old Arm Chair,
The Old Bog Hole,
Don't be Anxy, Mother,
Ever of Thee,
Whisper what Thou Feelest,
Didn't She seem to Like it!
Wearing of the Green—as
Sung by C. Wheatleigh, in
"Arrah-na-Pogue,"
On, on, on, the Boys came
Marching,
Brigham Young,
Erin's the Star and the Smile
in Thine Eyes,
Lizzie Dies To-night,
No Irish Need Apply,
The Irish Jaunting Car,
Judy McCarthy,
Paddy Haggarty,
Millie of the Vale,
Larry O'Brien,
We'll Fight for Uncle Abe,
Write a Letter to my Mother,
Our Union Right or Wrong,
Just Before the Battle,
Mother,
Wearing of the Green—
Original Version,
Farewell to Ireland,
Digging for Gold,
The Captain,
O, Whistla and I'll come to
You, my Lad,
That's what's the Matter
with Hannah,
Kitty Wells,
Aunt Jemima's Plaster,
The Quaker,
Bell Brandon,
Jeff Davis Dream,
Brother, Tell Me of the
Battle,
Battle-Cry of Freedom,
I Loved that Dear Old Flag
the Best,
Dear Mother, I've come
Home to Dis.

The whole of the above song sent FREE to any part
of the United States for nine cents in postage stamps.
Address, NOVELTY, 513 Hayee street, San Francisco,
California. feb14-1am-2m

BRONZE TURKEYS,

Largest and Finest Collection
on the Pacific Coast.

EMDEN GEESE,

58 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGHS,
COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.
The Poultry Bulletin, a 32 page monthly, the best.
Subscription \$1.00 a year. Send stamp for copy. Agents
wanted.

Address: **M. EYRE,**
Napa, Cal.

Eggs for Hatching, packed to travel safely by
rail or stage. 2v7-3m-16p-sp

THE PACIFIC RURAL PRESS has a
larger Circulation than any other Pacific
Coast Weekly, independent of a daily issue.

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of
Vegetable,
Agricultural,
and Flower Seeds,
Containing all the BEST varieties, and selected with
great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER, WHITE CLOVER

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,
No. 317 Washington Street,
6v2-1y16p SAN FRANCISCO.

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street.....San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants,
Ornamental Shrubs, Fruit and
Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of
Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in
quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD
GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS,
FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER
SEED, etc.

Agent for GARY'S SEMI-TROPICAL FRUIT TREES, which
are offered at Nursery prices, free of freight charges to
San Francisco.

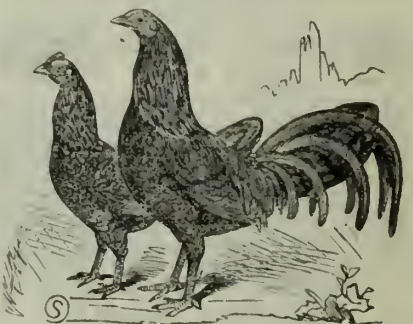
To parties desiring to purchase anything in the above
line, I will send any of my catalogues FREE OF CHARGE.
BULB CATALOGUE now ready. SEMI-TROPICAL CAT-
ALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE,
embracing Seeds of all the valuable varieties, Flower-
ing Plants, Ornamental Shrubs, Fruit and Shade Trees,
etc., ready Nov. 15th.
R. J. TRUMBULL,
15v6-6m-16p 427 Sansome st., San Francisco.

IMPROVE YOUR POULTRY,

It Costs No More to Keep Good Fowls than
Poor Ones!

OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

**GAME FOWLS!**

Warranted to Stand Steel.

Prize winning strains of the following varieties, just
received from the East: Earl Derby Games, Red Pile
Games, Blue Pile Games, Heathwood Games, White
Georgian Games, Black Breasted Red Games and Silver
Duckwing Games. Eggs, \$12 per doz; guaranteed to
reach the purchaser safely.

For further information send stamp for Illustrated
Circular, containing a full description of all the best
known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs cold absolutely guaranteed
9v7-tf

"BLOOD WILL TELL."
WHY KEEP POOR FOWLS WHEN GOOD
ONES ARE SO CHEAP?

San Jose Poultry Yards,
Corner Main and St. John streets, San Jose, Cal.

My stock consists of Dark and White Brahmas, Hon-
dana, Silver Spangled Hamburgs, White Leghorns,
Black Spanish and Black (white crested) Polands. Eggs
and Poultry on hand and for sale. Shipped with care
and guaranteed to be pure. H. E. STEVENSON.
11v7-3m-16p

More than double the number of Farmers and
their families read the PACIFIC RURAL
PRESS than any other journal on this
Coast.



Volume VII.]

SAN FRANCISCO, SATURDAY, MARCH, 28, 1874.

[Number 13.]

What are we Coming To?—

It is often said, and with truth, that farming in this State is an entirely different thing from farming as practiced in older and denser communities. Up to a certain point the difference is sufficiently pronounced to be patent to the most careless observer. Our climate, our soil, our capabilities and our needs are at present essentially different from those of other localities; and while there is an extended range in all these throughout the several counties of California, there is everywhere a certain marked peculiarity which is stamped as truly local. With such facts to start from, it is only natural and proper that the system of cultivation adopted should accord. Further, it is found that certain ways and means, incident to the spirit of the place, and these only, meet with success. When an immigrant, however thoroughly versed in the modes of culture elsewhere employed, arrives here, the first step should be to unlearn, in measure, his previous training and experience. Without this, and by doggedly sticking to precedents which obtain and succeed in his former home, the result is usually failure. To cite a case in point: A certain company, which had in view the cultivation of a special crop, sent an agent abroad to employ a man who should be conversant with the requirements of that crop, to superintend its growth upon the company's land, so that no element of forethought might be wanting. Yet the superintendent chosen, though a man of undoubted skill, found himself at first utterly at sea in his new position, and the returns unsatisfactory. In time, we believe, his efforts, directed by experience, met with better results. The same difficulty is experienced by miners who have studied their occupation in foreign mines.

But, with all allowance for existing differences, there are broad laws of agriculture which cannot be disregarded. In regard to the deterioration of soil there is no escape from the general principle that continued subtraction means nothing short of ruin. If land be constantly cropped, the produce removed, and none of its vital elements returned, it is not difficult to prophesy future depreciation in value. We are presuming too far when we overlook this, and the punishment is not so far distant as might be imagined. Even were the latter to fall only at some vague time in the future, a generation or so hence, the waste which is now so common would be hardly less censurable. But, unfortunately, the evil day is not so far removed. Already, in the older farming regions of the State, the complaint is made that the wonderful crops of early days are no longer possible. We are only beginning to feel this, and to realize that the flush times of old are indeed past. Extravagances in farming, the effects of former dazzling hopes, now become more apparent.

The story is an old one. The same course has been run in all new countries. When our ancestors first landed on America they were astonished at the miraculous yields of the virgin soil—a soil which had required centuries of forest growth and leaf decomposition to form, and but years of merciless taxation to exhaust. Were it not for the advances made in agricultural science and the discovery of new fertilizers, there would be little hope for farming in the Atlantic States. A similar experience awaited the settlers in the interior West. The rich black prairie loam, so fertile, so promising—again the storehouse of Nature's progress through ages of growing grasses and alternate decomposition—invariably yields at last. A system of surface-scratching, sowing and waiting for harvest is tempting, but ruinous in the end.

As time wears on, a sliding scale of enforced economy results. We have not yet reached the minuteness of English farming, the thrift of the East, nor even the moderation of the interior West, but each of these degrees will be arrived at in turn. We are sending away the wealth of the coast as truly in our wheat as in our precious metals, and while successive harvests are larger and larger, it is owing to greater acreage under cultivation, with reduced averages. One does not wish to be always moving in search of new land, and it becomes daily less accessible. It is the praiseworthy

desire of our farmers to leave the homestead in good condition for the boys, and also to secure to themselves a certainty that there will be no falling off in their own time. To these ends the usual means must be applied, and Californian distinctions done away with. Fertilizers, grazing and rotation must be resorted to.

HIGH FARMING.—A noted farmer of New England, after visiting England and examining with the critical eye of a practical and experienced agriculturist the system pursued there, says: I am thoroughly confirmed in my old faith that the only good farmer of our future is to be the "high farmer." There is a widely prevailing antipathy among the common farmers of our State against not only the practice



THE SILK WORM.

of high farming, but against the use of the phrase by agricultural writers. This is all wrong and should at once be corrected. Through some misconception of the meaning of the phrase, and also of its application, they have come to believe it synonymous with theoretical "book farming," "new-fangled notions," boasted progress, followed by disappointment and final failure. This is all an error. High farming simply means thorough cultivation, liberal manuring, bountiful crops, good stock, good feed, and paying profits therefrom. It is not strange that misconceptions have arisen in the minds of doubting farmers who have been eye-witnesses to some of the spread-eagle experiments of enthusiastic farmers, better supplied with money obtained in a business they know how to manage than with practical experience on the farm. Bountiful crops and paying profits of course are what all farmers who are depending upon the farm for an income are striving to obtain; and every year as it passes is reconfirming the opinion that the profits are small, and will grow "beautifully less" where high farming is not practiced.

A FACT which is not always considered by farmers in estimating the profitability of their calling is the comparative immunity from failure. It has been stated that ninety-five per cent. of merchants fail at some period in their business; and, certainly, if one calls to mind the personal experience of friends and acquaintances, the proportion does not seem so far out of the way. It is seldom that a farmer fails entirely.

The Silk-Worm.

Our illustration presents the silk-worm, *Bombyx mori*, in its four distinct stages of egg, caterpillar, chrysalis and moth. The chrysalis is, of course, contained within the cocoon in nature, though a view of it alone is given at the bottom of the wood-cut.

In none of its stages of growth is the silk-worm a remarkably good looking object. As an egg it is singularly insignificant; so much so that it requires about forty thousand to make an ounce. Among caterpillars there are many which are extremely beautiful; the silk-worm, however, is excessively plain. After the retirement within the cocoon, most insects emerge

in new beauty; the silk-worm moth is even then almost as homely as ever. But, like many other examples, the usefulness of the silk-worm is precisely in inverse ratio to its looks, and the little ugly insect is, of all its class, the most serviceable to man. Still, as Mr. Andrews observes, the cocoon is not made by the caterpillar with a view to making silk for ladies' dresses, but simply for the purpose of protecting the chrysalis from injury.

The very complete communications of Mr. Felix Gillet, published by us from time to time, would seem to render any dissertation on the mode of rearing the silk-worm uncalled for. But the following statistics of growth, furnished by Mr. Andrews to the *Artisan*, may be new to some of our readers: An ounce of eggs, if good, will produce about forty thousand worms; and these, when at their full growth, will require about one hundred and eighty-three square feet of shelf room. They will eat about 1,500 or 1,600 pounds of mulberry leaves during their growth, and should produce from forty-five to fifty pounds of cocoons. From these data readers can make their own calculations.

CAN'T DO WITHOUT IT.—"S. K. S.," of Snelling, who is cultivating some 150 acres in or near Snelling, says he can't farm without the *RURAL PRESS*, and his wife writes that she can't keep house without it.

CATALOGUE No. 6, of the series published by Mr. John Saul, seedsman, of Washington, D. C., is received.

The Model Farm.

As the large ranches are splitting up into smaller and better cultivated farms, the competition in size becomes exchanged for emulation in thoroughness. The very idea of what is called a "model farm," probably never entered the head of a Mexican ranch owner. How many miles could be ridden over without passing one's own boundaries, seems still to be more a matter of pride with some, than the less imposing, but more effective, merits of order, thrift and comfort. The agricultural editor of the *New York Times*, has, we think, hit the mark in a recent description of, and plea for model farming, and we can not do better than to give place to his remarks on the premium system:

It is unfortunate that the local, as well as the State, agricultural associations, almost altogether ignore the cultivation of the soil in their competition for premiums. As the success of agriculture depends in a much greater degree upon the excellence of cultivation of the farms, than upon the size or beauty of the stock raised upon them, it would seem to be more conducive to the attainment of the ends for which these associations are supposed to have been instituted, that they should attract attention to this especial feature by offering premiums for the best plowed field, the best crops, and the best crops, and the best cultivated, best managed, and best kept farm, as well as for the best horse, cow, hog, or trio of poultry.

The description of the prize farm is one of the most valuable and interesting parts of the reports of agricultural societies that come to us from Europe; and the plowing matches give rise to as much competition and produce as valuable results—if not more so, upon the whole—than the strifes between stock-breeders as to who shall produce the choicest animal. Our plowing is something of which few farmers will make a special source of pride, and the general management of the farm, barn-yard, and stock-buildings cannot be accepted as at all approaching perfection. In fact, our farming is susceptible of much improvement as to its condition of efficiency, neatness, and economy; and as there is but little emulation among farmers in this respect, while there is as to who shall have the fastest horse, the fattest hog, or the best cow or sheep, the consequence is that the animals which take prizes at the fairs sometimes come from farms which are notable for ill-kept fences, poorly-plowed fields, light crops, and dilapidated barns, but which yet offer a conspicuously favorable contrast with those of their less enterprising neighbors. There is nothing so "catching" as improvement; and while our agricultural associations have done an excellent work in creating and fostering a taste for good stock, and are yearly causing a vast improvement in the value of this class of agricultural productions, yet there is a wide field for improvement in our methods of cultivation, our modes of feeding or ways of raising crops, our styles of buildings, our manner of dividing fields, fencing, and in the general management of the farm, which might be occupied very advantageously.

THE VERMIN WAR.—A writer in an Eastern exchange gives the following as his method of poisoning moles, which is interesting as regards the proportion of poison recommended. Perhaps corn would be less likely to be lost than wheat, in poisoning squirrels. The writer referred to, says: Put some shelled corn in a vessel, with water enough to cover it, and strychnine in proportion to the amount of corn—about a thimbleful to a quart of corn is sufficient. Mix well, and let stand twenty-four hours; then put three or four grains in a place in the holes. Where there are trees or stumps, it is best to put it around them, as they work around them more than elsewhere. The best time for attending to this is in February and March. They commence operations the first warm spells in the spring, and if they are not attended to before corn is planted, it is too late. You can generally find the mole at the very spot where you put the corn, or near by, by tearing up the hole; very often they die at the spot.

The report and price list of the Southern Fine Stock Company are received.

CORRESPONDENCE.

Trinity County—Her Area, Soil, and Natural Resources.

Trinity is not a large county, that is for California, containing only about one and a half million acres. Of this, not more, perhaps, than one-fiftieth part is, in its native state, adapted for agricultural purposes; not that the climate is unpropitious or the soil generally barren, but because of the lack of summer moisture and the exceedingly mountainous character of the country. In mineral wealth Trinity has always ranked among the foremost counties in the State, and it has generally been supposed by persons abroad that her economic resources were confined to this species of natural wealth. But this is a mistake; the country abounds in a great variety of the finest timber, and grows everywhere the indigenous grasses; while, as a fruit producing region, this is not surpassed by any other on the Pacific coast. The soil, except on the higher mountains and steep hill sides, is deep and fertile, consisting of a rich red loam on the hills, and of a dark alluvium on the interval lands and river bottoms. As the season of rain is somewhat longer here than at points further south in the State, the growth of vegetation is greater, contributing to the enrichment of the soil. From this it will be seen that Trinity is entitled to some consideration on the score of her capabilities as a lumber making, stock growing, and fruit raising, if not also farming and dairying region.

Her Agricultural Products and the Homes of the Husbandmen.

There is a good deal of grain sown here; none, however, is suffered to mature, the whole being cut for hay. The cereal crops thrive, and would yield well if allowed to ripen; but it pays the farmer better to convert them into hay, an article that can not, like flour and grain, be conveniently freighted in from outside localities. It is a singular feature of this region, that most of the natural meadows are found on, or near, the tops of high mountains, from which the grass, if made into hay, could not be easily gotten down. All the bread stuffs and horse feed used here is brought here from the Sacramento valley; about 500 tons of flour being annually required for the use of the inhabitants. The agricultural land is confined mostly to the valley of Trinity river and its principal branches. The more important farming localities in the county, commencing at the north, are the following, there seldom being more than a few hundred acres, and nowhere more than a thousand, lying together at any one point:

About Trinity Centre, a small town thirty-four miles northeast of Weaverville, there are two or three large and several small farms, the owners of which find a market for their produce among the miners, who, to the number of about one hundred, prosecute their calling successfully in the neighborhood. There is here a well conducted school, an Odd Fellows' lodge, a comfortable inn, and several stores, that seem to be doing a prosperous business. The John Bull ranch, situate on the north side of Stewart's Fork, a short distance above its mouth, is a natural glade in the great forests that surround it; and as beautiful a spot as one will often meet with, even in California. It occupies a depression, scalloped out by the water flowing from the numerous springs that irrigate and enrich it. It is neatly enclosed and well cultivated; and besides a good deal of winter pasturage, yields annually a large amount of hay; producing, in addition to other indigenous grasses, a rich and succulent clover. The soil is of inky blackness, and when newly plowed, contrasts strongly with the growing grass and grain, and the deep shades of the evergreen forests that hedge the place in on every hand. The land faces to the south, and has just enough slope to insure easy irrigation and good drainage. Seen from the top of Buckeye Ridge, or other eminence in the neighborhood, this verdant spot seems a gem set in a wilderness of woods. To one seeking a secluded and luxurious home, no more acceptable spot could be found. As in all these farming localities, the finest of fruits and vegetables can be raised here with the least possible care. Once set out, in fact, trees and plants are bound to thrive, unless special pains are taken to defeat their growth.

Peter Van Maitre, and old resident and a well-to-do and pushing sort of man, has a splendid ranch at the mouth of Stewart's Fork. It is managed well by the proprietor and his sons, active lads, and produces a great amount of every conceivable kind of farming truck. In the vicinity of Lewiston, several miles further down, there is quite a stretch of good land on either side of Trinity river. This is mostly owned in small parcels, being occupied by a number of families, who cultivate it with care; and, between farming and mining, manage to make a comfortable living, with only a moderate amount of hard labor. Lewiston is a hamlet situate, at a point where the main stage road, leading in from Shasta, strikes the Trinity. It contains a couple of stores, a tavern, a post and an express office, enjoys the benefits of regular preaching, and has the credit of sustaining a live temperance organization. It is useless to add that the place is

distinguished for sobriety, good morals, and a high sense of religious obligation. There is a bridge across the river here, but most of the Weaver-bound travel goes by the way of

Lowden's Ranch.

Four miles further down, at which place the Trinity is also substantially bridged. This is the home of the Lowden family, pioneer settlers in Trinity. The father is dead, but the mother, a matronly, yet well-preserved and active woman, with a number of sons, all noted for their business tact and energy, still survives. Here are several hundred acres of river bottoms, the whole covered with orchards and gardens, or planted to grass and grain. Here are cattle, and pigs, and poultry, and fruit in such abundance, that the traveler need but hint a desire for some, to insure a gratuitous and full supply. Indeed, the motherly proprietress has the pleasant habit, on the arrival of the stage, of coming out with a dish filled with delicious fruit, and offering it freely to all who choose to partake of her bounty. The hotel at this place is one of the best kept in Northern California.

At Indian creek, a few miles below Lowden's, are several good farms, there occurring along the river, from this point down to McGillivray's ranch, a distance of 25 miles, many narrow strips of alluvial land, the most of them covered with fruit trees and gardens, being of too limited extent for the raising of grain.

McGillivray's Ranch.

Among the farms and orchards of Trinity, noted for their extent and excellence, this place stands conspicuous. The estate occupies a cove on the north side of the river, the rich interval land covering a hundred acres or more. The spot is overshadowed by steep mountains on the north and west, sheltering it from the only cold winds that could otherwise reach it. The soil drips with fatness, being formed from the sediment deposited by the overflowing of the river, of which this site was once the channel. The ground has only enough descent to favor irrigation, water, for which, is supplied from a large ditch, carried along the mountain side many hundred feet above. About one-third of the tract is planted with vines and fruit trees, or cultivated as a garden, the balance being sown to grass and grain.

The proprietor of this place, Joseph McGillivray, settled here 23 years ago, and has since continued to reside upon it, engaged in mining and cultivating the land. He commenced planting early, selecting with care, and at great expense, the choicest varieties of fruit trees and vines, the most of which have now been many years in bearing. Nor did he confine his plantings to a few kinds of the more choice and hardy fruits; they included almost everything that can be grown in the latitude of San Francisco: apples, cherries, pears—all of the peach and plum families—figs and almonds, grapes and berries of every description—all in endless, not to say useless profusion—for there is now little or no market, or even any call whatever for the most of these delectable products. At first, while there were more people living here and less fruit grown in the vicinity, these orchards and vineyards proved to the owner a source of considerable profit. Lately, however, he has made little out of them, hundreds of bushels of delicious fruit being given away, fed to the animals, or suffered to perish ungathered.

A visit to this Paradise of Poma in the fall of the year is an event to be noted and remembered: great clusters of grapes drying into raisins on the vines, showers of ripened almonds dropping from the overloaded limbs, and apples and pears hanging upon, or lying under the trees by the cart load, after the proprietor has filled his capacious bins, and his neighbors have come and gotten all they want, and the cattle and swine have for months been eating their fill. And such apples and pears! so large and fair, and solid. So spicy and juicy, and yet so tender and toothsome that they seem the very fruits that so delighted without ever satiating the omnivorous appetite of boyhood! The people here send these apples to their friends in the more southerly part of the State, that they may be able, by testing them occasionally, to preserve the distinction between this fruit and the less palatable pumpkin! I see by the papers that some of your orchardists have adopted the plan of erecting large storehouses in the Sierra Nevada, wherein to keep their fruit through the winter, the coast climate being unfavorable to its preservation. Recourse to this or similar awkward expedients, is not necessary here, the weather being so cool, and at the same time so equable, and the apples so solid that they neither shrivel up, nor rot during the winter.

McGillivray and his Family—Wealth Honestly Earned and Wisely Bestowed.

Besides being a veritable cornucopia, there is much in the history and present surroundings of the McGillivray ranch calculated to invest it with public interest. Within its boundaries are some of the best gold mines in the country. These consist of high bars along the river, which are now being and for many years have been worked on a large scale, and with eminent success. These claims, lately outfitted with the Craig nozzles, undercurrents, and other effective devices, are supplied with water brought across the Trinity river in a flume suspended from powerful iron cables. These mines will yield a gross product of \$75,000 the present season, two thirds of it net profits. They, and their supplying ditch,

as well as the ranch, belong to McGillivray, an educated, big-hearted Scotchman, characterized, like most of his race, by a deal of shrewdness, energy and common sense. Among the first to settle permanently in the country, he met with many obstacles in his endeavor to successfully combine the culture of the land, and the working of the mines, an end which he has achieved in a manner alike creditable to himself and gratifying to his friends, having, in the mean time, married an estimable and accomplished wife, and reared a large family of children.

McGillivray is now rich, and surrounded with every comfort, and even with many luxuries that wealth cannot buy; lives like an old-time lord, helping his poorer neighbors and practicing a large and open handed hospitality toward all. His residence, a cluster of huge buildings, though not kept as a public house, seems the resort of every one living in the vicinity or passing that way. The table here seats a multitude, that could not fail to delight the heart of a professional Boniface, were they all paying customers. Though reaching the length of a capacious room, what with workmen, neighbors, stragglers, children and their teachers, (for these latter in the absence of schools have to be employed in the house), this table never fails to be well filled. The union of this worthy couple has been blessed with a bevy of bouncing boys and girls, the most of them now pretty well grown up. Having been suffered to take an abundant out-door exercise, not omitting a due share of useful labor, they are, every one of them, the picture of youthful health and vigor. The boys having been early trained to work, and ride, and hunt, are now expert marksmen, ride like Apaches, and are really good farmers and miners. Having thus acquired a practical knowledge of much that may be useful to them in after life, cultivated good habits, and laid the foundation for a sound physical constitution, they are ready to go to school, where they will be likely to soon outstrip those, who, with enfeebled bodies and faded memories, have gained a disgusting familiarity with books, having fallen victims to the school master in early life. What a pity that more of our children could not be turned out in the mountains; there to grow up to adolescence in a natural and healthful way, even though the Jenkinses and the Grundies may deride the idea that "burly chicks and cliver hizzies can be bred in sic a way as this is."

H. G. D.
Weaverville, Trinity Co., Mar. 20, 1874.

Life in the Country.

"O fortunati nimium, sua si bonis norint Agricolas!"
VIRGIL.

It is no unusual thing for city fashionables to look down upon farmers as mere drudges, whom fortune has placed so far beneath them, as if the latter and all which concerns them, were below their notice. This is morally wrong, philosophically false, and poetically absurd.

"God made the country, and man made the town,"

Says Cowper, who more, perhaps, than any other of his countrymen, shows, in his ever agreeable writings, that he possessed the seldom combined qualities of moral instructor, philosophical reasoner, and true poet, united.

What are all the artificial pleasures of city life, compared with those which nature freely bestows on all whose uncorrupted tastes are capable of enjoying them! If the reader has but a tithe of the natural sentiment of Burns, instead of desecrating the Lord's day in furiously driving to the Cliff House, or in taking some longer excursions—for no other reason but because he thinks that he can

"Watch the world with his horsemanship"—

He would sooner do as he did, when

"Upon a Simmer Sunday morn,
When Nature's face is fair,
He walk'd forth to view the corn,
An' snuff the caller air;
The rising sun o'er Gaileston muls
Wi' glorious light was glintin',
The hares were hirplin' down the furz,
The laverocks they were chantin'."

But Sunday or Saturday, if one wishes to enjoy the country, let him get up in good time.

"For who the melodies of morn can tell,
The wild brook babbling down the mountain side,
The lowing herd, the sheepfold's simple bell,
The pipe of early shepherd dim descried,
The hollow murmur of the ocean tide,
The hum of bees, the linnet's lay of love,
And the full choir that wakes the universal grove."

These are the farmer's familiar acquaintances, and if the residents in towns have better to boast of, let them mention them. They may judge for themselves, the next time they go into the country.

"Sometime walking, not unseen,
By hedge-row elms or hillocks green,
Right against the eastern gate,
Where the sun begins this state,
Rohed in flames and amber light,
The clouds in thousand liveries bright,
While the ploughman, near at hand,
Whistles o'er the furrowed land,
And every shepherd tells his tale,
Under the hawthorne in the dale."

"No doubt, no doubt, reply our sagacious frequenters of free lunches," but one wants the substantial enjoyments of life, the eatables and drinkables, and all the other creature comforts which are only to be got in towns; the country may be good enough for poets to starve in, or clodhoppers to vegetate in; but we know better. They do not, they only think they do, and all their pretended knowledge is as shal-

low as their tastes are vicious. What school-boy that aspires to become an inmate of the university, but can tell them of Horace's country farmer who "despes inemptas apparatus?" But why quote Horace? It is wonderful if their slang does not out-master their mother-tongue. The classics have little charms for them. So let them take, as suggested, a forenoon's ramble among the hills, and then drop in on some honest farmer.

"Where Corydon and Thyrsis met,
Are at their savory dinner set
Of herbs, and other country messes,
Which the neat-handed Phyllis dresses."

And they will learn, if they are not aware of it already, that it is in the country, and in the country only, that one can enjoy his dinner satisfactorily. Does not Solomon tell us—he whom all the world, since the time he lived, has recognized as the wisest of men—that "better is a dinner of herbs where love is, than a stalled ox and hatred therewith."

O fortunate farmers, if ye only knew the good things which are peculiarly your own, ye would not envy the dwellers in towns. May your enjoyments be as pure as your lives ought to be happy.

AGRICOLA.

Those Conundrums.

EDITORS PRESS:—In the RURAL of March 14th, page 162, under the head of "Conundrums," a Granger asks if watermelons and squashes will mix.

Mine will; but I did not always think they would. I used to plant both in the same garden, and sometimes in close proximity to each other. But I soon found my melons deteriorated. I found some of them as hollow as a latter-day politician, and nearly as worthless—stringy, and of a decidedly pumpkin flavor. So I conclude they will marry.

I do not think your answer to the 2nd question quite right.

Frost [cold?] does not result from the condensation of vapor; but caloric does, if chemists [physicists?] tell us the truth.

The conversion of water into vapor absorbs heat, and renders it latent. The condensation of vapor liberates heat and renders it sensible.

That is the law as laid down in the books when I was a boy; but, since then, the science of chemistry has made such gigantic strides of advance, that that theory may be exploded; I don't know.

I would answer questions 2d in this way: Heat expands all bodies; hence, warm air is lighter than cold air. The atmosphere near the surface of the earth is warmer than that of the higher regions; consequently, on a still, clear night, it will rise, and the cold and heavier air above will settle down to fill the vacuum, until the temperature at the surface falls below the freezing point. Hence, the freezing of the rising moisture, as it is condensed, and of that already condensed—and we call it frost.

When the wind blows, the warm stratum flows along the surface of the earth, and is more or less mixed with the cold air from above; but the cold air does not mix in sufficient quantity to bring the temperature below the freezing point; hence, no frost on a windy night. Neither can there be any deposit of dew; as the rising moisture is swept along and absorbed by the current.

Milpitas, March 17, 1874.

[Our correspondent seems to have confounded the words frost and cold, and to have mistaken our previous use of these terms.—Eds. Press.]

Petaluma Notes.

EDITORS PRESS:—You requested an item concerning the manufacturing interests of this section, and as farmers are directly interested in manufacture of the vehicles they use, I mention this interest first. Also, because Petaluma contains the largest carriage establishment out of San Francisco, if not in the State. Twenty-two years ago, Wm. Zartman & Co. began the business in this city, and the demand for their wagons has steadily increased, till now a vehicle of some kind is turned off every four and one-half days. A few years since, he took as partner D. W. C. Putnam, a thorough wood workman, who superintends the wood shop. Every stick that contains a tenon or mortise, is placed in a dry room, and so thoroughly seasoned as to withstand our trying climate. Their buildings occupy 130 by 200 feet, which are filled with busy workmen and humming machinery. Every thing on wheels, from a cumbersome mountain freight wagon to a trotting sulky, is thus thoroughly made; and as evidence, their wagons are now running in Los Angeles, Lake, Tehama, Monterey, Colusa and Mendocino counties, and various other remote portions of the State, and Nevada.

This city is a splendid point for a woolen mill. The hundreds of hales of wool shipped from this point are evidence that plenty of material is in this season. It only wants energy.

Farmers are rather discouraged at the continued rains, but the prospect is not so poor as many anticipate.

C. W. O.

Petaluma, March 5, 1874.

Homes in the Foothills.

EDITORS PRESS:—"Homes in the foothills" appears to be a prominent subject in the *RURAL PRESS* just now. Having only returned this afternoon from a home in the coast range, I propose to give a slight account of what I saw and heard during my visit.

First, however, let us begin at the root of things, and ask ourselves what we understand by the word "home." Do those who are seeking for "homes in the foothills" expect to find some charming spot "where gold and diamonds grow," or where they can make a "big strike," and put up a "pile" in a few months; or, are they looking for some quarter-section, where, after several years of hard work, and probably a few years of some privation, they may be established prosperously and comfortably, but not in opulence, for the rest of their lives, and enjoy that country life which

" * * * is sweet!
In moderate cold and heat,
To walk in the air, how pleasant and fair,
In every field of wheat,
The fairest of flowers adorning the bowers,
And every meadow's brow;
So that I say, no courtier may
Compare with them who clothe in gray,
And follow the useful plow."

Quarter-section "hard licks," and pleasant every day country life are my idea of "homes in the foothills." Yesterday morning, after having driven a few miles by moonlight, I found myself at the crossing of the Carmel river, opposite Mr. Sargent's ranch, the Potrero; and nine miles' drive over a rough mountain, road and through two lovely redwood cañons, brought me to as picturesque a spot as one need desire to pass life in. Picturesque and lovely, no doubt! Most Californians know that red wood cañons are so. It's an axiom in scenery. Given, even one noble red wood, and there must be a lovely scene. But lovely scenery is not level land, and not half an acre of level land does the farm of Messrs. S. and W. contain. Seven years ago, three men "squatted" on some rough government land in this picturesque, but broken, land; they had two rifles, two old "plugs" and saddles, and cash or necessities, to the value of \$50. Now, any one who expects to hear of a big strike, or anything more than a good home made, need not read further. In addition to the above possessions, they had self-reliance, and understood how to use their hands. Persons not similarly "fixed," need not look for "homes in the foothills." Although ignorant of the business, and somewhat "scared" of bees, they took up bee-keeping; redwood's being handy, there was no lack of material for hives or for house building. Wild bees and bee-trees were abundant so abundant at first that the three could earn \$5 each per diem getting out honey and wax.

Now, bee-trees are scarce; but 200 stands on the ranch make them less necessary. In early spring, the alder, willow and other timber-trees, furnish good bee-feed; later, come the grass-flowers; but the main body of the honey is supplied by the bloom of the bear-berry bush and by the poison oak. The last makes excellent honey, white and fine-flavored. In a good season each stand should yield 15 to 20 pounds of honey and three-quarter pounds of wax. Messrs. W. & S. have sold honey as high as 27½ cents, and as low as six cents per pound. One season they sold three tons; but for the last two years the yield has been poor, probably from the drought.

Some four years ago, they started a small nursery for home supply, and now have four acres in vines and fruit-trees, mostly almonds. The soil appears to be a mixture of humus and disintegrated granite, and produces an extraordinary growth of wood and fine fruit. Mr. Blackburn, a nurseryman from the rich valley of the Pajaro, declared he had never seen such growth. A cherry-tree, set out three years ago, now stands over 18 feet high—not a slim shoot, but a handsome, well-proportioned tree.

A comfortable house, all made of split timber except the floors, three or four rooms hard-finished (two with hearths and chimneys), a well-roofed barn and substantial fences, all testify to the industry and perseverance of the owners, now two in number, the third having sold out.

Only ten acres of land are cleared and cultivated, but a few head of good American cattle run on a partially enclosed "outside range." So far, progress is reported; but discouragements have been by no means scarce. For example, sometimes a grizzly would come in the night to see his neighbors, and the debris of three or four bee-hives, or a dead cow, would prove that bruin was sufficiently acquainted to help himself to the best without invitation. On such occasions the doctrine of *similia similibus curantur* was exemplified. To cure the beef or honey-loving propensities of the visitor, a further supply of the like delicacy was provided with the addition of a little allopathy, in the shape of strychnine. Bruin thought the homeopathic treatment splendid, but was so disgusted with the allopathic that his dead body was all that was visible of him afterward.

The combination of bees and fruit is not found to work well. The attractions of a fine bunch of ripe grapes, or a ruddy, luscious peach, are altogether too much for the bees. Moreover, they are admirable connoisseurs, never failing to select the best. Messrs. S. and W. tried making raisins, and would have been fairly successful, had the bees given them a chance, but the bees had the best of it.

Another of the small discouragements, my friends, Messrs. S. and W. had to contend against, was the removal of a splendid crop of granite boulders Dame Nature, before these

gentlemen jumped her claim, had maliciously ordered that one of that geologically well-known firm of heavy teamsters, Messrs. Glacier, Ice-floe and Flood, to dump right in the spot which was selected by my friends for the nursery. This same firm, by-the-by, carried on a rushing business in the cutting, grinding and polishing line; now, Dame Nature still employs them, but in a much smaller way than formerly.

No doubt a foothill settler, without capital, has much to contend against—bad roads, distance from market, etc.—but it is also certain that persevering industry will find a way to earn means of subsistence, and eventually a comfortable home on a quarter-section of land that has not one square yard of level surface.

EDWARD BERWICK.

Carmel valley, March 15th, 1874.

Rambling in Napa Valley.

EDITORS PRESS:—Among the many places of interest visited by your correspondent, were the vineyard and wine cellars of Mr. Charles Krug, one and one-half miles above St. Helena. His place contains 800 acres; 80 of which are in bearing vines; 20 more being planted the present season. Two-thirds are foreign varieties, and the others will be grafted to these the present season. He has a concrete cellar, 94 x 100 feet; capacity 300,000 gallons. In 1872 65,000 gallons were made; 1873, 56,000; and the coming season, 1874, at least 120,000 gallons will be made. Mr. Krug was fortunate in securing the services of Mr. J. Beringer, a skillful wine-maker from the Rhine, to assist him in his large and growing business. Mr. Beringer was, at one time, connected with a large wine house in the East, and tested many lots of wine from this coast, which were completely spoiled—soured—in the transportation. Thinking he understood, and could obviate this difficulty, he came here and engaged with Mr. Krug; and now, after two years experience, is confident he has fully overcome it, and as an evidence that he is right, he says that they can scarcely fill the orders for wine from the East alone. Out of the 50,000 gallons on hand, 30,000 are already engaged to go forward this spring. So far, they have heard no complaint from their customers. Mr. Krug has labored under a great many difficulties in building up the wine interest in this valley, and deserves great praise for his energy and perseverance. His efforts are now being crowned with success. In the multiplicity of his labors, he has not neglected the adornment of his home; located, as he is, in a natural grove, he has intermingled it with evergreens, palms and shrubs of various kinds, tastefully arranged, and trees clad with ivy green, beneath whose shade, beautiful fountains and miniature lakes may be seen. Next was a visit to

Dr. Lyman's Farm.

We were shown over this extensive place by the courteous superintendent, Mr. D. M. Kent. This farm contains 1,000 acres; 500 acres bottom land, balance hills and gentle slopes. Two years ago, the doctor purchased this property at a cost of \$37,800. Since then, he has built a very neat and substantial concrete wine cellar, 30x50 feet, for the purpose of holding the product of his own vineyard (35 acres). Some 15,000 gallons were made, and stored in this cellar, last year. Adjoining this farm, and located on a fine mountain stream, is the "Bale" flouring mill, one of the oldest in Napa valley; which the doctor purchased at an additional cost of \$10,000. The mill has been leased, and is turning out a very superior article of flour, equal to the best. Last year, 15 acres of hill, or heach land, were denuded of the heavy growth of timber, and planted to grapes, making 50 acres altogether, in vineyard. Two hundred acres are sown to grain; the remainder is reserved for grazing purposes.

Under Mr. Kent's management great changes have been wrought in the last year on this farm; everything is being conducted in the most systematic manner, with neatness, and, withal, economy. If Mr. Kent carries out his present plan, he will make it one of the most productive wine and stock farms in Napa valley. In the orchard are apple, pear, plum, peach, apricot, nectarine, cherry and almond trees. There were also some 30 orange trees planted out last fall, and looking none the worse for the long, cold winter just past. About the dwelling are numerous English and black walnut and hutter-unt trees; all several years old, and bearing full crops of nuts; 500 pounds of the English variety of which were gathered and sold at 20 cents per pound. One of the largest fig-trees in the valley is here; it bears its two and three crops of delicious fruit every year. Among the ornamental trees are several specimens of honey locust, with hodies a foot or more in diameter.

The scenery hereabouts is delightful. A bold, dashing mountain torrent comes tumbling over rock and precipice, right under the very windows of the dwelling. We next called on

Mr. E. M. York,

Nurseryman and Fruit Grower. This gentleman showed us over his premises, and explained the manner of working the great variety of products raised on his place of 50 acres. He has some 15,000 grape vines in vineyard, mostly Black Malvoisia and Zinfandel; and 10,000 more are being put out the present season, of the choicest foreign varieties. A portion of his place has been sown to alfalfa, which is looking splendidly; and will be ready for the mower in a very short time. He is going largely into fruit; principally prunes and plums for drying; and anticipates a rich reward from this branch of his industry. Of prunes, he is planting mostly the Hungarian variety. Of plums,

Bradshaw, Peach and Purple Duane, are his favorites for this locality. He has a great many almond trees, mostly of the Standard variety, which are just now in full bloom, and expects a full crop this year; as the season, so far, has been very favorable for them. A large portion of his place is devoted to the nursery, and produces 20 to 30,000 trees per annum. His list comprises those varieties found from long experience to be best adapted to this locality. We next proceeded to the farm of

Mr. John Wineberger,

who received us with a hearty greeting, and kindly showed us over his beautiful home of 40 acres, equally divided between valley and picturesque hills and gentle slopes. The former, he is planting to prunes and plums; the latter, to the choicest foreign grapes for wine and raisins. He made a few hundred gallons of very superior white wine last year, by way of experiment; it is quite equal to the best made in this valley. Mr. Wineberger has built for himself a palatial residence on a beautiful slope, overshadowed in the background by tall firs and craggy hilltops.

Ranch of R. F. Montgomery.

Mr. Montgomery lives on a farm of 160 acres, mostly hill land, which is used as a stock range. He cultivates nine acres in hops. His plants are six and a half and seven feet apart, and in every ninth row he plants every ninth hill with the male plant. His yield is three pounds to the hill. Last year his crop was greatly damaged by the black cut-worm. He has a drying house 30x45 feet and 22 feet high, for curing his crop. Adjoining Mr. Montgomery is the farm of

Mr. W. A. Pratt,

who has a beautiful place of several hundred acres in a picturesque nook, almost surrounded by hills clothed with evergreen verdure. His time is divided between grain farming, stock raising, and the lumber business, several hundred cords of the latter going from this place to Vallejo and other points every year. J. M. St. Helena, Napa county, March 12th, 1873.

Growing Crops.

EDITORS PRESS:—Allow me to submit for your consideration a few crude ideas, suggested to my mind upon perusing the recent Act of the Assembly Judiciary Committee, in recommending that the Legislature do not pass the bill exempting the growing crops from taxation, upon the ground, that, if so exempted, it would be in conflict with the constitutional requirements, which demand that all taxation shall be equal throughout the State. I propose to look into this question of equality of taxes, and attempt to show in the citation of a few facts, how very thin the proposition becomes, under a fair consideration of its merits; and, should you deem it of sufficient interest, to ask you to give it a place in the columns of your paper, for the consideration of members of our order.

Let us take then, the present season as a basis for the comparison, when, at the present time, the assessors are about commencing their annual duties under instructions with reference to the above action, and when the prospects for a bountiful yield were, perhaps, never better; but, what may they be in four months' time, when too late to change the returns? Even four weeks may see those prospects, (now so fine), entirely blasted, and the crops a failure. It is not unusual in some sections of this State, for the lightning northwinds to sweep over the promising fields of grain, and like the hot siroccos of the desert, destroy in a single day, the fair prospects, and blight beyond reclamation the fruits of an entire year's toil. Rust, or some other kindred blight, may attack and destroy the grain ere it ripens in the kernel; the incendiary may apply his torch on the eve of harvesting, or still worse, while in the stack, and thus in an hour, lay waste the yellow fields of promise to the farmer. The crops are liable to destruction from insects and pests of various kinds, and many an accident, not at all improbable, may occur to render the whole utterly and entirely worthless. Yet, the assessor's list has been returned and the farmer must pay the tax.

And what is he to pay it with? certainly not the crop for which he has been taxed; but, perhaps, his land has been mortgaged, or his personal property sold to meet the inexorable demand of this very equitable law, for it is a well-known fact, that a large proportion of the farmers in this State have their crops hypothecated for the expenses thereon, long before they are harvested. And even should the yield be good, after the debts are paid, he oftentimes gets no more than fair wages for his labor. For what then is he taxed? Why simply for his own labor and industry, if not for the debts he may have contracted. Failure often befalls him, not from any fault of his own, but through agencies over which he can have no control, such as enumerated above and many others of a similar nature. No class of laborers are so much at the mercy of outside influences and accident as are the farmers, nor does any other class pay a tax upon their labor. Is the merchant taxed for his prospective profits on a venture; or the mechanic for what he might have realized from a fat contract provided he had been fortunate enough to secure one? Oh, no! that would be unjust, and would not be equality of taxation, would be considered as oppressive, and, perhaps, even create a revolution. Yet, I claim these to be parallel cases with the taxation on growing crops. The well-to-do farmer spends the profits of his crop in improving his farm or in the purchase

of stock which are all listed by the assessor and the State thus obtains double taxation on the same money; but, in case of the failure of the crop, he still has one tax to pay. As I have already stated, the farmer is more directly at the mercy of circumstances than any other class for his profits; yet, in the name of equality, must his industries be taxed, his energies crippled, and, perhaps, his farm mortgaged, and his family beggared to pay it? And now a reason why this is, or must be so, suggests itself, and I offer the following: simply that such legislation is in the interest of the capitalist, the merchants and such other classes as are able to hide their means from the assessor in numberless ways to avoid taxation, and the wheels of government must be oiled by some one; hence, the farmer must pay, for he can not (if he were so disposed) hide his property, because it is permanent and can be seen by any body; hence, this necessity for equality of taxation. The capitalist puts his money into bonds or in some other way puts his property beyond the reach of the assessor—perhaps he loans it to the farmer with which to pay this very equal tax at a high rate of interest—taking good care to provide in the mortgage, which he takes for security, that the mortgagor shall pay the tax thereon, and even more, should he chance to fall into the hands of some Shylock, who cuts the pound of flesh from him, by demanding that a sum equal to the tax shall be paid down, and the interest paid monthly or semi-annually in advance. Lo, the equality of taxation!

A farmer, tired of low prices for anything he sells, and high prices for all he buys, sells out his possessions in the Eastern States to emigrate to this golden land in hopes to better his condition thereby. What does he encounter? Let us see: He arrives with his family and some little means saved from the wreck of breaking up and emigrating, he looks around him for a small piece of land upon which to commence the battle of life anew. We will presume he succeeds in finding one that suits him, he purchases, say \$5,000 worth; thinking to be able to clear it in due time, he pays \$1,000 down, and gives a mortgage to secure the payment of the remaining \$4,000 at a comparatively high rate of interest. He commences operations and finds that he wants seed, teams, tools, feed and provisions, with which to commence putting in a crop. He expends what means he has, and obtains credit for the balance, relying upon his crop to pay it. Let us now suppose the crop to be in. He has no means, but must continue to borrow until harvested. Now comes the assessor, and commences first with his land at cash value, (what he paid), lists his personal property, (which is not paid for), and then his growing crop, (which is prospective), everything belonging to some one else, as it were, yet upon which he must pay the tax, first upon the real and personal property, then he must pay the interest on what he owes, and for which, bear in mind, he is taxed. Then he must pay the tax (which the capitalist should pay) on the mortgage; but, in the name of equality, he has inserted such a clause therein, whereby the farmer is held for it. And now, in addition to all this, comes the very generous demand of the State, (also in the name of equality and encouragement of industries), with her additional demand for the tax on his growing crop, which he does not own, and which he may never possess, and thus it is the State encourages emigration, for which the people are constantly clamoring.

As a general rule, all farmers (I mean small ones) are assessed for every dollar their land is worth; while the large land-owner is assessed at a merely nominal figure (another dodge in the direction of equality, and in favor of the capitalist and city real estate); for city property, as well as personal property escapes with much less, many times not even half value, and often without being assessed at all, owing to the inefficiency of assessors, who are not unfrequently nominated and elected for that very qualification. The farmer is supposed to have but little influence at an election; and, therefore, the assessor can afford to be strict with him; but the capitalist, on the other hand, is supposed to be a mine of wealth in that direction, and the assessor, being anxious for re-election, can afford to be easy with him, and so puts down a piece of real estate worth some \$50,000 or \$100,000 at \$5,000, or \$10,000; but some meddling fellow discovers this discrepancy, and brings it to light. Now, mark the explanation: The assessor avers that it is only a clerical error in omitting just one cypher in copying the list on the roll. Had it not been discovered, however, the equality of taxation would have been complete, and all would have been serene.

Now, I ask: Who pays the bulk of the taxes, and who has the least done for him in the way of legislation and assistance? I claim that it is the farmer. Where is all this kind of legislation leading us? First, to cripple our energies; next, to necessitate the mortgaging of our farms to the capitalists, who eventually must own them; and when three-fourths of the arable land of the State gets into the hands of a few millionaires, who will neither work it nor pay taxes on it at a fair valuation, what is to become of our beautiful and productive State; and where is the farmer to get food for his family?—and all this done in the name of equality of taxation and encouragement of industries. It is high time we made our strength known, and by lifting up our voices in unison against such oppressions, show that we are alive to our own interests and mean to protect them. And we will do it, or I mistake the martiality of many a

GRANGER.

Vallejo, March 6th, 1874.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

Catholics may Join the Grange.

We have several times alluded to the desire on the part of many farmers belonging to the Catholic Church, to join the Grange, but who have been hitherto debarred that privilege by the rule of their church, which forbids its members to join secret societies. A case is stated by the *Norisk Volkeblad*, the Scandinavian organ of Minnesota, which puts the matter to rest. It says a Catholic member of the Legislature of that State wished to become a member of one of the Granges. He consulted Father Ireland, of St. Paul, who referred him to Bishop Grace. Both these clergymen expressed themselves as possessing a favorable impression of the principles, object and methods of the Grange, but recommended a reference of the matter to the Pope. The matter was accordingly so referred, and at the same time full particulars as to the objects contemplated by the Order, and the means by which it was proposed to attain them, were transmitted. A reply has been received, stating that the Pope "allows the petitioner to join the Grange of Patrons of Husbandry, and be a member thereof, if he find nothing therein conflicting with his conscience or the creed of the Catholic church." As a consequence of this decision, it is said that the Order has received a large accession of strength in Minnesota, and when the news of the Pope's decision has reached other States, its effects it is believed will be largely to increase the numbers of the Patrons, and to remove the interdiction laid upon Catholics desirous of becoming such, by prelates who have disapproved of the Grange or been doubtful as to the consistency of its obligations with those of the church.

FROM LOS ANGELES.—Brother Garey, Deputy for Los Angeles county, says that Grange matters there are flattering, and the cause flourishing; the only fear being that the Patrons, in their zeal, may undertake too much. The *Mutual* says of the Grange Co-operative Company: The general impression appears to be to have the company get in working order, and handle this season's grain crop of Los Angeles and San Bernardino counties. In this one item alone, farmers will save more than the price of their stock, to say nothing of the value of their stock and other advantages to be derived, both in buying and selling.

THE NEW YORK STATE GRANGE met at Albany, on Friday last. The Committee on Resolutions reported a series which were adopted. Among them are resolutions endorsing the declarations of the National Grange at St. Louis; demanding among other things, legislation which will open the avenues of traffic and produce cheaper transportation; a law in favor of low canal toll; reform in assessment and taxation; also in our banking laws; in favor of reasonable temperance reform legislation, etc. The Matrons' committee reported a series of resolutions expressing the endorsement of farmers' wives of the principles of the Patrons of Husbandry.

WOMAN SUFFRAGE AND THE PATRONS.—Some of our exchanges, opposed to the Woman's Suffrage Movement, are objecting to the Patrons, on account of their supposed sympathy with that movement. The fallacy of such objection may be inferred from the fact that the Iowa Legislature, which is supposed to be largely under the influence of the Patrons, has recently passed an Act providing for a Constitutional amendment, giving women the right of suffrage; while the lower House of the Rhode Island Legislature, in which State no Grange has been organized, has done likewise.

HONORS EVEN.—Brother Stiles, in his letter to us announcing the organization of three new Granges in San Joaquin county, remarks, "this makes fourteen Granges in San Joaquin county." Our brother is slightly mistaken. His work during the past week brings up the number in that county to fifteen, and makes the honors even between San Joaquin and Los Angeles county. Which will "go one better?"

FOUR MASTERS IN A FAMILY.—Dr. E. S. Carr, W. M. of Temescal Grange, Nelson Carr, W. M. of Bennett Valley Grange, E. M. Carr, W. M. of Suñol Grange (all of California), and Sol. Carr, W. M. of a Grange in Milton and member of the Assembly of Wisconsin, are own brothers. Another brother in Wisconsin is W. Overseer. The Carr family can not be beat, in the Grange movement at least.

SPREAD THE WORK.—Bro. Wright F. Green, late Secretary of Plaza Grange, has purchased a ranch on Red Bank Creek, nine miles from Red Bluff, Tehama county, and removed thither. He will certainly inspire his neighbors to organize a Grange. They now have two Granges in that county. We add a second one to our list this week. May the good work continue to spread.

ALAMEDA COUNTY COUNCIL meets at Centerville, to-day, March 28th.

The Patrons and the State Fair.

A Healdsburg correspondent, Brother Charles Alexander, sends us a somewhat lengthy communication, in regard to the rejoinder of the Managers of the State Agricultural Society to the resolutions of the Healdsburg Grange. We presume the farmers generally throughout the State fully understand and endorse the position of the Healdsburg Grange. As the matter hardly needs the attention which our correspondent has given to it, we have taken the hint from his opening remarks, to omit from his letter all but the following extracts: "There is no especial need of much talk in this matter. The farmers are now fully prepared to take care of themselves and their interests. They are ready, not only for talk, but for work, also—not only Grange No. 18 (Healdsburg Grange), but every Grange in the State, from No. 1 to 160. * * * The Managers tell us that seven out of ten of their number are practical and extensive farmers and stock-raisers. I am glad of that, and I wish the other three were also good farmers; but their not being farmers nowise precludes them from being honest men. * * * It seems the Agricultural Board has been looking over the books of the Society, and think, as they find no members hailing from this section, that they are not drawing much advantage from here, in any way. But, if they will take the trouble to examine the hotel registers of Sacramento, and if they can distinguish who paid entrance fees at the Pavilion, they will find quite a showing from these parts. They will also find, on examination, that considerable tax-money is paid into the State Treasury from this county, for which reason we hold that we have a right to object to the extravagant use of our money in building a telegraph-office and sitting-room for horse-racing purposes at the Agricultural Park. It is difficult to see how the farmers are to be benefitted by a tax of \$15,000 or \$20,000 for building a Grand Stand for such purposes."

The Next State Fair.

"There is one other matter to which our correspondent alludes, and in which, we think, all may agree. The matter is stated as follows: The time for the commencement of the next State Fair, is fixed for Monday, September 21st, to continue and include Saturday, September 29th. Entries will be received on the Thursday, Friday and Saturday previous, and up to 10 A. M. on Monday, the 21st—but none after that hour. Why, gentlemen, make it necessary for exhibitors to either be on the grounds and settled, as early as Saturday—two days before the Fair opens—or break the Sabbath and the quiet which belongs to the day, by driving, and herding, or stabling stock on that day. Now, brother farmers of the State Board, we don't want to dictate in this matter; but why not allow Tuesday, at 10 o'clock, as the latest hour for entrance? By such an arrangement, many of us can spend our Sunday at home, and go to Sacramento with our sacks of wheat, our sheep, hogs, or whatever we may desire to exhibit on Monday, and thus save expense, and keep the commandment—'Remember the Sabbath Day.' Our object should be to accommodate all, as far as possible, do the greatest amount of good for the least amount of cost, and save as much as possible for the inevitable tax day."

TAXING GROWING CROPS.—Lodi Grange, San Joaquin county, through its Secretary, Mrs. Nellie Crouch, sends us the following resolutions, passed by that Grange:

Resolved, That we fully endorse the resolutions adopted by the Vallejo Grange, in regard to sacking grain and taxing the growing crop; also, that the record of the vote in the Assembly, on that question, be preserved by this Grange, for future reference.

Resolved, That we, the members of Lodi Grange, No. 92, P. of H., do hereby pledge ourselves that we will not purchase sewing machines of those agents who have withdrawn their proposition to sell to Patrons of Husbandry, at reduced rates.

Resolved, That copies of these resolutions be transmitted to the RURAL PRESS and California Granger, for publication.

THE SEWING MACHINE QUESTION.—In addition to the resolutions of the Lodi Grange, elsewhere given, we have also received during the past week, similar resolutions as passed by the Hollister and Point of Timber Granges. In this connection we would call attention to a paragraph in another column, headed "An Offer."

SANTA CLARA.—The next meeting of the Santa Clara Council will be held at Santa Clara, on Monday, April 13, at 10 o'clock A. M. The meetings of the Council are open to all fourth degree members, although none but delegates are entitled to take part in the proceedings.

CENTERVILLE GRANGE, which, though quite recently organized, already numbers over 80 members, will hold a harvest feast to-day, March 28th. Invitations have been extended to other Granges in Alameda county to be present.

CASTORIA GRANGE, through its Secretary, W. V. Howell, reports prosperity. It now numbers over one hundred members.

P. of H. BALL.—Centerville Grange will give a May party ball on Friday evening, May first.

From the Granges.

STANISLAUS GRANGE, STANISLAUS CO.—A brother writes as follows: I send enclosed the subscription price for one year of your most excellent paper. It is a paper that no farmer should be without, and I fancy that I can tell which of my Brother Patrons are readers of the PACIFIC RURAL PRESS, from the advanced ideas in farming matters evinced in their discussions, and acted out on the farm.

It has been a very favorable winter and spring for this section of the State. There has been a greater acreage sown to grain in Stanislaus county, than ever before; and the prospect for a large yield of grain is more favorable for this season of the year than it has been for the last seven years.

The Stanislaus Grange is increasing in members and influence. Its membership is about 123. There was a class of 13—four ladies and nine gentlemen—initiated into the mysteries of the fourth degree at our last meeting. The matrons of the Grange prepared a most excellent harvest feast, which was partaken of by a goodly number of appreciative Patrons, notwithstanding the rainy day.

The members of the several Granges in Stanislaus county, contiguous to Modesto, have formed a Co-operative Union, and incorporated under the name of the "Grange Company of Modesto;" the objects of which are to build a warehouse in Modesto, and to buy, sell, store and ship grain, and agricultural produce and machinery, and to conduct a general commission and warehouse business. Capital, \$100,000, in shares of \$100 each. The company has already made a purchase of 200,000 grain bags for the stockholders of the corporation. The stock is to be confined to members of the Order of Patrons of Husbandry. A large portion of the stock is already taken, notwithstanding the rule that no one is allowed to subscribe for more than 15 shares.

Would it not be the true policy for the Grangers of each county to form themselves into similar bodies, locating their principal place of business at some central position on railroad or water communication. When we form ourselves into corporate bodies we immediately establish a credit, and are in a condition to do business. We can purchase our sacks at a time of the year when they are reasonable, without advancing a dollar toward their payment until we are ready to use them. Another advantage is, they pass directly to the farmers, in lots to suit, and at wholesale prices. We dispose of our wheat and other farm produce directly to the shipper of wheat and the distributor of produce through our own warehouse. We can charter ships to carry our grain to its destination; for who can tell better the tonnage required for each locality than the farmers of that locality. I think the Patrons of Husbandry, to gain their desired end, must eventually follow out a line of policy somewhat similar to this. For a number of these companies uniting could accomplish almost any desired end, having such a large concentration of capital to work upon.

BADGER FLAT GRANGE—MERCED COUNTY.—Secretary A. P. Merritt writes as follows: As we seldom see anything published from our Grange in the Press, and appreciating the fact that the extreme modesty of our members will scarcely secure for them the commendation they have earned, I will give you such items of interest as I may be able to think of. Our Grange now numbers fifty-three members, is in a flourishing condition, and though the "novelty" of the thing begins to wear away, yet the interest increases. On Saturday, Feb. 28th, we had a harvest feast, in which we were joined by a number of our neighbors of the Los Baños and Cottonwood Granges. During an interchange of social and fraternal conversation, we did honor to the contents of the bountiful tables, in a manner flattering to the culinary pride of our lady members.

The discussion of questions of practical interest to Patrons, which forms a feature of our Grange, is having a tendency to develop not only a better manner of expressing ourselves, but a greater willingness to make the effort. Great improvement has already been observed, in even the little practice we have thus far had. We have also another interesting feature—a live paper—the *True Patron*, published every two weeks, by an editress and assistant. The first number, which appeared at our last meeting was considered a decided success.

We are having fine spring rains, and the crops, which are a little backward on account of the unusually cold weather, are now beginning to grow rapidly. I can't help contrasting, in my own mind, the present situation, with a corresponding date last year, or a number of years in fact. It seems reasonably certain that the San Joaquin valley will this year reap a bountiful harvest.

TEMASCAL GRANGE.—At a recent meeting, the resolutions of the Healdsburg Grange, concerning the State Agricultural Society, were endorsed. The Worthy Lecturer, Mrs. Jennie C. Carr, at the same time effectively read the poem entitled "The Old Man at the Fair," previously published in the RURAL. J. V. Webster and W. Applegarth have been elected delegates to the County Council. The Committee of sisters on Harvest Feast, reported in favor of each member of the Grange inviting a guest to join in the festive occasion on Saturday, April 4th, on which date the Grange will meet at 12 o'clock. An invitation has been extended to every member to attend the Harvest Feast of Centerville Grange, on Saturday of this week.

YOUNTVILLE GRANGE, NAPA COUNTY.—J. M. Mayfield, Master of this Grange, writes as follows: "We have a class of nine this month, and hope to have another such next month. That energetic and enterprising organizer, brother W. H. Baxter, has organized a Grange at Rutherford, a railroad village, midway between Yountville and St. Helena, which makes five Granges for Napa valley—a pretty good showing for a 'little garden spot'—as some of our old Napa friends persist in calling it. We Napa people are very proud of our little valley, and some of us are vain enough to believe that when we have done so much for it as kind Providence has done, it will rival that beautiful garden of which we read in the Good Book, when the first manufacturing establishment, of which history gives an account, was located, for the manufacture of aprons, etc. Wonder if the aprons manufactured there were half so neat and tidy, and refreshing to the eye, as the beautiful snow-white aprons worn by our sisters in the Grange? If they were, old father Adam must have felt quite proud the first time he saw his lost rib dressed up in her new apron. Last Saturday was one of the most dismal days I ever experienced; yet, we had a full attendance at our Grange meeting; and among those present were several sisters, some of them coming four and five miles. It will require something more than a driving rain storm to cool our ardor for the glorious cause! The crop prospects for our county are very good, considering the extraordinary character of the winter. The breadth of land seeded is less than the average, but if we get a little rain in April or May, I feel justified in saying that our county can be relied upon for nearly or quite an average crop of the cereals for 1874. Success to the good old RURAL and its proprietors."

ANTELOPE VALLEY GRANGE, COLUSA COUNTY.—Secretary A. F. Walton writes as follows: Thinking that a few items relative to Grange matters may be of interest to you, I send you an account of the progress of our little Grange since its organization. We were, as I suppose you know, organized by Deputy J. J. Hick, on the 10th of October last, with 13 male and 11 female charter members. The officers then elected were re-elected with but three exceptions at the annual election. In consequence of the inclemency of the season, and the fact that a majority of our members are engaged in stock-raising as well as farming (their time having been taken up during the spells of bad weather in attending to their stock), our meetings were not as regular and as well attended as they would have been under more favorable circumstances. Yet, we have taken some forward steps in the admission of members to our Grange; and we expect, when the weather becomes settled, to have many more applicants for membership. The weather here is very unsettled yet; but all the rain that may fall from this on will be considered as an addition to the prospects of a good crop this season. In my next communication, which I think will be soon, I expect to have the pleasure of sending you the names of a club of subscribers to your valuable paper.

WATERFORD GRANGE, STANISLAUS COUNTY.—Secretary W. C. Collins writes to the Granger that the farmers thereabouts are very cheerful. The discussion of Grange interests appears to be the topic of the day. As to the character of our Grange, I may say that it is in good working condition, and that its members are tillers of the soil—the bone and sinew of our valley, and there is more of like material left and coming. We have "gone slow and kept in the middle of the road." Our Grange numbers 52. On last Saturday we started a class of six, and, with what we will pick up on the way, there will be eight or ten to partake of the harvest feast. There are a number of intelligent gentlemen of professions who have never heretofore thought a farmer could rise above a plow. God will forever bless a true Granger.

POINT REYES GRANGE.—A. H. Stinson, Master, writes: Deputy J. H. Hegeler met the people of Point Reyes, Dec. 20, and organized our Grange, No. 154. As the population of Point Reyes is small, we were nearly all initiated as charter members, there being but a few to join. We number now twenty-seven members, and have regular meetings once in two weeks. On account of unusually cold, wet weather, and over stocking the ranches, the prospects for dairymen are not flattering this season, the produce to date generally not being nearly as much as usual. I hope soon to be able to send you a list of subscribers for your valuable paper.

HUNGRY HOLLOW GRANGE, YOLO COUNTY.—By letter from J. M. Dutton, Lecturer, we learn that this Grange met on the seventh inst. for the installation of officers and a harvest feast. Over one hundred persons partook of the feast, which was followed by a harvest dance. The officers of this Grange are: G. L. Parker, M.; J. M. Dutton, L.; C. O. Perkins, Sec.; C. H. Dresser, T.; F. Masst, C.; C. P. Dubois, O.; N. Spaits, S.; J. M. Parker, A. S.; T. J. Pierce, G. K.; Mrs. M. Parker, C.; Mrs. E. Young, P.; Miss C. H. Dutton, F.; Mrs. L. Parker, L. A. S.

LOWER LAKE GRANGE, LAKE COUNTY.—J. S. Fruits, Secretary *pro tem.*, writes: This Grange is prospering finely. Notwithstanding it has never made any report of its progress, many of its members are constant readers of your valuable paper, the RURAL PRESS, one that every Patron should take. We celebrated our harvest feast to-day, with a class of twelve, that were initiated to the mysteries of the fourth degree. Our local agent is J. W. Howard.

Address.

(The following address, read before the Stanislaus Grange, by C. C. Luther, Lecturer of that Grange, on the occasion of their last Harvest Feast, has been forwarded to the PACIFIC RURAL PRESS for publication, by order of the Grange, as expressed in the form of a resolution.)

WORTHY MASTER, AND FELLOW PATRONS:—It is with extreme pleasure, that I am permitted again, to meet with Patron friends, and enjoy the luxury of another Harvest Feast. A long interval has elapsed, since our first demonstration of social converse, around that festive board; and, if I may be permitted to judge other brothers and sisters by myself, we found it exceedingly pleasant to be there. Undoubtedly sisters and brothers have a lingering impression still, upon their minds of happy moments of pleasure, enjoyed on that occasion. How beautiful the consideration, to behold a fraternal feeling of union existing, where all is peace, joy, and love. We, as representative cultivators of the footstool of our Creator, are assembled here for the purpose of not only moral, social, and intellectual advancement; but, also, for the purpose of inculcating and strictly carrying out the noble principle of liberty and justice, to all men and women. "Live and let live," should be our motto, asking nothing, but what is just, and submitting to nothing that is wrong. Our object, as Patrons of Husbandry, are undoubtedly well understood. As to numbers we are already a success. We have over one million members at the present time, every State has come into line, as Granger States, but three. The probability is, that we shall have double our present number by next session at this time. We now have one hundred and sixty-three Grangers in our own State.

As to impressions made by social and friendly relations existing in our order, we are a little inclined to bashfulness; fearful, perhaps, of overdoing the social status of our order; but, my brothers, we need have no fear of overdoing the principle of friendship, love and truth. Feeling friendly, dealing kindly, acting fairly; striving so to do others as they should do to us again, blessing all and scorning no one; wronging none by word or deed; but forbearing, soothing, serving, such should be our life and creed. We are living now, as it were, in the dawning of a new era, in which the sons and daughters of honest, hard toil are trying to better their condition, while engaged in the most noble occupation of man. An erroneous idea obtains generally, among the kid-glove gentry, that farmers, or laboring men, belong to the lower strata of society. Let us look at the facts, and positive evidence of downright ignorance on their part will appear. Henry Clay was a poor boy and worked hard for a living, and the faint glimmerings of his oratorical talent were first developed before an audience of forest trees; Henry Bascom, the great western orator, traveled west on foot, with his ax on his shoulder; Daniel Webster, in his S-ratoga speech, in 1844, said that he was a backwoodsman, born in a log cabin, on the border of the unbroken forest, and enured to hard labor; Franklin, a practical printer, was a hard worker; the eloquent Patrick Henry labored on the farm while a young man; Washington, when not employed by his country, labored upon his farm, and was actually following his plow when he received the news of his election as President; Burns, the Scotch poet, composed much of his poetry when at work on a farm. Some of the best men that ever lived, were hard-fisted, hard working, honest tillers of the soil that gave them birth.

Arouse then, my fellow-farmers and Patrons, and demonstrate to the world that we are competent to maintain and defend our just rights, on the great field of agriculture, prepared by the Supreme Power, that presides over the destiny of worlds. Continual, united action, is the cardinal principle of our noble Order; "united we stand, divided we fall," is the old adage, and true. Eyes right! right dress! then, farmers, forward march, in solid column, upon the enemy's works, and the victory is ours! The wealth of our State lies in its agricultural products. Good markets and cheap freights are of the utmost importance to agriculture. It don't make any difference how abundant our crops are, unless a market can be reached, without a sacrifice of one-half the product, in the shape of freight and other expenses, attaching thereto. If the farmers—the tillers of the soil—do not receive a fair remuneration for their work, all other industrial interests will suffer with them. Anything that tends to deprive the producer of the value of his product, tends to the impoverishment of the whole country. Any system of laws, regulations, by government or combinations of men, or corporations, that are oppressive to the producer, oppress the whole people. It matters not whether these oppressions are in taxes, tariffs, or charges, for the transportation of the farm product. No difference, in what shape it comes, the result is the same. The great oppression now being practiced upon the farmers of California, is the enormous charges made by ship-owners, for tonnage to Liverpool and other foreign ports.

I entertain no misgivings as to our first business demonstrations. By incorporating ourselves we take a position affording the proper facilities for transacting business. Private corporations possess none of the attributes of sovereignty, and hence are to be treated in law as private individuals. All that is required to

make our effort a final success is, for every Granger to come forward with alacrity and subscribe for stock in the warehouse, and then get a benefit on the sack trade, and everything pertaining to the business. If I understand the solution of the Grange problem, it consists in a concentration of the agricultural element in mass, upon the strong-holds now in possession of our enemies—the monopolizers and California street gamblers in San Francisco. The bears of the wheat market have succeeded in cinching the bulls, and the result is that all farmers holding wheat are completely at the mercy of the speculator. And now, my friends, fearful of worrying your patience, I must close. Thanking you for kind attention, I hope we may have many pleasant meetings in the future, bringing increased prosperity to all Granges and farmers.

New Granges.

FARMINGTON, TEHAMA COUNTY.—Bro. G. W. Colby, Deputy for Butte county, writes as follows: I organized a Grange at Farmington, Tehama county, on the 19th instant, with twenty-five charter members; seven ladies, all of them matrons, with children in arms. Addison J. Loomis was elected Master, and S. B. Loomis, Secretary. The entire number were highly pleased with the situation, and possess the working material for a successful Grange. The post-office address is Tehama. Seeding and plowing being over, you may look for a healthy and rapid advance in the Grange.

Farmers in this section are through seeding. The amount sown is about the same as last year, but more summer fallow. The winter has been unusually cold and wet, and the harvest prospects are not as good as one year ago. Feed is very short; many sheep have been lost, and the lambs saved is about one quarter that of last season. Many cattle have been unable to stand the cold storms and short feed of the winter. Farmers everywhere run short of hay; hence, the loss of stock. During the week I have visited parts of Tehama and Colusa counties and find the crops about the same as here, compared with last year. Volunteer and summer fallow on the upland bid well for a fair crop. Winter sowing looks bad.

COLLEGEVILLE GRANGE, COLLEGEVILLE, SAN JOAQUIN COUNTY.—Deputy E. B. Stiles, assisted by Bro. Andrew Wolf, Past Master, organized a Grange as above, on the 19th instant, with a full list of 30 charter members. The following officers were duly elected and installed: Alex. Mayberry, M.; T. Minnahan, O.; W. N. Moss, L.; P. P. Ward, S.; Geo. A. Beach, A. S.; F. Faris, C.; D. C. McIntosh, T.; J. C. McIntosh, Sec'y.; D. M. Wahad, G. K.; Mrs. J. M. McKamy, Ceres; Mrs. M. L. McIntosh, Pomona; Miss Minerva McKamy, Flora; Mrs. Josie M. Merwin, L. A. S.

FARMINGTON GRANGE, SAN JOAQUIN COUNTY.—Deputy Stiles organized the above named Grange on the 20th inst., with 30 charter members, and the following list of officers: J. M. Groves, M.; G. W. Andrews, O.; M. J. Draiss, L.; J. W. Smith, S.; J. R. Owens, A. S.; C. H. Patterson, C.; J. R. Henry, T.; E. O. Long, Sec'y.; Mrs. J. Manchester, Ceres; Mrs. Lizzie Patterson, Pomona; Mrs. C. Draiss, Flora; Mrs. C. E. Schroeder, L. A. S.

ELLIS GRANGE, ELLIS, SAN JOAQUIN COUNTY. Deputy Stiles also organized the above Grange on the 18th inst., with 27 charter members, with Henry H. West as Master and N. S. Misiner, Secretary.

AN OFFER.—In view of the sewing machine companies withdrawing all favor from the members of the Order of Patrons of Husbandry, we make this offer: We have a model machine of working size now with us, with patents well secured, which is capable of being made fully equal with the best, and in some respects superior to any machine in the market, which we will give to any responsible party—who will bind themselves to prepare machinery so as to be able to manufacture the machines at the lowest possible expense, and agree to furnish them to all members of the Order at a price not exceeding ten dollars above cost—for the sum of one hundred dollars as a guarantee, and one dollar royalty for each machine sold. Each machine to be numbered, and a correct account to be kept of the sales. The machines to be of the best material and workmanship. This offer to be open ninety days from March 16, 1874.

Address, Caleb Cadwell, San Jose, California. Patrons to whom this offer is sent will please make it known to the best workmen of their acquaintance.—*Cal. Granger.*

EDITORS PRESS:—Can a man who follows the nursery business for a living, and is not connected with farming, become a Granger? If a member of a Grange is elected to fill an office in the Grange by ballot, can the same brother be elected to another office by ballot, and fill both at the same time? R. P. A.

[To the first query we would say, if he is a producer, most decidedly, yes. To the second, as decidedly, no.—*Eds. Press.*]

A GOOD IDEA.—The members of Badger Flat Grange have established a "live paper," which they call the *True Patron*. It is published (written, we suppose) every two weeks. The idea is a good one, and affords an opportunity for many who can not well express their ideas *viva voce*, to do so in writing.

ADVANTAGES OF HOEING.—Too many persons who use the hoe suppose that the chief benefit derived from it is to kill the weeds. That, certainly, is an important work, and one greatly neglected. Weeds are not only in the way of cultivating the crops which we plant, but they rob them of much of the nutriment which they need. Hoeing, then, is an essential service in respect to destroying the weeds. There are other advantages, however, which are commonly overlooked. Let us see: 1. The loosening of the soil in the operation of hoeing, is beneficial to the plants, as much as the destruction of the weeds, or more so. 2. Moisture abounds in the atmosphere during the hottest months, and is absorbed and retained most abundantly by a soil which is in the most friable state. Professor Schluber found that 1,000 grains of stiff clay absorbed in 24 hours only 36 grains of moisture from the air; while garden mould absorbed 45 grains, and fine magnesia absorbed 76 grains. 3. Then, again, pulverizing soil enables it better to retain the moisture absorbed. 4. The soil, in order to be healthy and active, must breathe. A light porous soil admits the air, and thus it is fed and greatly invigorated by the atmosphere. 5. The sun's rays heat a hard soil much more quickly than a loose one, and the hotter the soil is, so much greater will be the evaporation from it. So that the hard soil is deprived of its moisture much sooner than one of a loose texture. 6. The soil that has been kept loose near the surface by the action of the hoe, will receive and hold the rain-water that falls, while a hard soil will allow most of it to run off into the valleys and streams as it falls.—*Canada Farmer.*

THE RAMIE INDUSTRY.—If any inventor has a good machine, capable of thoroughly, quickly and economically preparing ramie fiber for the market, there is a good prospect of its being largely in his interest to perfect the same, and bring it before the public at as early a day as possible. The great obstacle to the introduction of this valuable plant—which, from the fact of its being an excellent substitute for silk, is destined to be one of our most important products—is the difficulty of separating the fiber from the bark that envelops it. The Chinese do this work by hand, producing one or two pounds per day of marketable fiber, and using an ordinary knife. Of course, this slow process will not pay here. Several machines, we are aware, have already been invented; but, for some reason, the proprietors take little pains to bring them into notice. The plant can be successfully cultivated in California and the Gulf States. It can be cut by an ordinary mowing-machine, and an acre of land will produce from 400 to 500 pounds at a cutting. The crude ramie staple is worth from \$320 to \$340 per ton in Europe. American manufacturers offer for it from 20 to 25 cents per pound, when furnished in considerable quantities.—*Scientific American.*

A CONTRAST.—A correspondent of the *Country Gentleman* says: I have known two kinds of industrious farmers. One builds a costly barn, and uses up his means for manuring, cultivating, and draining, when cheaper buildings would have answered. Another works a wet field year after year at great cost and inconvenience, and with small results, because he is too busy to underdrain it. He does everything at a disadvantage. Very different is the course of the good manager. He looks at all his work—has it mapped out before him—estimates accurately the labor to accomplish each job, and the time when it should be done to prevent loss, and then goes on systematically. It does not require great genius to do this, but common sense, and for the farmer to keep his wits about him. This is what makes a man practical and successful.

We have seen it stated that millet and wheat taken from the pyramids and ancient Egyptian tombs, certainly several thousand years old, would grow, almost as well as fresh seed, when properly planted. The perfect preservation was due, of course, to the dry air of Egypt, and though the accounts seem rather fishy, there is no doubt of the possibility, in cases where the seeds were perfectly preserved. And now the *Garden*, of London, records an experience, going to show that scions and cuttings retain their vitality much longer than has been generally supposed; those of vines, plums, figs, apples and pears taken from England to the colony at Victoria, having been worked with success nine months after being severed from the parent stock.

HARROWING GRAIN.—J. M. Mayfield, of Forestville, writes as follows in reference to the matter of harrowing grain: "I heartily concur with the Stanislaus farmer, in regard to the beneficial effects of harrowing grain. I had a harrow made to order for the purpose of experimenting more extensively in that direction. It is an old-fashioned A harrow, with the teeth set back at a sufficient angle to prevent clogging.

I will answer one of Granger's "conundrums":—"Will watermelons and squashes mix?" They will, as I know from observation, producing a hybrid utterly worthless for anything but hog feed.

On another page two useful and tried devices in poultry raising are illustrated. It is the aim of the *RURAL* to lay before its readers such practical hints as come to notice in the course of miscellaneous reading; and sketches of new mechanical appliances which are found of use about the farm, are solicited.

The Mechanics' Institute.

The industrial exhibitions held in this city, under the auspices of the Mechanics' Institute, have always been the most successful affairs of the kind on the Pacific slope, and the announcement that another is to be had, is gratifying to every one. The Ninth Industrial Exhibition will open on the 18th of August next, and continue for thirty days. The Board of Managers invite all those interested in the material industries to prepare such productions, natural or otherwise, as may be desirable to exhibit at the fair. They intend constructing an exhibition building having an area of 15,000 superficial feet of floor-room, with a degree of convenience and magnificence never before attempted on this coast. The location of the building is immediately opposite the new City Hall. It will run the whole length of the east side of Eighth street, between Mission and Market.

The exhibition is open to all the world, and all exhibitors are placed on the same footing. Motive power will be furnished free of charge. Bands of music will be in attendance, and the building will be well lighted both day and night. The managers request that persons desiring to exhibit will present their applications at as early a day as possible, addressing their applications to the "Secretary" of the Board of Managers, Mechanics' Institute, No. 27 Post street, in this city. The following gentlemen are prepared to give any information required concerning the coming exhibition: A. S. Hallidie, 113 Pine street; James C. Patrick, 122 Battery street; Henry L. Davis, 421 California street; H. W. Jones, 612 Clay street; Asa R. Wells, Mechanics' Mills; B. P. Cornwall, Spear street, corner Harrison; Chas. E. Elliott, 516 California street; George Spaulding, 414 Clay street; Richard Savage, 138 Fremont street; A. S. Iredale, 957 Mission street; J. H. McDonald, 217 Spear street; J. P. Curtis, 320 Jackson street; and R. B. Woodward, Woodward's Gardens.

For the benefit of those intending to exhibit, we append the rules and regulations adopted by the Board of Managers of the exhibition.

1. The Pavilion will be open for the reception of goods, on Monday, August 10th. The Exhibition will be open to the public on Tuesday, August 18th, at 11 o'clock, A. M.

2. Applications for space must be made on or before July 20th, stating character of exhibit, amount and kind of space required—wall, table or floor. Blanks will be furnished for this purpose, and a clerk will be in attendance at the Library of the Mechanics' Institute, every day from 12 to 1, and 7 to 10 P. M.

3. All persons presenting articles for exhibition must have been registered by the Receiving Clerk, who will give a receipt for the same, which receipt must be presented when the articles are withdrawn, at the close of the Exhibition.

4. The name of every article must be attached by the exhibitor to it, and filed with the Board of Managers.

5. In case of any misunderstanding, application may be made to the Manager of the day, who will at all times be in attendance.

6. Articles intended for sale will be labeled accordingly, but can not be removed until the close of the Exhibition, except by written permission of the Managers.

7. Steam-power will be provided, so that machinery of all kinds may be seen in actual operation, and every facility possible will be given to exhibit working machinery to the best advantage.

8. Perishable articles will be received, or may be removed at any time during the Exhibition, with the consent of the Managers.

9. The most effectual means will be made through the agency of the police and otherwise, to guard and protect the property on exhibition, and it will be the purpose of the Managers that all articles shall be returned to the owners without loss or injury. Still, all articles will be at the risk of the owners.

10. Articles intended for exhibition must be entered and placed on exhibition on or before Friday, August 21st.

11. The Managers are desirous that articles should be presented early. Those from abroad, intended for exhibition, should be properly packed, and if not consigned to the exhibitors must be marked: "Managers of Ninth Industrial Exhibition, San Francisco, Cal." Articles from foreign countries should be accompanied with a certificate by the American Consul, in order that, upon their arrival, the proper course may be taken to have the duties remitted. All articles thus received, arriving too early, will be stored, free of cost, to the exhibitor, and the Managers will have them duly placed in proper position for exhibition. No freight charges will be paid by the Managers; but exhibitors are notified that arrangements are being made with various transportation companies to repay freight charges on evidence of return of goods exhibited.

Information will be furnished on addressing "Managers of the Ninth Industrial Exhibition, San Francisco, Cal."

The dairy associations East, unite in condemning skim-milk cheese. Besides its inferior quality, it is found to fall far behind in keeping qualities. The large amount of this cheese, made in this country, throws discredit upon the reputation, and diminishes the use of American cheese.



Such Pleasant People.

[Written for the RURAL PRESS by ELIZA E. ANTHONY.]

"Ward, can you spare me ten dollars, as I need it badly?" said Sadie Moran in a timid voice to her husband, as he rose from the table one morning, frowning, until his eye brows almost met. He answered angrily: "It's money, money, everlastingly; you are like the Leeches' daughter, crying 'give, give, give,' and never satisfied. "What is wanting now?" "Essie needs a pair of shoes"—"That is two dollars, he interrupted; "Nina a new dress"—"the second during the last month—what will it cost?" Five dollars will do," Mrs. Moran replied. "Humph! it ought to, what next?" "The remaining three dollars I wish to use myself," she responded. "Really! and what do you need, pray?" Mr. Moran, queried, sarcastically.

"Gloves, pins, cotton and trimmings," his wife replied, her pale cheek flushing with anger at her husband's cross-questioning, yet not daring to refuse to answer him. "Well, if you must have it, you must, I suppose; here it is, and take good care of it, as I am not made of money." So saying, Ward Moran tossed ten dollars on the table, and without any leave-taking, which he regarded as superfluous, hurried off to his business.

Later in the day a lady entered his store, and asked him to contribute something towards an enterprise, which would not benefit him in the least, as he would only gain the publicity of giving a certain amount of money. With much suavity of manner Ward Moran wrote his name down for fifty dollars—five times the amount he had grumbly doled out to his wife—and the lady departed, telling everybody she saw, that Mr. Moran was such a pleasant man.

"Orville, I wish you would go to my room, and bring me my fan, gloves, and also, my vinaigrette," said Coralie Hunter to her handsome husband, who was leaning back in an easy chair, admiringly watching her, as she was preparing to attend a reception.

"Certainly," he replied, leaving the room. He soon returned, and laid a dainty vinaigrette, and a pair of tiny gloves on the marble table. "There! you have forgotten the fan, as I know you would; I never sent you for anything, but you forgot the most important article," said Coralie, crossly; and a moment after added: "Well, are you going to get the fan, or shall I?" "When you speak to me a little more respectfully, than as if I were your lackey, I will get it; 'but, Coralie, tell me why you are so much more polite, and pleasant to me, when we are abroad, than at home?" said Orville Hunter. "Because we are married; and at home, there is no necessity to keep up appearance," coldly replied Coralie.

After they had entered the carriage, Orville Hunter laid a snowy fan in his wife's gloved hand, which she received in silence. The same evening, accidentally dropping her filmy handkerchief, a gentleman picked it up, and with a low bow, presented it to her; with sweetly uttered thanks, and a winning smile, she received it, and was so charming and pleasing, that everyone in the room, except her husband, concurred in saying: "That Mrs. Coralie Hunter is such a pleasant woman."

"Edgar, will you bring me a pail of water? I am so tired," said Dellie Lester, to her brother, a stout young man, who was deeply absorbed in getting the right twist to his neck-tie, and who answered, shortly: "Oh, bother! I'm busy; get it yourself, Del." "Edgar Lester, you ought to be ashamed of yourself, asking a delicate girl like Dellie, to carry a pail of water, while you stand and look on," said his ten-year old cousin, Fannie Carlton. "Mind your own business, Miss Fan., or I'll make you. I am not going to wait on Del. all the time; and if she wants the water, she can get it, or go without," said Edgar angrily, and taking his hat off the rack, opened the door, just as Fannie cried, mockingly:—"No, I

wouldn't tire myself, if I were you, as you are so delicate; I am afraid that your health is getting as bad as your temper. I'll tell Eva Kelly how cross you are at home, and how polite, and what airs you put on at her house."

"If you dare to, I'll break every bone in your body, you little imp," and slamming the door, Edgar walked down the street, and overtook a young girl, petite and brunette, who was carrying a large basket. "Good afternoon, Miss Eva, let me carry that heavy basket," said Edgar, suiting the action to the word; and he made himself so agreeable and pleasant, and spoke so kindly of his sister and cousin, that Eva Kelly thought he was a very loving brother; and she was envied by all her acquaintances, in having won the love of Edgar Lester, as people said he was such a pleasant young man.

"Mother, do tell me where my dress is, that you ironed? Did you mend my stockings, as I told you to? Where is the rouge, and lily bloom?" said Mary Clarkson, in a sharp tone to her mother, who was flutting a dainty lace frill.

Mrs. Clarkson looked up, and answered mildly: "One question at a time, my dear. Your dress is in your room; the stockings, I did not have time to mend, but it will not take you long." "No, indeed, I won't touch them; I will buy a new pair, and you can mend those to-night," rudely interrupted Mary, who then added: "Why don't you tell me, where my rouge and lily blo—Roy, you rascal, how dare you! I'll box your ears, well for that, you little wretch!" and Mary made a spring at her twelve-year old brother, who had just entered the room, with his cheeks and nose covered with rouge, and his forehead, lips, eye-brows, and hair, covered with lily bloom, and shook him, until he blubbered for merrcy; and when she released him, escaped to the door, and cried tauntingly: "Why don't you act this way when Dave Graham visits you, Golly! you can say prunes and prisms then, can't you! I wonder if he sees that your cheeks are an inch thick, with that red paint, and that you sift white powder on your hands and neck. Guess I'll tell him; say, did you ever tell him how much horse hair you wear on your head!"

Here Roy dodged outside the door just in time to escape a book, which was hurled at his head by his irate sister.

An hour later, Mary Clarkson, in a filmy white dress, almost covered with flounces, over which her mother had toiled half a day; her cheeks and lips crimson with rouge, her forehead, neck, and arms dazzling in their whiteness, with Lily Bloom, entered a ball-room, leaning on the arm of Dave Graham, a rising young lawyer, and whenever Mary's musical laughter rang out, or she uttered a sparkling *bon-mot*, everyone unanimously agreed that she was "such a pleasant young lady."

San José, February 2d, 1874.

A Gem From Whittier.

To appreciate the truth and beauty of the following lines from the pen of Whittier, it is necessary to know the circumstances under which they were written. A friend of Whittier's youth, who had spent much of his life on the Illinois prairies, called on the poet at his home in Amesbury, and together they recalled the scenes of their childhood, and briefly recounted the course of their after life, and Whittier seemed much affected by the allusion of his friend to his prairie home, where a wife, children, and a grandchild ("Constance") awaited his return, and on being asked for his autograph, replied: "Call on your way to the ears, and I will hand it to you." The friend called and received the following. The lines show the delicate texture of the poet's heart, the tendrils of which were evidently stretching after something beyond his reach:

The years, that since we met have flown,
Leave, as they found me, still alone,
No wife, nor child, nor grandchild dear,
Are mine, the heart to cheer.
More favored thou; with hair less gray
Thou mine, canst let thy fancy stray
To where thy little Constance sees
The prairie ripple in the breeze.
For one like her to lip thy name
Is better than the voice of fame.

—Boston Commonwealth.

LUXURY is a vice which prompts many to run into expenses beyond what their circumstances will admit. And why? Because respect is attached to prodigality, and contempt is shown for those who do not maintain a similar profusion; because the custom of lavish expenditure is universal, and because things that are superfluous, useless and frivolous are rendered almost necessary and indispensable. Here is the mischief of luxury.

Old Saws, Etc.

[Written for the RURAL PRESS.]

"A woman will have the last word." Before reading Mrs. Nichols' letter in your issue of the 28th ult., I had no idea that "old saws" were such very dangerous tools. I barely touched one and lo! I had wounded some one's sensibilities. Possibly the metal of the one I used contained a flaw, (a logician would probably call the flaw, "an undistributed middle term;" the predicating, i. e., to an entire class, what can be affirmed of but part of that class); possibly time has worn the blade so thin that it is incapable of any further useful work, if it ever performed anything better than saddling the "grey mare" with a burden that the bay horse could with equal propriety have borne.

Mrs. N. calls on me to "rise to explain." Thanks, dear Madam, for hauling me over the coals in your kindly criticism, for slipshod writing; thanks also for your contribution to the RURAL's Home Circle "Picnic."

"Peccavi," is the only explanation I can offer, the proposition is incapable of demonstration, from the fallacy involved in the use of the undistributed middle term. But, though I thus retract, I cannot remove from my mind the idea that the old saw is a saw, and has been a saw, and that the maker, obtained his metal and pattern from somewhere. I humbly submit that I think the second Mrs. L. would have let Mr. L. feel that, though the metal was faulty, some of the teeth were still sharp; or at least that there was enough of the old metal left to make the "fire fly," when Mr. L. approached with the family tinder-box.

"Putty Women" Versus "Fireflies."

But, my dear Madam, is my use of the old saw worse than your use of the combination, "putty women." I think that, were I a woman, the imputation of being describable by the adjective "putty" would rile me far worse than the imputation of loving the last word.

Submission, a womanly virtue.

Was it not the still, small voice of conscience, the voice of Truth, that suggested that "to be submissive and forbearing are womanly virtues"? Aye! and many ones too! The Manliest of men "took upon Him the form of a servant," and humbled Himself. But that submission is a peculiarly womanly virtue in her relation to her husband, in fact, and in dispensable virtue, I think is demonstrable.

Before beginning our argument, however, I would ask whether the good old ideal marriage—the making "of twain one flesh," the union of tender care and loving trust, is altogether impossible now-a-days? Are we all so entirely selfish that even husband and wife cannot make their interests identical? If marriage is to result only in mutual defiance and distrust, it would be better, for the sake of the wretched offspring, that marriages ceased.

I maintain, that in marriage, the submission of one is a necessity. Which is preferable, anarchy or paternal despotism? These, of course, are the extremes. Perhaps Mrs. N. would suggest a Duumvirate, using *vir* to include both sexes. Excellent, no doubt, but how when the duumvirs opinions clash? One must go to the wall, while the other becomes dictator. A woman, though never such a hand at making the "fire fly," would have small respect for a "putty" man who abandoned his deliberate convictions for fear of a few wordly expressions, however vivid and sharp. When divergent opinions arise, and neither can convince the other, one must yield, and surely the one who bears the outward brunt of life's battle should be allowed the marshalling of his own array.

I am speaking of men, and not of those bipeds who too ashamed, or afraid, to vent their ill-temper on hired hands or strangers, or perhaps in a state of semi-intoxication, come home to wreak their passion on their children and wives:—though doubtless, there are women submissive even to such for less ignoble reasons than "putty!"

Man's Ideal of Happiness.

which, even in moments of revolutionary crime and madness, the most abject of the race howl for, is the perfect enjoyment of "liberty, equality and fraternity." This is the relationship of a perfect marriage; thus the relationship that God presses on unwilling acceptance. On God's part nothing has been left undone to induce

man to accept the offer; man's will alone is wanting, and Omnipotence cannot compel free will.

But the perfect enjoyment of liberty, equality and fraternity, promises the extinction of all selfishness (all sin that is, for what sin has not gratification of self as its motive), and the union of our wills with the Divine Will.

"Our wills are ours, we know not how;
Our wills are ours to make them thine."

Obviously one will alone is excellent. Of two contradictory wills, but one can be accomplished, and it is the knowledge of the one excellent ever accomplished Will, and little necessary accordance of our wills that constitute eternal life:—the enjoyment, that is, of liberty, for he is free whom love obliges:—of equality, for willing as God wills, our wills are accomplished even as His:—of fraternity, for what ideal of fraternity exceeds that true brotherhood of children of God, each forgetting all selfish aims in love for every other, and being loved by all; instead of each hugging merely his own precious self, careless of, and uncared for, by any other.

So, in any true marriage, selfish interests are presupposed extinguished, each enjoys the true "right" of loving the other as him, or herself, of having one common interest, one mutual confidence; and womanly submission becomes a light burden, an easy virtue. Would that all marriages were of this nature. There would be loss occasion for the poet's sneer.

"Romances paint at full length people's wooings,
But only give the busts of marriages."

EDWARD BERWICK.

Carmel Valley, March 4th, 1874.

Religious Belief of Boston's Literati.

"Templeton," the Boston correspondent of the Hartford *Courant*, writing of the religion of Boston literati in his last letter, says: Until of late almost everybody known in Boston in letters or in public life, was a Unitarian. Of the five ministers to England which Boston has furnished in this generation—Lawrence, Everett, Baneroff, Adams and Motley—all were of this persuasion. Mr. Lawrence, however, I have heard, had not the moral courage to attend the Unitarian Chapel in London in the face of the prejudice against Unitarians among the aristocracy of that capital. Not so Mr. Adams, as you may imagine. Mr. Baneroff, I think, renounced Unitarianism some time during his residence in New York. Daniel Webster attended Brattle street Unitarian Church until its standing committee offended him by selling his pew for non-payment of taxes, when he took up his connection with St. Paul's (Episcopalian). He was claimed by some of the Congregationalists, also, after his death. Mr. Epes Sargent is the only decided Spiritualist that I know among our literati, but he has continued to attend Unitarian preaching. Mr. Whipple has long been of the Rev. Dr. Bartol's parish, which was formerly that of the father of Professor Lowell. Wendell Phillips is nominally an orthodox Congregationalist, but his face is not familiar among the attendants of any of our Congregational churches. He may be said to have inherited the faith without relinquishing it altogether. The Rev. Dr. Blagden, our oldest Congregationalist minister, and one of the few who made decided opposition to the anti-slavery movement almost to the last, is Mr. Phillips's brother-in-law. Mr. Richard H. Dana, Jr., is probably much more interested in religious matters than any of the above named gentlemen, and is an Episcopalian of the extreme high church stamp.

PLANT AND ANIMAL LIFE.—In one of the papers read during the late session before the Royal Society, a fact highly interesting to physiologists was made known by Professor Sanderson, of University College, London. It is, that vegetable fibre, when electrically excited, behaves in the same way as animal fibre. The learned professor's experiments were made on the leaf of *Dionaea muscipula*, popularly known as Venus' fly-trap, and the effect of the currents was identical with that observed in experiments on muscular fibre. Here we have confirmation of an oft-suggested proposition, that plant life and animal life have much in common.

EVERY man's past life should be his critic, his censor, his guide. He who lives, and is done with life the moment it drops hour by hour from his hands, is not half a man. He is like a plucked plant that stands in water without roots of its own, and can have no growth, and soon fades and passes away.

Has He a Call to be a Husband!

Has he a call to be a husband who thinks more of his horse than of his wife! Has he a call to be a husband who spends six evenings out of the week away from home, and complains because his wife will go Tuesday evenings to prayer-meeting?

Has he a call to be a husband who spends \$5 a week for cigars and an occasional glass, but can't afford to take a newspaper for his family?

Has that man a call to be a husband who makes elegant presents to other ladies and grumbles if his wife wants a new dress?

Has he a call to be a husband who swears if the one hundredth button is missing and never speaks a word in commendation of the ninety-and-nine that remain immovable?

Has he a call to be a husband who never buys a book or a picture to make home attractive, and still wonders why a woman can't be contented to stay at home seven days out of the week, and ever singing, "There's no place like home."

Has he a call to be a husband who comes to the table with tobacco-stained lips (those lips for which sweet kisses should ever be in waiting), and turns away in disgust from a grease spot on his wife's apron?

Has he a call to be a husband who loses money by betting on elections and horse races, and when he becomes involved attributes it to his wife's extravagance?

THE SEA MOUSE.—The sea mouse is one of the prettiest creatures that lives under the water. It sparkles like a diamond and is radiant with the colors of the rainbow, although it lives in the mud at the bottom of the ocean. It should not have been called a mouse, for it is larger than a big rat. It is covered with scales that move up and down as it breathes, and glitter like gold shining through a flocky down, from which fine silky bristles wave that constantly change from one brilliant tint into another, so that, as Cuvier, the great naturalist says, the plumage of the humming bird is not more beautiful. Sea mice are sometimes thrown up on the beach by storms.

GOOD LANGUAGE.—Young people should acquire the habit of correct speaking and writing, and abandon as early as possible any use of slang words and phrases. The longer you put this off, the more difficult the acquirement of correct language will be; and, if the golden age of youth, the proper season for the acquisition of language, be passed in its abuse, the unfortunate victim will probably be doomed to talk slang for life. You have merely to speak the language which you read, instead of the slang which you hear, to form a taste in agreement with the best speakers and poets in the country.

A boy's sheepishness is by no means a sign of overmastering reverence; and while you are making encouraging advances to him, under the idea that he is overwhelmed by a sense of your age and wisdom, ten to one he is thinking you extremely queer. The only consolation I can suggest to you is, that the Greek boys probably thought the same of Aristotle. It is only when you have mastered a restive horse or thrashed a drayman, or have got a gun in your hand, that these sly juniors feel you to be a true, admirable and enviable character.—*George Eliot.*

Off with your hat, my boy, when you enter the house. Gentlemen never keep their hats on in the presence of ladies, and if you always take yours off when only mamma and the girls are by, you won't forget yourself and be mortified when a guest or stranger happens to be in the parlor. Habit is stronger than anything else, and you will always find that the easiest way to make sure of doing right on any especial occasion, is to get into the habit of doing right. Good manners can not be put on at a moment's notice.

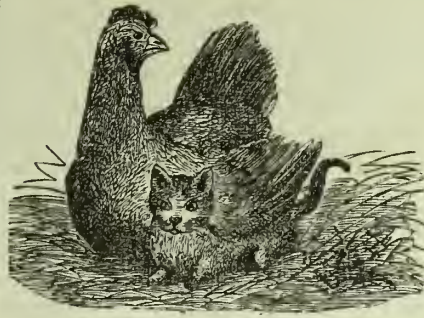
NEVER be above your business, no matter what that calling may be, but strive to be the best in that line. He who turns up his nose at his work quarrels with his bread and butter. He is a poor smith who quarrels with his own sparks; there is no shame about any honest calling. Don't be afraid of soiling your hands; there is plenty of soap to be had.

ITEMS about little boys who pull each other from under broken ice are fashionable just now. No family should be without one.

YOUNG FOLKS' COLUMN.

Artie's Prodigy.

The following verses are founded on facts. Some months since, a weak and homeless kitten took up its abode with the poultry flock of Mr. P. H. Sumner of Oakland. It gleaned its food from the scraps thrown to the chickens, grew strong, and became the pet of Master Arthur Sumner. It creeps upon the roost and re-



ceives the fostering warmth of the chickens by night, and accompanies them in their daily wanderings for food.

You've heard of the woman
Who kissed the old cow;
Of mooly and piggy,
Which fraternize now—
Of friendly relations
'Tween pussy and mouse,
Which strangely enough
Are playing—keep-house.

Of the hateful old crower
And fair bird of Jove,
Which once were united
In conjugal love.
For taste, no accounting,
Like this and like that,
And there's yet another,
A waif of a cat.

Which a sceptre doth sway
In a henery home,
Every chick doing homage
To king pussy Tom.
There's a purr of delight,
When mother hen tells
That a wee downy chickie
Has peeped from the shell.

He eats with his subjects,
They make him a bed
'Neath madam hen's wing.
Where he tucks up his head.
'Tis plain he is happy,
With comforts like these,
And in turn wraps her plumage
With his long narrative.

His chariot of state
Is chat ticeer's back,
Which treads very proudly
With king Thomas Cat.
Now some one will say,
(But we don't care for that)
"He's out of his sphere,"
For a civilized cat.

Surely will cat-chaise
His uncanny way,
But when the cat's gone
The mice can play.
So he's making his living
In a let-it-ting way,
Which is better, I'm sure,
Than some men of to-day.

The Reason Why.

Little May lives near our creek, and often she comes down to the meadow to talk with her big brother, when he's at work. He's a very knowing man, I can tell you, for the reason that he keeps his eyes and ears open when he's out of doors; and, when he is indoors, he fills all his odd moments with reading. Well, May came in crying to him, the other day, to tell him how she had broken her mother's beautiful china vase. The vase was very cold; and May poured hot water into it. The poor child could not see how so simple a thing should have broken the delicate china into pieces. He tried to explain to her how all the tiny particles of the china had drawn closer together with the cold; while, if the vase had been standing by the fire they would have moved a little farther apart from each other; for the cold contracts, while heat expands. (This you littlest folks will read about in your Natural Philosophy, some time). Now, I being a Jack-in-the-Pulpit, could see that the vase was ever so little smaller by standing in the cold, and that pouring in the hot water would make it expand too quickly, or cause unequal expansion by the boiling water expanding the inner surface before the outside had caught the idea, thus causing it to break. But May, being only a little girl, did not have eyes sharp enough to see this, though they are as bright as bright can be; the difference in the size of the vase in the cold or in the heat is so very, very small! But she will remember now not to pour hot water into cold china or glass, or cold water into hot china or glass, unless (now this is the great secret the big brother told to Mary) she first puts into the vase, or whatever it may be, a silver spoon. The

metal, he said, draws the first shock of the heat or cold to itself, and thus the glass will not be broken. Was he right?—From "Jack-in-the-Pulpit," in *St. Nicholas* for March.

LEARN FROM BABY.—Jack heard a very strong young farmer say one day that his baby brother had taught him a capital lesson,—that was to stretch himself often. Baby did it for some wise reason, he knew; so he had followed the example. Stretching makes you grow, makes you supply and active, and is altogether a good thing. Follow the baby's plan, my dears; stretch your arms, legs, neck and body for a few moments, morning noon and night, until further notice.—From "Jack-in-the-Pulpit," in *St. Nicholas* for March.

VALUE the friendship of him who stands by you in the storm; swarms of insects will surround you in the sunshine.

GOOD HEALTH.

Reading to the Sick.

Florence Nightengale gives the following judicious advice on this subject: With regard to reading aloud in a sick room, my experience is that when the sick are too ill to read themselves, they can seldom bear to be read to. Children, eye-patients, and uneducated persons are exceptions, or where there is any mechanical difficulty in reading. People who like to be read to, have generally not much the matter with them; while in fevers, or where there is much irritability of brain, the effort of listening to reading aloud has often brought on delirium. I speak with great diffidence, because there is an almost universal impression that it is sparing the sick to read aloud to them. But two things are certain:

(1.) If there is some matter which *must* be read to a sick person, do it slowly. People often think that the way to get it over with least fatigue to him is to get it over in least time. They gabble; they plunge and gallop through the reading. There never was a greater mistake. Houdin, the conjurer, says that the way to make a story seem short is to tell it slowly. So it is with reading to the sick. I have often heard a patient say to such a mistaken reader, "Don't read it to me; tell it to me." Unconsciously he is aware that this will regulate the plunging, the reading with unequal paces, slurring over one part, instead of leaving it out altogether, if it is unimportant, and mumbling another. If the reader lets his own attention wander, and then stop to read up to himself, or finds he has read the wrong bit, then it is all over with the poor patient's chance of not suffering. Very few people know how to read to the sick; very few read aloud as pleasantly even as they speak. In reading, they sing, they hesitate, they stammer, they hurry, they mumble; when in speaking they do none of these things. Reading aloud to the sick ought always to be rather slow and exceedingly distinct, but not mouthing—rather monotonous, but not singsong—rather loud, but not noisy—and, above all, not too long. Be very sure of what your patient can bear.

(2.) The extraordinary habit of reading to one's self in a sick room, and reading aloud to the patient any bits which may amuse him, or more often the reader, is unaccountably thoughtless. What do you think the patient is thinking of during the gaps of non-reading? Do you think that he amuses himself upon what you have read for precisely the time it pleases you to go on reading to yourself, and that his attention is ready for something else at precisely the time it pleases you to begin reading again? Whether the person thus read to be sick or well, whether he be doing nothing or doing something else while being thus read to, the self-absorption and want of observation of the person who does it is equally difficult to understand, although very often the reader is too amiable to say how much it disturbs him.

Over-Eating—Scientific Cooking.

Targot could not work well till after he had dined copiously; but many men cannot think after a substantial meal; and here, in spite of the example set by Scott and Goethe, let us observe that nothing interferes so much with brain work as over-eating. The intellectual workman requires nourishment of the best possible quality, but the quantity ought always to be well within the capacity of his digestive powers. The truth appears to be, that while the intellectual life makes very large demands upon nutrition—for cerebral activity cannot go forward without constant supplies of force, which must come ultimately from what we have eaten—this kind of life being sedentary, is unfavorable to the work of digestion. Brain-workers cannot eat like sportsmen and farmers without losing many hours in torpor, and yet they need nutrition as much as if they had led active lives. The only way out of this difficulty is to take care that the food is good enough for a moderate quantity of it to maintain the physical and mental powers. The importance of scientific cookery can hardly be exaggerated. Intellectual labor is, in its origin, as dependent on the art of cookery as the dis-

semination of its results is dependent upon paper-making and printing. This is one of those matters which people cannot be brought to consider seriously; but cookery, in its perfection—the great science of preparing food in the way best suited to our use—is really the most important of all sciences, and the mother of the arts. The wonderful theory that the most ignorant cookery is the most favorable to health, is only fit for the dark ages. It is grossly and stupidly untrue. A scientific cook will keep you in regular health, when an ignorant one will offer you the daily alternative of starving or indigestion.—*Herald of Health.*

Carbonic Acid Not a Poison.

Dr. Van der Weyde has published a paper containing some very extreme views on this subject. He says: For some time the opinion has become prevalent, among many chemists, that most cases of poisoning usually ascribed to carbonic acid are due to carbonic oxide, the product of imperfect combustion of coal. It is argued, 1st. That if carbonic acid were a poison we would continually be inhaling a poisoned atmosphere, as good air always normally contains one-tenth of one per cent. of this substance, and may contain much more without being injurious to the system. 2d. That the cause of the unpleasant effect of air in a close room, after having been breathed by many persons present in the same, is due to other exhalations—perspiration, flavors, etc., of the different constitutions, and not to the carbonic acid. 3d. That pure carbonic acid only intoxicates, and in this way makes the persons insensible; while, when they are made to breathe pure air afterward no unpleasant effects remain. 4th. That death in those cases of committing suicide by means of a furnace of burning charcoal in a close bed-room is caused by the carbonic oxide produced by the imperfect combustion of the charcoal by the insufficient amount of oxygen in the room, and not by the carbonic acid—carbonic oxide being acknowledged as a virulent poison, of which the presence in the air in a quantity of less than one-fiftieth of one per cent. causes a series of alarming symptoms.

As a companion to this change of opinion comes the announcement of M. P. Bert, who has found that when pure oxygen is inhaled under a pressure of four atmospheres, or more, it becomes a most virulent poison; while common air breathed under a pressure of twenty atmospheres kills, not so much by the mechanical effect of an increase of pressure, to which an animal soon accommodates itself, but to the concentration of the oxygen present in the air to a bulk so small that twenty times as much comes in contact with the surface of the pulmonary cells, as is the case in the normal condition.

In reviewing Dr. Van der Weyde's paper, Professor Wurtz, editor of our valued exchange, the *Gazette Journal*, indorses the position advanced and adds that in his own case, speaking as a chemist, no "change of opinion" has occurred on the point of the non-toxic nature of carbonic acid; as he is not able to remember the time when he was willing to admit it to be a poison, in the true sense of that term.

Cleansing Garments by Heat.

A garment can be freed from odors by exposing it to heat for a few hours. Thus, body and bed-clothing, and indeed all vestures, may be rendered fresh and clean. It is only the odors, and not what remains after they are expelled, that makes the foulness in a garment. Any substance deprived of them cannot be considered filthy or dirty in the true sense. Ground is not offensive, nor wood, nor the metals, nor any texture in its pure native state. It is decomposition that causes the mischief—a rotten carcass, decayed vegetation—it is the essence of these that we bear about in our filthy garments, in our rooms, our bed-clothing, etc. The exhalations and excrementitious matter of the body come under the same head, made worse by decomposition, which readily takes place. Soap and water will remove these more effectually when heated. Heat alone—dry heat—will remove the odors, which are thus sent off in a volatile state. It requires only that the texture will bear to do the work satisfactorily. Thus bed-clothing may be used, and body garments worn longer, by ventilating with heated air. The skunk's odor may be removed effectually by exposing for an hour or two to heat.

Why, in view of this, may not a room be fitted expressly for this purpose, or some other room temporarily employed? A few hours' exposure will, in general, be sufficient. Clothes thrown off at night may thus be treated; bed-clothes an hour or two during the day. The sun in its mid-summer fervor, when the air is dry, is a good renovator, but the heat is not strong enough to do it entirely satisfactorily. Garments will bear a much stronger heat.—*Country Gentleman.*

GLYCERINE IN ASTRINGENT INFUSIONS.—Glycerine has been successfully used for rendering astringent infusions bright. One part of glycerine to nine of infusion of roses is said to be sufficient. Mixtures of infusion of roses and sulphate of quinia, in which a precipitate of tannate of quinia is produced, may be rendered transparent by a similar addition, as also gargles composed of tannic acid and infusion of roses.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance—For one year \$4; six months, \$2.50; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 80 2.00 5.00
One-half inch.....1.00 3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, March 28, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—What are We Coming To? High Farming; The Silk-Worm; The Model Farm, 193. Losses in Sheep—Can They be Obviated? Frog Culture, 200. Another Home Industry; How Figs are Dried in Smyrna; The Stick Fish; Legislative, 201. Patents and Inventions, 204.

ILLUSTRATIONS.—The Silk-Worm, 193. Artie's Prodigy, 199. Alcyonoid Polyps, 201. A Chicken Boarding House; Poultry Marker, 203.

CORRESPONDENCE.—Trinity County—Her Area, Soil, and Natural Resources; Life in the Country; Those Conundrums; Petaluma Notes, 194. Homes in the Foothills; Hambling in Napa Valley; Growing Crops, 195.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 196-7.

HOME CIRCLE.—Such Pleasant People; A Gem from Whittier; Old Saws, Etc.; Religious Belief of Boston's Literati; Plant and Animal Life, 198. Has He a Call to be a Husband? The Sea Mouse; Good Language, 199.

YOUNG FOLKS' COLUMN.—Artie's Prodigy; The Reason Why; Learn from Baby, 199.

GOOD HEALTH.—Reading to the Sick; Over-Eating—Scientific Cooking; Carbonic Acid Not a Poison; Cleansing Garments by Heat; Glycerine in Astringent Infusions, 199.

THE DAIRY.—Influence of Light on Milk and Cream, 200.

USEFUL INFORMATION.—A Day's Work; To Dissolve Glim; Fire-Proof Construction; To Deaden the Sound of an Anvil; Coloring Materials by which Gems are Imitated; New Use for Infusorial Silica; Hollow Walls; Pneumatic Call Bells; San Bernardino County; A Destructive Engine of War; Pulmonic Candles; New Photo-Process, 202.

POULTRY YARD.—Ideas in Chicken Raising; Trouble in the Poultry Yard; Preparing Poultry for Market; A Varied Diet for Fowls, 203.

AGRICULTURAL NOTES from various counties in California, 204.

A BEET SUGARIE FOR WASHINGTON TERRITORY.

—Mr. S. M. Waite, of Dayton, Washington Territory, whose name has been mentioned in connection with the establishment of a beet sugarie at Dayton, left for his home on the 21st instant. In conversation with him, a few days since, he assured us that he had carefully examined into the matter of his mission—has visited and closely inspected the beet angaries at Sacramento and Alvarado, and the cane sugar refineries of this city, and has come to the conclusion that the plan of establishing a beet sugarie at Dayton is a perfectly feasible one. Mr. Waite is a gentleman of large business experience, is well known in Washington Territory, in Oregon, and in many parts of this State, and we have no doubt that his favorable report in this matter will insure the early erection of the proposed works. The town of Dayton is located in Walla Walla county, near the extreme south-eastern portion of the Territory. The large cost of freight to this extreme location—over three cents per pound—will add largely to the profits of the manufacture over those which can be realized in this city. The market there is quite extensive and rapidly increasing. Mr. Waite will take up a quantity of beet seed with which experiments in raising beets will be tried in various localities, the present season. If these experiments succeed—of which there can scarcely be a doubt—the factory will be put up in season to commence operations with the incoming of next year's crop.

ON FILE.—In addition to articles, the receipt of which has been previously acknowledged, we have now on file communications from J. E. Arnold, Yuma, Arizona; Anne; Wm. M. Landrum, Watsonville; "Adamite," on the Unity of the Race; Mary Mountain, in continuation of the Farm House Chat series; Sonoma; G. K. M.; H. D., etc. We have received three more papers on the Native California Coffee, and have several letters from Grange officers, letters of inquiry, etc., of which want of space has compelled us to delay publication.

Professor Denton's lectures on geology have been thoroughly appreciated and well attended in this city.

Losses in Sheep—Can They be Obviated?

We are constantly, during the winter months, hearing of considerable losses of sheep in almost all parts of the State, and the question naturally arises, "Are these losses inevitable?" Do the forces of nature fight against the sheep-farmer, or does the sheep-farmer expect from nature more than he fairly should?

The mortality is greatest among old ewes, in the season before there is a bite of new grass, when the old grass is either all eaten or innutritious from the amount of bleaching and washing it has received; and among lambs during cold storms, especially when corralled in muddy corrals.

We have known as many as 500 lambs to die in a single series of cold storms, on one ranch, where the entire crop was probably under 4,000; and this winter we have chronicled heavy percentages of deaths among old sheep.

In early times, when the grass crop was the only dependence for the season, there might be some excuse in dry years for owners leaving sheep to starve by the hundred. Now, there is no such excuse. The area devoted to grain crops ensures an abundance of stubble, and the hay from a few acres, devoted to barley or alfalfa, to be fed out when the stubbles no longer furnish sustenance, should prevent any loss among old sheep, providing they are judiciously culled annually.

The penny-wisdom which refuses to avail itself of the use of stubble, and the raising and feeding of hay, deserves to result in the pound-foolishness of hundreds of dead sheep; so much dead loss. Losses by actual disease are small, compared with the losses caused by insufficient food. "Scab" is probably the worst disease that affects California flocks, and a prompt application of some efficient dressing will generally check this in its incipient stage. The use of portable redwood hurdles for corrals, so that the sleeping place of the flocks may be frequently changed, will do much to keep the sheep healthy. The plan of dispensing entirely with corrals, except for shearing, etc., and camping a sheep, is excellent, when the range is tolerably free from beasts of prey, and the shepherd is vigilant.

The Mortality Among Lambs

Is almost equally unnecessary. We have known over one hundred per cent. of lambs raised from a small flock of ewes, by giving them a fair chance. The simplest means are always best, and all that nature requires is that the ewes get enough grass, without being harassed, and that the lambs be not unduly exposed to the elements. These conditions may be complied with on almost every ranch by the simple enclosure (even a poor brush fence will keep ewes and very young lambs together) or eight or ten acres of pasture land with some trea on it. Lambs dropped in the night can be put, with their dams, into the field after the rest of the flock have gone out to feed, and those dropped in the day can be gathered and put therein after the main body of the ewes are corralled for the night. By this method the herder hardly needs extra help. A man and a boy could "lamb" easily some 1,600 ewes. If the flock is very large a second field would be a desideratum.

In most parts of the State some fencing material can be obtained cheaply, and such an enclosure will amply repay its cost. Should there be no sheltering trees in the pasture, a very severe storm might cause some deaths; but the mortality would not be nearly so great as if the flock were huddled together in a cold, muddy corral.

Where such enclosures are not possible, the following plan might be tried—it is largely practiced in Australia.

As the ewes drop their lambs, they are removed from the "dropping flock" into the "receiving flock," and there remain until the lambs are tolerably strong. They are then removed to the "first strong mob," where they remain some time, and finally are drafted into the "second strong mob." This plan, however, requires at least four men or boys, and each division must not only be kept separate, but out of sight and hearing of every other division, or the ewes will travel from one flock to the other, and made "confusion worse confounded." But even here, though there may be little loss from lambs losing their mothers, there would be loss from severe weather.

We consider that the best plan of all, in our climate, would be to have for each flock of ewes, a large field of alfalfa—the larger, the better; and, instead of waiting until the period of cold storms, that there may be green feed for the production of milk, have your green feed ready in September, and let the lambs be all dropped before mid-October, so that before the cold storms come, the lambs may be strong enough to resist the effects of wet and cold. In this way, there need be no loss, and no expense beyond the raising of the alfalfa, from seed for the first season; there would hardly be need for a herder even. The objection to "fall-lambing" is the lack of green feed; with plenty of alfalfa, this objection is no longer valid.

THE ILLUSTRATION of Hebborn's squirrel exterminator, which appeared in our issue two weeks ago, could have been better understood if it had not been shown upside down. In using it, a foot or two of rubber hose, with one end attached to the nozzle of the bellows, and the other end inserted in the hole, will render its use more convenient.

Frog Culture.

Here is Seth Green's manifesto on this subject: We have many stagnant pools about the country that are useless in their present state, and believing that there is nothing made in vain, I do not know of any other use for them than to make them into frog ponds. I also believe it would make the man wealthy who could raise a million frogs and get them to market. All I would claim is giving him two years' experience in experimenting.

How to gather the spawn:—Take a large dipper and go to the pond where the frog casts its spawn; you will find them in a glutinous mass; dip them up and be very careful not to break the glutinous matter which binds them together; put them in a pail, or can, filled with water; take them to your hatching-box, which is made after the fashion of my shad hatching-box. It is a box two feet long and eighteen inches wide. The bottom is covered with twelve wires to the inch, gas tarred, wire sieving; anchor the box in a gentle current, and they will hatch in from seven to fifteen days, according to the temperature of the water; soon after they are hatched they should be turned loose in a pond prepared with great care, as they have numerous enemies, such as fish, snakes, birds, lizards, coons, and many other animals. The pond should be made where the ground is springy with plenty of soft muck in the bottom. Here is where the frog lies during winter. The pond should have a tight board fence, so that no animals could get in, and so close to the water that no bird could stand on the inside and pick up the polliwogs.

If you do not heed all these precautions, and more, too, your frogs will all disappear down the throats of some fish or bird, or animal, and, if you are not an unusually close observer, you will be in great wonder where they have gone. You will have no trouble in feeding the young while they are polliwogs; nature has provided for that in all waters; they live on what is called sediment; it collects on every thing lying in all water that is not strongly impregnated with some mineral; if you put the sediment under a strong magnifying glass you will see that it contains animal matter, or a formation between animal and vegetable matter, and is the proper food for the young frog fry. They will eat it off the sticks, stones and bottom of the pond, and keep them as clean as if they had been washed. An old pond is better than a new one, because it will have more feed.

The above is as far as I have gone. I have lost my polliwogs and know what became of them. I hope others will profit by it. The rest of my experience is very limited.

When they become frogs they live on all kinds of insects, and the only thing I know of to make a success of it is to procure insects in large quantities, enough to support a large number of frogs. One plan I had was to put some kind of meat, or anything that would call flies, around the edge and on boards, in the pond. Flies would come and cast their eggs and the frog would live on the fly and maggots. I think they could be taught to eat meat, chopped fine; they would certainly eat if they once got a taste of it; the question is, how to get them to taste it. I have many a time tied a small piece of meat on a fine thread, and then attached it to a long fish rod, then move it near a frog's nose and he would take it very quickly. But you could not afford to teach a million in this way. But I think there could be something contrived that would give it a life-like appearance, and not be made so bungling as to frighten the frog before he made a snap at it. He takes his food with a snap.

Frogs are in some countries an article of food, and a great luxury to many people in this country; they used to be plenty, but they are very scarce now, owing to their being taken during the spawning season, which is about the only time they are taken, except by some few that take them out of the muck in the spring, where they all gathered during the winter.

TEACHING GARDENING AS AN ART.—Touch this subject, S. B. Parsons writes: "Gentlemen of large income, with country places, the proper management of which would give more pleasure to a whole family than anything else, are unwilling to pay more than \$800 or \$1,000 per year for a good gardener, whose knowledge is the work of half a lifetime. They will give \$3,000 to a bookkeeper, whose knowledge can be acquired in a year; they will expend \$1,000 or \$2,000 for a camel's-hair shawl or a span of horses, and yet would think themselves very extravagant if they gave \$2,000 per year to a skillful gardener, who could produce for their use Muscat grapes and all other luscious fruits, and who could make their grounds and gardens a veritable paradise. Once establish the fact that a skillful gardener can be sure of \$2,000 or \$3,000 per year, and numerous young men would give their education that direction. Wealthy men, also, who expect to leave their sons large fortunes, would give them a horticultural education, both as a means of producing enjoyment to themselves, and as a profession upon which to fall back in case of disaster. Young men so educated will never become base; the world is for them too full of delightful capabilities.

THE annual report of the Kansas State Board of Agriculture is at hand. It appears to be very complete in statistical information, and is of creditable typographical appearance.

THE DAIRY.

Influence of Light on Milk and Cream.

Mr. L. B. Arnold has communicated some interesting observations to the *Live Stock Journal* from which we quote: While some organisms of a peculiar nature flourish better in the dark than in the light, the general effect of light upon living organisms, both animal and vegetable, is to encourage growth and perfect development. Milk is full of organic germs, and it is found that light hastens the change required for their development and multiplication. Direct sunlight very soon spoils milk or cream by premature souring and decomposition. The effect of indirect or reflected light has been but little observed. It nevertheless exerts an active influence not only upon milk and cream but upon butter and cheese while curing. The general effect of light upon milk and cream is to hasten the action of the lactic yeast, and then the formation of alcohol, and after that to hurry up putrefaction, and these changes are occasioned by the influence of reflected light the same as direct sunlight, only in a feebler degree.

Effect of Light on Color.

The first effect, however, of a small quantity of reflected light—a quantity that would just enable one with good eyes to read ordinary print—is to heighten the color of cream during an exposure of thirty-six to forty-eight hours. Whether the increase of color would continue for an indefinite length of time, I am unable to say, but probably not.

As soon as the quantity of light allowed to fall upon milk is increased beyond the small amount named, its influence is soon manifested upon the cream, causing it to become sour and stale, lose color and flavor, and if the light is strong, its surface is soon covered with mold and pimples, where the same milk standing in a more shaded position will be all right. The quantity of light which can be safely admitted into a milk room, even from a northern exposure, is very small, as a few examples will illustrate.

Decomposing Influence.

In the Speedville Creamery, Tioga county, N. Y., a streak of light was admitted from a window having a northern exposure, but located under a porch so that its effect was diminished by its indirect course, and fell obliquely across two of the pools in which the coolers were standing full of milk. The rest of the room where the other coolers stood was so shaded as to appear quite dusky upon first entering it. The milk in all the coolers was kept at fifty-eight to sixty degrees alike, and stood from forty-eight to sixty hours. The cream in all the coolers standing in that streak of light was observed to lose color and grow stale, and at length become covered with pimples and mold, and finally flecky. The pimples with which the top was blistered became watery, giving indications of vinous fermentation and premature decay. The top of the cream soon became sour and shortly reached through to the milk, while the cream and milk standing in the more shaded part of the room was sweet and sound. When the window was shaded all the phenomena at once disappeared, but if the shade was removed they reappeared. It was changed several times, and always with the same results.

"Other Experience."

In a recent visit to some of the butter factories in Franklin county, N. Y., a similar experience was related by Mr. G. L. Donaldson, manufacturer in the South Bangor factory. The milk in that, as in all the other Franklin county butter factories, is set in twelve large Jewett pans—ten feet long by four wide, and seven inches deep; these are placed six on each side of the room, with one end butting against the wall and the other reaching toward the middle of the room. While there are six pans butting against a side of the room, there are but three windows on a side, so that one-half the pans stand squarely against a window, and the other half against a wall. The pans standing before the windows, and especially the ends next to the light, were noticed to have the cream on them paler than the rest, although the milk was the same and stood at the same temperature, and it sooner became stale and sour. The effect in the Bangor factory was not so great as that in the Speedville factory, as the milk only stood in the pans thirty-six to forty-eight hours. Had it stood as long it would no doubt have been the same. The quantity of light was gradually diminished till it was found that the best effect was produced when all the windows on the sunny side of the room were closely shaded, and light only admitted through three ten by twelve panes in each window on the opposite side.

Finding too much light injurious, Mr. D. tried the opposite extreme. He put a screen over some of the pans, so that one end was exposed to a moderate light and the other entirely dark, and found the dark ends paler than the others, but otherwise sound. A similar experience has occurred in other factories in the neighborhood, and the practice has there become general of shading down the light in their milk-rooms to the same standard as above indicated.

Too much light is doubtless often the cause of faulty butter; and even after it is manufactured, butter, like cream, will soon fade if exposed to the light, even though it may be covered with brine.

Another Home Industry.

The Union Box Factory.

The interest, and apparent anxiety, manifested by the public in regard to our home manufactures, may possibly convey to outsiders the impression that the condition of San Francisco is rather deplorable than otherwise, in regard to this great element of prosperity. But while we heartily join with those who are most clamorous for more, we are not disposed to allow establishments that have done much toward supplying this great want to remain unnoticed. While we are urging capital and enterprise to embark in manufactures, we should not fail to recognize and duly honor the merits of those who ventured to pioneers in local manufacturing, and are now enjoying deserved success.

Swan & Co., Union Box Factory, is among the most noted and successful of our home industries. It was started in 1870, on a scale of not one-quarter its present capacity. Its employees now range in number from seventy-five to one hundred. The factory is three stories high, ninety-one feet front by one hundred and thirty-seven and one-half feet in depth; the lumber store rooms being forty-six feet in front by two hundred and seventy-five feet in depth. They purchase their lumber by cargo. They receive it in pieces varying from six to twelve inches in thickness, and from twelve inches to thirty inches in width. The wood is mostly spruce, but for butter chests, and other articles requiring great strength, they use maple and ash.

The business of the establishment has steadily increased from its origin up to the present time; and they now turn out from twenty-five hundred to thirty-five hundred boxes daily. This immense number is composed of boxes ranging in size from those three inches in diameter, to the largest packing boxes. Their stock is disposed of mostly in San Francisco, portions of it going from here to all parts of the Pacific coast. The San Francisco Packing Co., Cutting & Co., and Lusk & Co., are among their heaviest purchasers. To move their stock they have six horses, which they keep busy throughout the year. Those who are interested in the question

What Shall we do with Our Boys.

Should visit this establishment. They will here find, at different seasons, from twenty-five to thirty-five boys employed in light, healthful labor. Mr. Swan has not hung out the sign "No Chinamen Employed," but he has carried out the principle; and it is really gratifying to the visitor to see these busy, cheerful youngsters, thus employed to the profit of themselves and of the community.

One of the most interesting features in this manufactory is

The Steaming Process.

By which the wood is prepared for cutting. For this purpose large wooden tanks are provided, into which the wood, cut the requisite lengths, is placed. The water, into which these blocks of wood are put, is prepared by a chemical process, for which this company possesses a patent. Steam is then forced into the tanks, and after being exposed to this boiling for about thirty-six hours, it is ready for cutting. It is now placed upon the "slicing" machine while steaming hot, and is sliced to any desirable thickness, from one-hundredth part of an inch to one-half inch; the width, in some cases, being eighteen inches. The block being cut during our visit was only two feet in length; but a machine is nearly completed which will take a block six feet in length. These large slices are more especially intended for the backs of large mirrors and picture-frames. One of these machines, with the aid of three men, will cut in ten hours, two hundred thousand superficial feet of lumber. The wood is not steamed, but boiled; and the mechanical and chemical appliances combined in this process, have achieved a remarkable success. There are no chips or sawdust, thus avoiding all waste of wood, and the surface is as smooth and clean as the cuttings from a new bar of soap. The pliability and toughness produced by Mr. Swan's process are not affected by drying. Among the machines in operation here, is one for cutting up lumber, (their own patent) which will turn out as much work in a given time as twenty men can do by the ordinary process of sawing.

They have a perfect dovetailing machine, the only one of the kind on this coast, used in making butter-chests, tool-chests, office-boxes, and other heavy work. Besides this there is a small machine of the same character for smaller boxes, and still another called the "mitre dovetailing machine," which cuts a groove and tongue which can be placed together with great rapidity, and make a neat and almost inseparable joint. The boxes and chests upon which the above machines are employed can be shipped in parts, thus securing a great saving in transportation, and put together with remarkable ease and rapidity.

The number and variety of articles made here are so great that it will be impossible for us to give scarcely more than a mere enumeration of them; but as we have on several occasions received from our readers, inquiries as to the supply which our market affords in this line, we will mention some of the articles most in demand; attending first, to the wants of the growers and shippers of fruit.

Beginning with the lowest grade, we have the one-pound fruit box, well adapted to "nesting," which can be bought for one dollar per hundred. Strawberry "drawers," which formerly

sold at ten cents, can now be made and furnished at eight cents, for eight pound drawers, and six cents for four pound drawers. There are other boxes for carrying grapes, cherries, etc., made in two pieces from this "sliced," toughened wood; and being "scored" for their corner joints, they can be packed almost as compactly as sheets of paper and forwarded in this manner. When wanted for use, a mere novice in mechanics can put them in shape, by using half a dozen tacks, as fast as a grocer can put up his pound packages; these can be bought at from three to four cents, holding from five to eight pounds. The peach basket, standard size, strong, light, and neat, good nesters, can be bought at ten cents each. The increasing wants of our

Packing Business

Are properly considered here. The most noticeable among the articles in this line are the square lard boxes. They are coated inside with a cement which prevents the soaking of lard by the wood, and are covered with a material which renders them impervious to moisture or air. The top is attached and included in this preparation, only a hole being left, through which the melted lard is poured, when a stopper, which comes with the box, closes the entrance; and it is ready for the purchaser; and if the purchaser don't come, why, the lard can wait. The cement applied to the inside of these "lard caddies" is patented by this company, and is used in various other articles made by them, which require to be impervious to moisture, or which might otherwise impart the taste of the wood to delicate articles.

Pickle kegs, cartoons for jellies and other moist articles, boxes intended to take the place of jars for butter, corned-beef, etc., are to be found here. For uses where extra strength is required, they have contrived upright hars, which are attached to the sides of the box, forming a very strong article. This company have made great efforts toward improving and cheapening butter-chests, and have attained both these objects.

Swan & Co. have been highly complimented by box manufacturers, both from New York and Chicago, who have recently visited their works, and they certainly deserve local commendation for perfecting and cheapening much needed articles, and for imparting increasing confidence in the success of our home industries.

How Figs are Dried in Smyrna.

At a meeting of the Fruit Growers' Association of the Gulf States, Mr. Geo. A. Faunce gave a description of the mode of preparing figs at Smyrna, Turkey, which may be the means of enlightening many persons why they have failed in making a merchantable article of our native fig.

Mr. Faunce describes the soil in the neighborhood of Smyrna as being of volcanic origin, the climate much colder than ours, and surrounded by high mountains covered with snow.

Of the fig, there are three varieties generally grown there; one a large purple fig, much like those seen in the neighborhood of New Orleans; a large yellow and a smaller kind which is not much thought of, and is never shipped.

The trees average the size generally seen in our gardens. The fruit is very dry and rather insipid, and when fresh, is not used by the natives.

The crop ripens about the 28th of August, and they are shook from the trees and thrown on the ground in the sun where they are allowed to remain a few hours; they are then packed in hampers and brought on the backs of mules to the bazaar or market and thrown into piles 12 or 15 feet high. The fruit is selected into three classes by women and children, and packed without further preparation into boxes or cartoons.

Figs are generally shipped on sailing vessels, the hold of which is kept well ventilated by windsails and the hatches kept open. There is also a small white worm or maggot which bores a hole in the bottom end of every fig; these worms are in such abundance that they crawl all over the vessel and drop into everything. Our informant has often seen the skippers trying to clean the stem of his pipe which was full of the vermin.

When the fruit arrives at its destination, if it is dry and covered with grape sugar, it is considered in good order; if dark and of a shining appearance, it is in process of heat and decay.

PEANUT CULTURE.—An Eastern farmer gives the following hints on growing peanuts, which may be of interest to those of our readers who raise peanuts: Peanuts require very similar cultivation to beans. The ground requires to be well plowed and harrowed and either thrown up into ridges or furrowed into check rows. The drills may be 24 to 27 inches apart, and the seed may be dropped 18 inches apart in the rows. Two nuts should be dropped in each place. These must be carefully shelled by hand, without breaking the skin. The cultivation consists in plowing the rows, and throwing earth up to the plants as they grow, and keeping them free from weeds. When they begin to blossom cultivation must be discontinued, and weeding be done by hand. The plants then strike into the soil to seed, and the soil must previously be kept loose and mellow to facilitate this process. When ripe the sides of the rows are split with the plow, and the nuts pulled up by hand, and left to dry upon the ground.

The Stick Fish.

The two strange vegetable-like figures on this page are different views of the most remarkable animals classed under the name polyp. Figure I shows the general appearance of the *Verrillia Blakei*, reduced to one-twelfth the natural size. Figure II gives a section across the polypiferous portion, of the natural dimensions.

This peculiar form was first brought to the notice of the California Academy of Sciences in June, 1871, and has been fully described and classified in the proceedings of that body.

The thirteenth class of invertebrate animals, the polyps, is one of the largest and most interesting groups. The Alcyonoid member, which we illustrate, though one of the most erratic forms, may yet be taken as a type of the whole class. The polyp is so near in appearance and char-

Fig. I.



Fig. II.



ALCYONOID POLYPS.

acteristics to a plant that it long was a question under which head to consider it. The marks which qualify the animal from the plant, sensation and voluntary motion, are so nearly effaced, that in many cases it is difficult for scientific men, even now, to distinguish the one from the other.

Among the peculiarities of these strange animals, it is remarked that the vital principle is so universally diffused throughout their simple structure that, when divided, each portion, if placed in favorable circumstances, will become a separate, perfect animal. Sometimes this division is made naturally, and a polyp will split into two of its own accord, each half becoming an independent being. The egg of a polyp becomes a bulb and then a branching stem, thus still further imitating vegetable forms of growth. For a long while the name animal plant was applied; the one now adopted is the reverse, plant-animal, or zoöphyte.

The powers of motion possessed by the polyp are exceedingly limited. Nearly all the varieties are attached in some way to rocks or other substances, and the only voluntary movements are those of the tentacula by which they secure their food. Certain kinds appear to be endowed with motion only to allow them the opportunity to select a place of residence, which, once chosen, is adhered to through life, showing that the love of home, considered a noble sentiment, is not confined to the higher animals; though a polyp hardly calls for com-

mendation on this point, since its natural feelings must be sadly restricted by want of opportunity.

Legislative.

The present session of the Legislature closes on Monday next, the thirtieth inst. The public begins to breathe easier, day by day, the various bills come up and are finally disposed of. Although, through a subservient Senate, many measures important to the people, have been, or are to be strangled, the people feel that they have in Governor Booth a man vigilant and watchful for their interests, and one who will see that no improper legislation is smuggled through in the haste of the closing days of the session. Both Houses are now making the most of their time, holding sessions late into the night, and disposing of business with a most commendable dispatch.

RAILROAD MATTERS.—The fate of the Freeman bill was sealed on Tuesday by a Senate vote of 21 to 13. The ayes and nays were as follows: Ayes—Andros, Beck, Boggs, Bush, Duffy, Dyer, Eakin, Evans, Finney, Garratt, Graves, Hendricks, Hopkins, Irwin, Kent, Laine, McCoy, McCune, McKusick, McMurray, Pendegast, Perkins, Roach and Tuttle—21.

Nays—Bartlett, Crane, DeHaven, Edgerton, Farley, Goodale, Lindsey, Martin, Neff, O'Connor, Oulton, Spencer and Turner—13. Absent or not voting—Fraser, Gibbons and Keys. Immediately after which the Irwin bill, introduced in the interest of Stanford & Co., was taken up and subjected to a lengthy discussion, at the conclusion of which, that also was effectually put at rest. Both railroad bills were by that day's action laid upon the Senate table, from which they cannot be taken except by a majority vote. There is very little reason to believe, that at this late day, any further notice will be taken of them. So we are to have no railroad legislation this session—but it will surely come with the next.

The vote on the Irwin bill stood as follows: Ayes—Andros, Bartlett, Beck, Boggs, Bush, Crane, DeHaven, Dyer, Edgerton, Evans, Finney, Garratt, Gibbons, Goodale, Graves, Hopkins, Kent, Keys, Martin, McCoy, Oulton, and Pendegast—22.

Nays—Eakin, Farley, Fraser, Hendricks, Irwin, Laine, Lindsey, McCune, McKusick, McMurray, Neff, O'Connor, Perkins, Roach, Turner, and Tuttle—16.

Absent or not voting—Duffy and Spencer. IRRIGATION, another measure in the interest of the people, has shared the fate of the railroad matter, and must slumber for another two years—at least so far as any action from the State is concerned. The question came up under Venable's bill, providing for a general system of irrigation. Various amendments and counter amendments were offered, and when the bill came up for final passage, the vote resulted in a negative of 26 to 13. We give the ayes and nays on this bill also, for future reference.

Ayes—Bush, Edgerton, Evans, Farley, Finney, Gibbons, Goodale, Hopkins, Keys, McCune, McKusick, Pendegast and Roach—13.

Nays—Andros, Bartlett, Beck, Boggs, Crane, De Haven, Duffy, Dyer, Fraser, Garratt, Graves, Hendricks, Irwin, Kent, Laine, Lindsey, Martin, McCoy, McMurray, Neff, O'Connor, Oulton, Perkins, Spencer, Turner and Tuttle—26.

Not voting—Eakin.

AGRICULTURAL MATTERS.—There is a bill pending appropriating \$3,000 to the State Agricultural Society, and \$1,000 to each of the District Societies. Also another having reference to the business of warehousing, the object being to protect farmers and others having wheat in store. The bill requires, among other things, that warehouse receipts shall be given for specific packages; that is, sacks of wheat shall be marked, and it is made an offense, punishable by fine or imprisonment, to deliver this wheat to any person except the owner, or to his order. A good reform bill has also passed both Houses which provides that vineyards, orchards, and everything rooted to the ground, shall be hereafter taxed with the land as real estate. There has heretofore been an unreasonable method in taxing the lands of farmers, which has caused much complaint.

THE GEOLOGICAL SURVEY appears to have been brought to an abrupt termination, by a Senate vote of 50 to 15. The Senate has passed a bill, providing that the Board of Regents of the University shall collect the property of the Survey, and turn it over to the Professor of Geology in that institution. This property is of considerable value, and it is to be saved, with a view to hereafter continuing the Survey. A bill has also been introduced, providing for a completion of the map of Central California, under the superintendence of Chas. F. Hoffman.

DAIRYING.—The San Bernardino *Guardian* urges farmers to engage in dairying. It says: "There are three great sources of profit in dairying—the butter, the increase of stock, and the raising of hogs from the milk and slops of the dairy. Indeed, in the upper country the revenue coming in from the sale of hogs generally pays the expenses of the dairy, and often leaves a good margin behind." To which we may add the profit derived from cheese-making which is destined to be in future a more important element.

IMPROVEMENT of the soil and appurtenances of a ranch should ever make the principal item of profit.

USEFUL INFORMATION.

A Day's Work.

The amount of work that a man can do in a day has been the subject of no little investigation and discussion. Some writers on physiology have unquestionably set the average too high, while others have erred in the opposite direction. Among the estimates given by the best authorities, however, there is no very marked discrepancy, and the question may now be considered as quite accurately answered.

In comparing different kinds of muscular labor, it is necessary to fix upon some convenient unit to which they may all be referred. The force required to raise one pound one foot, or a "foot-pound," as it is concisely expressed, is the "unit of work" commonly employed in England and this country. In France, the lifting of one kilogramme (about 2.2 pounds) to the height of one metre (39.37 inches) is taken as the unit. This "kilogrammetre," as it is called, is equivalent to 7.216 foot-pounds. The "foot-ton," which is often mentioned in connection with estimates of this kind, is the force lifting a ton of 2,240 pounds one foot, or one pound 2,240 feet, which is, of course, virtually the same thing.

Now, if a person unfamiliar with these calculations were asked how many foot-tons he considered a fair day's work for an able-bodied man, he would not, probably, guess very wide of the mark. It has been stated in books as high as 1,000 foot-tons, but this is at least twice too much, 500 foot-tons being in reality a daily "stint" which very few laborers could keep up from week to week. Four hundred foot-tons is a hard day's work, and 300 an average day's work for a strong man in good health. Dr. Parkes, who has given much attention to this subject, says that the hardest day's work of twelve hours that he has personally known a man to do, was in the case of a workman in a copper-rolling mill, who stated that he occasionally raised a weight of 90 pounds to a height of 18 inches 12,000 times a day. Assuming this to be correct, the work done would be equivalent to 723 foot-tons. The same man's ordinary day's work, which he considered extremely hard, was raising a weight of 124 pounds 16 inches 5,000 or 6,000 times in a day. Taking the larger number, this would be 442.8 foot-tons.

Coulomb reckons a day's work at pile-driving as 312 foot-tons; Lamande finds it, in another case, to be 352 foot-tons. The work done by porters was calculated by the former authority, in a variety of instances, to be from 303 to 381 foot-tons. Dr. Parkes has known an Indian coolie to travel 30 miles, with an ascent of 5,000 feet, in three days, carrying a load of 80 pounds; which would be at the rate of 500 foot-tons a day.

The work done in walking is greater than many persons would suppose. Rev. Mr. Harghton, to whose elaborate investigations in animal mechanics we have more than once referred in the *Journal*, has shown that walking on a level surface is equivalent to raising one-twentieth part of the weight of the body through the distance walked. In going up-hill a man, of course, raises his whole weight through the height ascended. If a man weighs 150 pounds with his clothes, the work done in walking a level mile is 17.67 foot-tons; for 10 such miles, 176.7 foot-tons; for 20 miles, 353.4 foot-tons. One can readily calculate what the labor would be for a man of different weight or for one carrying a given load. It will be seen that a walk of 20 miles on a level road is a good day's work, and there are comparatively few persons who can keep up such a "tramp" for many days in succession. For a soldier, carrying 60 pounds, a day's march of from 10 to 12 miles is fair average work, being from 247.5 to 297 foot-tons, even if the ground is level.

In these estimates it is assumed that the work is done in the easiest manner for the person concerned, especially as regards the time taken for it. If the time is shortened beyond certain limits, the work becomes more exhausting, on account of the greater strain on the heart and lungs. In a boat-race, rowing at the rate of a mile in seven minutes, the work done in that time is between 18 and 19 foot-tons. This is apparently not a great exertion, but it is very severe for the time, from its effect on the circulatory system.

This reference to the strain upon heart and lungs reminds us to say, that in these remarks upon muscular labor, we have dealt solely with "external work," as it is termed, in distinction from "internal work," or that done by the muscles concerned in respiration, circulation, digestion, and other vital processes. We have before given some facts and figures in regard to the work done by the human heart. The sum total of the mechanical labor performed within the body averages, according to careful estimates, about 260 foot-tons every 24 hours. To this part of the work accomplished by the wonderful machinery of our human organism, and also to the sources whence its motive power is derived—the fuel that feeds its furnaces and keeps up the steam in its boilers—we shall recur at some future time.—*Boston Journal of Chemistry.*

TO DISSOLVE GLUE.—It is said that if one part of sugar is dissolved in three parts of water, and digested with one-fourth part of calcic hydrate, the resulting liquid will readily dissolve glue warm, and the solution will remain fluid on cooling, without having lost any of its adhesive properties.

Fire-Proof Construction.

As a precaution which may be used in lessening the tendency to catch fire in buildings which are not in their nature actually non-inflammable, or intended to be so, it is very desirable, whenever timbers are exposed, to cover them with a coating of common whitewash, which acts doubly as a preservative, both by excluding air from the timber, and from its non-conducting power. This will, of course, be of no use when a fire has once been kindled and got to a head; but, in case of fire, seconds of delay in kindling it or communicating it are of vital importance. In many a workshop or factory, if the floor and roof timbers were kept well whitewashed, the risk would be much diminished. Special precaution should be taken about the floors and fireplaces: there is frequently great carelessness in trimming joists and fixing ground for skirting, etc. It would be very desirable always to skirt chimney-breasts in cement or plaster, and to fill in the place under the hearthstone with cement concrete. Ceilings, again, should be formed with much stronger laths and better nailed; and if about 2 in. of rough mortar, the coarser the better, were laid over the laths between the joists, it would be found very difficult to set fire to them—they would resist for a considerable time even a fierce fire underneath. Again, all rooms should have a good height, otherwise the constant operation of gas-lights is to prepare the timber of the ceilings for combustion on the most rapid scale, if the opportunity be once given. As regards all stoves, great attention should be paid to their being so arranged as to avoid all risk arising from the heat of the stove itself, its flue-pipe, or its ash-pan; no stove should be considered safe, the flue-pipe of which cannot be heated to redness with perfect safety to the building. But in all ordinary buildings the most important point to attend to is the staircase; it should be, if circumstances will admit, closed at top or bottom, cut off from the passages leading into the rooms, and in the construction of it, it is very desirable to lath the soffits with extra strong laths, and fill in from the upper side with concrete, so that all the space at the back of the riser and under the tread shall be a solid mass of non-inflammable material. Such a staircase would probably stand and bear the weight of persons ascending and descending under circumstances where an iron or stone staircase would be destroyed or useless.—*Builder.*

TO DEADEN THE SOUND OF AN ANVIL.—The *Building News* recently remarked upon this subject: "If a chain about one foot long, formed of a few large links, is suspended to the small end of an anvil, it will destroy, we are told, that sharp thrilling noise produced by striking on it with a hammer; the vibrations of the hammer are extended to the chain, which absorbs them, without producing any sound. This is worth trying by any one who has a blacksmith or a coppersmith for a neighbor." [We presume it is intended to suggest that the smith should be induced to use the chain, and not the neighbor; but with reference to this application to the beak of an anvil, we may tell our contemporary that, were a chain suspended in that way, the labor of the mechanic would be painfully increased, for the hammer would fall heavily and flat, without that spring or rebound that the active vibration gives to the hammer, and the brawny arm of the smith would be called upon to lift a dead weight every time he struck the iron, instead of having only to catch up the rebounding tool and direct its next blow. For our part, we think there is a very musical sound in the anvil, and certainly can not recommend the use of the chain.—*Iron Monger.*]

COLORING MATERIALS BY WHICH GEMS ARE IMITATED.—The basis of these imitations is a soft white lead glass of highly refracting power, called strass. For imitating topaz, glass of antimony, 37 parts, and purple of Cassius, 1 part is added to 840 parts of strass, or 1 part of crocus martis to 100 of strass. For ruby, the above is fused for 30 hours, or oxide of manganese is used. For emerald, add 250 parts of strass, 2 of verdigris and half a part of crocus martis. For sapphire, add 1 part of oxide of cobalt. In all cases a careful fusing in furnace or blow-pipe is required of the substances before hand, well powdered and mixed; but above all, a considerable degree of experience, obtained by continued practice.—*Manufacturer and Builder.*

NEW USE FOR INFUSORIAL SILICA.—Infusorial silica has been strongly recommended for surrounding ice, ale, and beer cellars, fire-proof safes, steam boilers, and powder magazines. A firm in Germany have recently made a series of experiments on a large scale, and they assert that the use of this earth has reduced the melting of ice in a cellar during the summer from 23,500 to 10,000 pounds. This material is not inflammable, and is not in the least affected by the hottest fire, and it prevents the entrance of rats and mice.—*Scientific American.*

An excellent cement, it is said, may be made from rice flour. It is only necessary to mix the rice flour intimately with cold water and gently simmer it over a fire, when it readily forms a delicate and durable cement. When made of the consistency of plaster, clay models, busts, bas reliefs, etc., may be formed from it.

Hollow Walls.

It is well known that walls of extra thickness, made of brick, are very apt to be weak and fall to decay in a comparatively short space of time. This fact may be accounted for at once, when one remembers that mortar requires the free action of the atmosphere, without which it will not harden. It is true that the brick will absorb the moisture, but the lime and sand will become disintegrated, and crumble away without effecting the purpose required, namely, that of forming a binding joint. Walls three feet thick have been taken down after twenty years' standing, and found to be little more than rubbish at the core. Such brickwork is sure to be weak; for the damp increased in it will work ruin most effectually, both inwardly and outwardly.

In the construction of fortifications, this existence of damp at the core of the wall is avoided by using water-lime cement, instead of quicklime, as the former will indurate under the very influence that proves an insuperable obstacle to the hardening of the latter. Besides, the courses of brick masonry in fortifications are raised so slowly that it gives ample time for the setting of each course before the succeeding one excludes it from the action of the atmosphere.

To give an opportunity to ordinary walls of dwellings, etc., to receive the full benefit of the air on the mortar, a method of hollow-wall has been introduced in building, and this is accomplished either by a novel article of brick or block, cast with an elongated aperture within itself, or it is brought about by so using ordinary bricks as to leave a hollow space varying from two to four inches in the rearing of the wall.

The great difficulty to be encountered in the formation of hollow walls is found in the fact that there must be binders, or bricks laid crosswise, at every fourth or fifth course. Such bricks serve as ducts to convey moisture from outside to inside. And, as there must necessarily be a great number of these, it is very evident that the transit of damp is not wholly prevented by the system of hollow walling. It is to avoid this mischievous intervention of the binders that a patent mode of hollow-wall has been introduced in the West, by a builder of much experience, at San José, California. His plan is to substitute for brick binders, lath laid diagonally; reversing the slope every second course, or alternately.

These ties are simply laths such as are used in plastering. They are four feet long, and are cut three times, so as to give four ties of a foot in length to each lath. But for twelve-inch walls it is proposed to make the lath ties sixteen inches. They are scattered along every fourth or fifth course, throughout the wall; and spaced about ten inches apart on the wall.

This is certainly a very economic way of treating this matter, and the binding principle must surely be preserved by it. But in the event of fire, how inevitably would the devouring element seize upon the very vitals of its prey, and in the destruction of these laths, most effectually disintegrate the wall.

However, the plan is nevertheless a good one, and the substitution of hoop-iron would guard against the fearful eventuality alluded to in the use of laths.

As to any sanitary benefit being derived from the use of hollow walls, their efficiency is doubtful; indeed, one may incline to the opinion that these same intervals or spaces in walls are dark chambers for the generation of poisonous gases, which are apt to find an entrance through the porous brick into the dwelling apartments and bed-chambers of houses, superinduced by the attractive atmosphere there. To be sure, this objection might be obviated by ventilating apertures. But these, again, admit the external cold, and permit the escape of the internal heat.—*American Homestead.*

PNEUMATIC CALL BELLS.—A French inventor has lately brought out a novelty in bells for houses. A series of small leaden tubes proceed from the kitchen to each room, one to the sitting-room, one to the drawing-room, and one to each bed-room. Attached to these tubes in each room are a few feet of India-rubber tubing, suited in color to the paper of the room. To the end of the tube a syringe is fixed airtight, and this hangs similar to an ordinary bell-ropes. In the kitchen is a case containing the bell, which serves for all the rooms, the distinction being effected by tickets with the names of their respective rooms printed on them, held down by springs. They work in this manner: the India-rubber syringe is pressed, and the air by this means is forced through the tube into a corresponding India-rubber syringe or ball in the case in the kitchen. This, of course, expands, and forces up a small rod, which moves a cog-wheel and rings the bell, and at the same time sets free the spring which retains the ticket of the room in which the bell is rung; this starts up into a square in the glass door, and at once indicates in a simple manner the room. These ingenious bells act as effectively as electric bells, which they resemble exceedingly in sound, without their trouble and expense, and not getting out of order like our wire bells and cranks.—*Iron Age.*

A GERMAN chemist has discovered that one of the eatable mushrooms, *Agaricus oreades*, emits, even when freshly gathered, a notable quantity of hydrocyanic acid. After cooking, however, the cryptogam is not poisonous.

San Bernardino County.

San Bernardino is cut off from the sea by a small intervening slip of Los Angeles county; population, 9,000. The San Bernardino range of mountains divides the county into two parts, differing from each other in topography, climate and nature of soil. The eastern part lies within the Great Basin, or valley of the Colorado, and may be said to be worthless, agriculturally. The western part extends from the San Bernardino range to the Los Angeles line, including within its boundaries the beautiful, fertile valley of San Bernardino. The western slope of the county contains an area of about 2,000 square miles, nearly all of which is highly fertile. The San Bernardino is divided from the San Gabriel range by the Cajon pass, and from the San Geronimo pass. Each of these passes opens on the desert. East of the San Bernardino range the vast area of country extending to the Colorado is a barren waste, a great part uninhabited, and almost uninhabitable. The landscape is diversified, indeed, presenting the most varied scenic contrasts. In the country are great mountains, vast forests, extensive table-lands, beautiful and fertile valleys, teeming with semi-tropical productions, dreary alkali flats, sparkling streams, or, rather, small rivers, spreading beauty and fertility in their flowing paths, and a vast and sterile desert. The bleak, bare and waterless desert is offset by the most fertile, blooming and beautiful valley in California; the frigid vegetable and the orange-tree grow side by side. The productions of both the semi-tropical and temperate regions of the earth are indigenous to this soil; the precious as well as the useful metals abound throughout the vast mountain-amphitheater, which almost encloses our famed valley; and, to carry the parallel still further, we have two distinct climates; for, during the winter season in this valley, summer and sunshine reign on and along the edge of the desert. It is a country abounding in most surprising natural contrasts.—*San Bernardino Guardian.*

A DESTRUCTIVE ENGINE OF WAR.—The recent trial of the Taylor battery gun, upon which the Colt company, of Hartford, has, for some months, been engaged, shows it to be the most formidable weapon of war that has yet been invented. Its barrels are twenty-four in number, and are arranged in two concentric circles. They are also regulated so as to radiate their fire, covering a horizontal line of twenty-two feet, at a distance of five hundred yards. The gun fires with great rapidity, by fusillade or by volley, at the pleasure of the operator, while the cartridges are fed into the barrel from suitable charging cases, which are introduced into the interior of the breech cylinders. The results at the late trial were astonishing. In firing a single barrel, at a distance of five hundred yards, bullets were repeatedly sent into an eight-inch bull's-eye. In firing the fusillade, the twenty-four balls were distributed on a horizontal surface, twenty-two feet long, at a distance of a foot apart, and firing by the battery, the same results were accomplished. The rapidity of the fire was remarkable, being at the rate of seven hundred balls per minute. The terrible effectiveness of this weapon in battle, and the utter powerlessness of charging column in the face of a fire, can be seen by the fact that every second sweep over twenty feet in length, and mows men down at the rate of a regiment a minute. The inventor of this remarkable weapon is Colonel James P. Taylor, of Knoxville, Tenn. His invention was conceived in 1870, and patented in July, 1871, and it has since been improved until its present extreme simplicity, have been reached. The manufacture of the gun is to be rapidly pushed and active measures taken for its introduction among foreign governments.—*Am. Manufacturer.*

PULMONIC CANDLES.—Under this name, Field & Co., the great English chandlers, have introduced candles containing in their substance some of those gum-resins and balsams, especially benzoin and storax, which from time immemorial have proved useful in chronic bronchitis, and allied maladies. When burnt, the candles yield, by the combustion of these drugs, a pleasing fragrance, and at the same time give a good light. Candles are not much used in this country, but we should not be surprised if some enterprising Yankee adopted the idea to the medication of kerosene; which may thus be compelled to make partial amends for the slaughter it has caused. The aromatic odor alone would be an improvement of the unforgotten combustibles.—*Jour. of Chem.*

NEW PHOTO-PROCESS.—A recent improvement, announced by Mr. Burgess, a photographic artist, of Peckham, England, consists in sensitizing gelatin by means of bromide of silver. The mixture is applied warm to the glass plate, and the picture may be taken with the plate either wet or dry. The time of exposure is the same as for the ordinary wet collodion plates. The alkaline-pyro developer is used, the picture making its appearance rapidly, with any required degree of intensity. The new process promises to compete sharply with the ordinary collodion process.

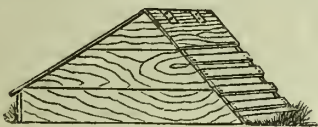
The combustion of one pound of coal in one minute is productive of a force equal to the work of three hundred horses during the same time.

There is probably nothing better and cleaner than black lead and tallow as a lubricant for friction wheels or brakes.

POULTRY YARD.

Ideas in Chicken Raising.

A plan which many of our readers have doubtless tried to advantage, is that of raising several families of chickens with one hen, thus allowing the other hens their liberty; and, as it is claimed, hastening the return of laying. We cannot do better than give the whole system, as detailed by a correspondent of the *New York Tribune*. His plan is to set six or seven hens upon 100 eggs, and while the setting is going on construct a coop as follows: Make the sides according to diagram, one yard long at base and two feet high; nail the back board on, which should be one yard in length; put on the roof of tongued and grooved stuff; nail on the slats in front, leaving room at the top for a board eight or nine inches wide, to be attached by leather hinges, and to serve as door, and your coop is done. As soon as the eggs begin to hatch, visit the nests frequently and remove the loose shells, that they may not "cap" eggs from which the chickens have not escaped, and as soon as all are out, put the chickens and the most motherly hen in the coop described, with



A Chicken Boarding House.

a yard of old carpet under them. At night, throw another piece of carpet or blanket over the front of the coop. When the carpet becomes soiled, or gets wet, remove it; cleanse and hang up to dry.

The advantages claimed for the plan are, briefly: The other five hens, after a few days confinement, will begin laying. The chickens, being all with one hen, there will be no fighting among the different broods. The one hen and 100 chickens will consume less food than six hens with the same brood. The back board of the coop prevents the hen from trampling her chickens, as she would do if the roof was shelving to the ground. So large a number of chickens together maintain a high degree of temperature, and they keep circulating to and fro underneath the hen, and are fully as comfortable as they would be with a number of hens. For the first week feed with Indian meal wet with water; afterward use cracked corn. Give an abundance of pure fresh water. After the chickens are a few days old let them run abroad with the hen when the weather is pleasant, fastening them in the coop at night. The writer referred to concludes by saying that he has had a number of years' experience with this method, and commends it to all who wish to know the best way.

Those who keep fine poultry, and desire to note the effect of varied crossings of breeds, should always keep a poultry-book, in which the birds are registered by number. This is



Poultry Marker.

distinct from the account-book, which every poultry-raiser has, or should have; but, for convenience the reference list, and the accounts may be kept in a single blank-book.

The device for marking poultry which we illustrate, has been used for some time by an English breeder, Mr. William Saville, with entire satisfaction. He says: "It can be put on or taken off with the greatest ease by using two pairs of ordinary round-pointed wire pliers. It is made by letting fall one or more drops of melted solder on to a piece of stoutish copper wire. The solder is then stamped with a number, by means of a die, and a corresponding number entered in the poultry-book. The size and number of the drops of solder, and likewise the thickness of the copper wire, can be varied at pleasure to suit the size of the chicken or fowl, and any ironmonger will furnish a set of number-dies of the requisite size at a trifling cost. I may add that I prefer two drops of solder in case of the accidental defacing or loss of one. I do not find my marker incommodes the birds in the least, nor does it chafe or injure the feathering or color of the legs of Brahmas or Cochins."

Trouble in the Poultry Yard.

Mr. John Bagge, of Haywood, Alameda county, writes as follows: "There has recently appeared a disease among the poultry of this neighborhood, which threatens to kill all the chickens, as nobody seems to know of any remedy. There is absolutely no symptoms before death, as most of the victims are apparently in the finest condition possible, and sometimes the hens are found dead in their nests. I have examined some after death, but I cannot discover any diseased organ. Although other kinds of poultry are affected, it is chiefly the hens that suffer, and I know of half a dozen farmers who have lost their entire stock. If you can give me a remedy for the

disease, please do so in your next issue, and confer a favor on many subscribers, as well as yours truly.

Most of the hens are attacked when laying eggs, are fat and their combs are very red, they show no symptoms of sickness; but fall dead as by magic."

[We are unable to form any idea as to the nature of the disease or the remedy. Perhaps some other of our readers may have noticed a similar fatality, and learned the cause and a remedy. If any one has done so, will he "rise and explain."—Eds. Press.]

Preparing Poultry for Market.

A New York firm of commission merchants give the following directions for preparing poultry for market: Secure plump, well-fatted birds. Bleed them in the throat. Scald enough to make the feathers come off easily. Pick both feathers and pin-feathers all off nicely, taking great care not to bruise or break the skin in any way. If one or two in the lot should accidentally get bruised or have the skin broken, sell, or use at home, as they will hurt the sale of the whole lot. Leave all of the entrails in, and heads and feet on. After they are dressed, hang them in a cool place, where they will dry and get stiff before packing. Pack in boxes or barrels, in nice, clean rye straw; if this cannot be obtained, dry oat straw may be used. Be sure and pack solid, so they will not bruise in transit. Pack with breast down. Poultry prepared in this way always find a ready market, while poor, half-dressed, sweaty, (caused by packing while warm), and bruised lots, will not sell at any time.

Many farmers make a practice of feeding their half-starved fowls all they will eat just before killing, and send them to market with full crops, in order to get the price of poultry for corn. In this they make a great mistake; the crop being swollen to an unusual size, turns black after being packed a while, and not only shows clearly the dishonest intentions of the packer, but injures the sale of the fowls a great deal more than is gained in weight. Feed meal only for at least two days before killing.

Remember that it is the appearance of goods that sells them. Nice, large, fat, plump, white turkeys, ducks, chickens or geese, always bring outside prices.

When is the best time to ship? This question is often asked. We answer: any time after cool weather commences. But if sent for the holidays, have them here at least three days before Thanksgiving, Christmas, or New Year's. Keep the largest turkeys for New Year's.

A VARIED DIET FOR FOWLS.—There are no animals more omnivorous than fowls; fish, flesh, birds and grain, being devoured by them with equal relish. We say equal, though they commonly pounce upon meat with greater avidity than upon grain, this is generally because it affords a rarity, and a flock kept for a while, almost entirely on animal food, will show the same greed for a few handfuls of corn. The fondness for variety shown by fowls is as significant of real needs as we have found it to be in ourselves. In purveying for them, a judicious variety, selected from the three general divisions—*fresh vegetables, grain and animal food*—is at all seasons absolutely necessary for young and old, in order to make them perfectly thrifty. True, they will not starve on hard corn and water, neither will they pay a profit so kept.—*Poultry World*.

NEW BOX MAKING MACHINE.—A novel and most ingenious machine was exhibited in operation at the recent monthly meeting of the Franklin Institute, viz: Heyl's machine for making paper boxes. This invention performs, with marvellous celerity, all the movements of the human operator, and turns out boxes of any desired sizes ready for use. The inventor at first designed a neat machine for pasting the different parts of a box together, as is now done by hand labor; but, by this machine, he has superseded his former invention, by one in which the parts of the box are held together by a wire, which, at the proper time, is made to puncture the card, and is instantly locked down upon it. The machine is capable of turning out from 60 to 100 boxes per minute, according to the size of the box. The machines, though but recently brought to public notice, are already kept busily at work filling orders, and there can be little doubt that they will bring about a speedy revolution in the box trade.

WHEN beets are preserved for the manufacture of sugar, they give off carbonic acid and take up oxygen. The carbonic acid is a product of the oxidation of the sugar contained in the beets. According to calculation, 1,000 cwt. beets would lose 10 cwt. sugar in thirty days. The air contained in the beets consists mainly of nitrogen and carbonic acid and very little oxygen.

SPONTANEOUS COMBUSTION OF HAY.—In a paper on the spontaneous combustion of hay, H. Ranke says that, in consequence of prolonged fermentation, hay can be transformed into a true coal, which, when exposed to the air at some somewhat elevated temperatures, acts as a pyrophorus.—*Quart. Jour. Sci.*

THE rate of wave-motion was shown by Aebe to be only 3 feet per second in the muscles of a frog, much slower than the rate at which waves pass along the motor nerves of the same animal, which Helmholtz determined at 88 feet per second.

EFFECT OF RARIFIED AIR.—A recent book of travels in Asia, by Dr. Henderson, contains an interesting statement of his experience on high altitudes. A few days out from Lé they had to cross a pass, the Chang-la, 18,000 feet high. In so doing, almost every one suffered from the rarity of the atmosphere; in one case the pulse went up to 100, the respirations to twenty-two per minute. Some complained of a feeling of suffocation, and could not sleep; but a few deep inspirations relieved this feeling. Intense headache was complained of, with great prostration of mind and body; the temper became irritable, and there was most distressing nausea. In some, the lips became blue, and in another case the temperature, as indicated by the thermometer, sank one or two degrees. Such is the exceedingly interesting account given of the effects of great rarification of the atmosphere by Dr. Henderson. We may mention that here the barometer stood at 15.73, and the thermometer at 61° Fahrenheit, and water boiled at 181° Fahrenheit.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS,

PIECE MILK-PANS,

STRAINER PAILS,

CREAM PAILS,

MILK PAILS,

ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m

SAN FRANCISCO.

WAKELEE'S

Granulated Squirrel Exterminator.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is scented so that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed.

3v7-3m

LANDS & HOMES FOR SALE

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,
311 Montgomery street, San Francisco,
Or Pacific Rural Press Office.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission

St. S. F. C. H. Gruenhagen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San

Francisco. Manufacturers of Carriages, Wagons and Stage Work of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of

Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warrent street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

BUSINESS EDUCATION

HEALD'S

BRYANT & STRATTON

BUSINESS COLLEGE

24 POST ST. SAN FRANCISCO

SEND FOR CIRCULARS

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars.

E. P. HEALD,
2v6-tf President Business College, San Francisco.

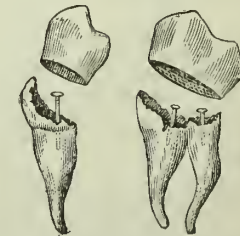
SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to ELWOOD COOPER,
2v6-tf President Board of Directors.

Don't Have Your Teeth Extracted.



DR. BEERS' PATENT ENAMELED GOLD CROWNS, for Covering Teeth broken down by Decay, have been thoroughly tested, and when properly applied will surely restore them again to usefulness and beauty. Call and see them. Office, 230 Kearny street. 6v7-cow-bp-3m

McLAREN, BRYDGES & CO.,

DEALERS, MANUFACTURERS AND INTRODUCERS OF NEW INVENTIONS FOR THE PACIFIC COAST.

Manufacture Espey's Patent Coil Wire Door and Gate Springs; Gate's Patent Oil Blacking, etc.

—ALSO—

Real Estate and General Business Agency.

NO. 605 CLAY STREET, SAN FRANCISCO, CAL.

ja10-hp-3m

OUR SPECIALTY: "BEYOND THE MISSISSIPPI!"
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required: Nerve and Honest Industry.
THE FAR WEST,
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFUT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chromo,
free to each subscriber.
"AMERICAN PROGRESS,"
Two sample Worlds sent for 10 cents. Agents wanted.

AGRICULTURAL NOTES.

BUTTE.

WEATHER.—*Record*, March 21: Monday last, Chico was visited with a hail-shower. Luckily it only lasted about a quarter of an hour, or fruit might have been scarce the coming season. The last two days, the weather has been improving, and March now gives every indication of preparing "to go out like a lamb."

CALAVERAS.

NUMBER TWO.—*Chronicle*, March 21: The citizens of Altaville are gathering the second crop of apples from their trees. The severe weather does not seem to affect them in the least. Old Calaveras is not so poor a section for fruit after all.

EL DORADO.

PLEASANT.—*Mountain Democrat*, March 21: After a long spell of anything but agreeable weather, we have been blessed the present week with four or five days of bright and warm sunshine. This has been a terribly severe season on stock, and the cold, backward weather of spring thus far has not helped to improve the situation, and is telling hard upon the cattle and sheep raisers, and in some localities upon the grain growers. A large number of cattle and sheep have been lost—in some sections amounting to as high as from 15 to 20 per cent.—from exposure to the long and cold storms. Early sown grain on low lands has suffered from being flooded, but there is very little of this in our county. One good result, however, promised from the lateness of the season, is an extra large yield of fruit. Generally the time of danger for the fruit blossoms is in February or the first of March, when the warmth and humidity of the air tempts them forth to be nipped by frosts later in the season. This year, even now, the 20th of March, the fruit buds in this vicinity are but just beginning to swell and open, which is almost a sure guarantee of a large crop.

It is generally believed that this will be one of the best fruit seasons we have ever had in the mountains. The almost continual cool weather has prevented the buds from swelling which will retard their blossoming until the heavy spring frosts are over. At this time last year many trees were in blossom, but bore but little fruit, the frost "nipping it in the bud."

The Alden fruit drying-house, at San Lorenzo, preserved 400 tons of fruit in 1873, and will probably preserve 500 or 600 tons this year. The establishment may be considered permanent, and will probably be followed by others.

HUMBOLDT.

STOCK DYING.—*Times*, March 8: The late storms have occasioned fearful loss among the stock in the hills. Cattle, horses and sheep bave at last alike succumbed to the terrible severity. From every direction intelligence reaches us that all kinds of stock are dying in large numbers. The names of many stock raisers are mentioned as being already heavy losers—all the way from twenty-five to seventy-five per cent. of the whole number possessed by them. And, indeed, it is reported that one had lost up to the last storm all but fifteen out of a flock of fifteen hundred sheep, some of which were of very choice and valuable breeds. Of course, in the present condition of the stock that is left, every hour's continuance of the present cold and stormy weather, will largely increase the percentage of losses.

KERN.

PROSPECTS.—*Courier*, March 21: Fine weather has now fairly settled upon us in this portion of the State. The crops throughout the delta of Kern river are looking finely, and all around is instinct with joy and happiness. Never has prosperity dawned so auspiciously upon this portion of the great southern valley as it does to-day, and everybody seems jubilant.

MERCED.

THE CROPS.—*Tribune*, March 21: The crops in this vicinity, particularly on Bear and Mariposa creeks are looking well. From the west side of the San Joaquin river we hear the most encouraging reports. Merced county will make a splendid showing the coming harvest.

MONTELEY.

SOQUEL.—*Democrat*, Mar. 14: Ploughing and preparing the land for sugar beet culture in this vicinity is progressing rapidly; a ton or more of the seed have arrived and five tons more are on the way. There are also at the landing twenty-five tons of the sugar beet to be planted to raise seed from for the next season, besides several and various implements for working.

NAPA.

NEW HORSE DISEASE.—*Reporter*, Mar. 21: Some time since we published the loss of some horses by Mr. W. K. Salmon, caused by worms in their maw. This gentleman has lately lost four others from the same disease, and J. B. Hamett, a neighbor, three. Worms from two to six inches in length were found in a fine horse of the latter, which after death was cut open for the purpose of investigation. Cases of this same disease came to the knowledge of a gentleman in Vacaville, who wrote us giving the same symptoms and description of the worms as is given by Messrs. Salmon and Hamett. The recurrence of this mortality among Mr. Salmon's horses would seem to warrant the advent of a new malady among equines, and calls for an investigation by men of veterinary skill, so that some means may be devised to guard against its recurrence.

NEVADA.

FRUIT PROSPECT.—*Union*, Mar. 17: Farmer

George Wilson, near this place, thinks there will be a great abundance of fruit this year. The continuous cold weather has kept the fruit trees from blooming out too soon, and the later frosts are not liable to nip the blossoms. Hope he is correct, and that he will send peaches to us in the coming summer time. Grass is growing somewhat, so Farmer George says, but the grain planted is not doing anything for itself.

SAN JOAQUIN.

PROSPECTS, ETC.—*Stockton Independent*, Mar. 21: During no past year has the general appearance of the young grain crop been more encouraging than at the present time.

The vitality of the Chinese allanths trees in the Court House square has been put to the test by cutting their heads off. It is believed that the stump will sprout sometime during the summer.

SIERRA.

STOCK DYING.—*Mountain Messenger*, Mar. 21: The great theme of conversation is the starving of stock in Sierra valley. Hundreds have already died, and perhaps thousands more must ere spring. Some large herds have been driven out on the desert to browse on sage brush, but when spring opens a large number of animals will be lost in the soft muck of the tules, too weak to extricate themselves. Everybody is tired of constant snow storms and blockades, especially stock and stage men. Mails very irregular. Hard times predicted for the next two years, because of this loss of stock, together with the demands of the land Commissioner, requiring all the floating funds of the valley to pay for lands.

STANISLAUS.

CROP PROSPECTS.—*News*, March 20: Take it all in all, the outlook was never before so favorable as at present, for a large wheat yield in Stanislaus county. The greatest wheat yield for our county was in the year 1872, which was 5,000,000 bushels. Farmers all agree that, in their respective neighborhoods, the soil this season has been, generally, pretty thoroughly ploughed, harrowed and well sown. From these facts we reason thus: that, if the present year is as favorable as that of 1868, the wheat yield of Stanislaus will be near 7,500,000 bushels, with upwards of a million bushels of barley. Should the year compare with only that of 1872, the crop should be, in wheat, 5,500,000; in barley, 1,000,000 bushels.

TULARE.

WHEAT GROWING.—*Visalia Delta*, March 19: Tulare last year cultivated 32,000 acres of land; this year the amount sown to wheat may be safely estimated at from 50,000 to 60,000. The Mussel Slough region alone, which produced for export, last year, 30,000 sacks, is estimated to have not less than one-fourth of this amount. This wheat is said to be the very best quality of any produced in California. The average yield of Tulare county may be taken at 900,000 sacks. This would equal 300,000 barrels of flour. Not more than half will be manufactured into flour by our local mills. About 15,000 barrels of flour will be required for home consumption if our population remains the same. We may calculate on an influx, however, which may require 10,000 barrels. Hence, if the coming crop proves what it promises, we shall be able to export from this county 275,000 barrels of flour. There is some chance for Tulare to take her position among the wheat-producing counties. Last year Stanislaus, with 300,000 acres sown to wheat, was second only to Solano, while Merced was somewhat behind. An average crop in Stanislaus is no more than half what it is in Tulare per acre.

MUSSEL SLOUGH.—*Cor. Tulare Times*, March 21: Nearly every quarter-section in this vicinity has an occupant. Much railroad land has been taken up and sown in grain. The "no-fence law" is a great blessing for the community. We feel safe in sowing crops, as we now have protection against the roving bands of cattle that have heretofore roamed over the plains; as for the future prospects, we will know what to depend upon. Without a law of this kind, this country could never have been developed; the extreme prices that we would have had to pay for fencing would not have justified us in the experiment. Our irrigating advantages are excellent. There is one ditch in the western part of the county that has been used two years, and the results are highly satisfactory. Two other ditches are being constructed, and will be completed the coming season. They are being dug by the people, each person along the line of the ditch has taken a certain number of shares, and either pays the money or works the assessment out in the ditch; by this means all will be enabled to procure an interest. The ditches are supplied with water from Kings river, which always has an abundant supply. Where they connect with the river, the banks are very high, and required great labor to excavate them; but they are now nearly brought to the surface, and the work will progress much faster. With the three ditches, the land here will be very well supplied with water for irrigation. The land here never has to be flooded; it is always moistened by saturation. This year rain has been very abundant, and prospects for crops are very flattering. There has been large quantities of grain sown this year, and the loss in the past will no doubt be compensated for. Our land when supplied with water is adapted to the cultivation of almost all kinds of products. While wheat, and barley will ever be the leading staples, cotton, tobacco and many other things may be grown with great profit. Some alfalfa has been sown this year; we think our soil well adapted to its production, and it will, no doubt, soon receive much attention, and the raising of stock made

profitable. Some soft timber grows very rapidly here, and with a little attention fencing material could be raised to enclose the land, or fencing can be done with osage orange or limes.

VENTURA.

ITEMS.—*Signal*, Mar. 21: Albino Pierce, who has been wintering in the Ojai, received an order from an Illinois druggist for 100 pounds of Manzanita leaves, for which he received thirty-five dollars. . . . K. M. Brown has placed on our table some clover stalks two feet and ten inches in length which have grown since the rain began. Such a growth effectually demonstrates that the Matilija climate is not cold, as many believe. . . . Mr. Egbert has on his ranch a tomato vine, from which he has gathered ripe fruit throughout the winter. It is now full of green and some ripe fruit. . . . Wild blackberries are now in blossom. . . . New potatoes are abundant in the market. . . . An abundant crop of almonds is promised from all the orchards in the county.

YOLO.

Mail March 19: We have the most cheering news from farmers from all parts of the county. The crops are looking and doing well. The next two months will be to these farmers a season of comparative rest, after which the harvest will demand their energies.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Mar. 24, 1874.

FOR WEEK ENDING MAR. 10, 1874.

BROOM-HANDLE SOCKET.—Henry Anderson, of S. F., Cal., and James F. Houghton, Sacramento, Cal.

REIN HOLDER.—Jefferson Kindleberger, S. F., Cal.

HYDRAULIC MAIN AND RETORT CONNECTIONS FOR GAS WORKS.—James R. Smedberg, S. F., Cal.

ELECTRIC FUSE.—Thomas Varney, S. F., Cal.

GRAIN TALLY.—George P. Fitts, Jacksonville, Oregon.

CAR STARTER.—Josiah C. Tuck, Oakland, Cal.

PERMANENT FAUCET FOR BEER BARRELS.—John Brozee, Alvarado, Cal.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

WILD HEMP.—We have seen a sample of a native fiber plant from a bale sent from the interior to the Pacific Foundry, of this city. It looks well, is very strong, and is to be tested. We shall watch for results and report the same.

ANOTHER.—We have received from "C. A.," a Healdsburg correspondent, a specimen very similar to the above, of which he says: "I have noticed it growing on my ranch, on Madama creek, for two or three years past. It grows very thriftily on the sand bars, along the creek, with roots deep-seated and very firm. The stalk is tall and slender, something like the nettle, starts early in the spring from the roots. It is almost impossible to destroy it. It has a very disagreeable smell when bruised. Now, when everybody is trying to find out something new, it has occurred to me that it is possible this plant might be economized as a new textile. The plant produces an abundance of lint, which is very readily separated from the woody fiber, when dried, and we see no reason why it may not be utilized for the more coarser textile purposes.

As the season advances and the weather becomes more settled, the effect is noticeable in the quantity and quality of farm produce sent to our city markets. Already the change is great, from a few weeks past, and in a month or so there will be no complaint on the part of consumers of want of variety. Dairy produce, of rich quality, is coming in profusely, and some of the spring vegetables begin to show. Soon, the annual period of local gratulation and expressed sympathy for benighted Eastern friends will arrive. For our part, we will try to be modest, and not too exasperating to our exchanges, when strawberries are plenty.

AN EXTRA ISSUE of the San Francisco *Journal of Commerce* comes to us this month. It contains illustrations of many of our principal buildings, and introduces a new feature in presenting the portraits of thirty-two of our prominent business men. The issue is neatly gotten up, and of marked typographical excellence.

UNCLE SAM has under cultivation, at Mare Island, 270 acres of wheat, 30 acres of barley, 65 acres of alfalfa, and 47 acres of wild oats.

At least one third more ground has been sown in grain this season, in Tulare county than ever before.

WEDNESDAY night the last forms of PACIFIC RURAL PRESS are closed. The first forms are printed earlier. Communications should be sent as early as possible.

THE END-SHAKE THRESHER.—The following letter is from Wm. P. Harkey, Esq., Sheriff of Sutter county, referring to the value of the Lanfenberg End-Shake Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.

MESSERS. TREADWELL & CO., San Francisco.—*Gentlemen*: In regard to the Lanfenberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I need it throughout the season on a Russell Separator, which I had run previously with a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain. I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thresher.

WM. P. HARKEY.

COURTLAND, Sacramento Co., Aug. 11th, 1873.

MESSERS. TREADWELL & CO.—*Gents*: The Etna Mower I purchased of you exceeds my most sanguine expectations, working satisfactorily in the most difficult of my alfalfa, and it will cut it against the lay of the clover, something I have seen no other machine do with the same results; it doing the work in the best possible manner, and without clogging or choking. I can cheerfully recommend the Etna before any other mower for alfalfa cutting.

Yours Respectfully,

C. NELSON.

We, the undersigned, having seen the Etna work, concur in the foregoing statement.

J. F. PARKER.

J. T. RUNDALL,

WM. MCCAIN.

FARMERS, if you want any Harvesting Machines or Implements, come to San Francisco and inspect the large variety of machines, etc., at Treadwell & Co.'s Warehouse. The amount you will save in buying will pay the expenses of the trip three times over. If you cannot come in person, then send a letter to us, and state what you will want, and we will send you by next mail full description, prices, terms, etc., and you can then easily order what you want, and it will be promptly sent to you just as safely and securely as if you went along with it. Address, Treadwell & Co., San Francisco, Cal.

DR. E. J. FRASER, Homoeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No. 305 Kearny street, northwest corner of Bush.

Fearful—the amount of money thrown away in not buying shoes protected by SILVER TIPS. Parents be wise and insist that your shoe dealer should keep them.

U. S. LIVE STOCK EXCHANGE,

S. E. COR. FIFTH AND BRYANT STS., S. F.

CATTLE SOLD ON COMMISSION, —OR— Bought on Farm for Cash.

Our accommodations for Cattle, Sheep and Horses are most convenient and complete, our terms most reasonable and moderate. Our proximity to the Fourth and Kearny street cars, Long Bridge and Freight Depots of Southern Pacific and Trans-Continental Railroads, affords our friends and patrons a combination of conveniences and freedom from expense never before secured for them in S. F. Our best and confidential counsel shall always be at the disposal of those soliciting its advantages. A cordial invitation is extended to our friends in the country to call and see us when they visit the city.

Wanted—Milk Cows, Bees, Sheep, Hogs and Work Horses. Address:

DAWSON & BANCROFT, 449 Fifth street, S. F.

Special Rates to Members of the Grange.

13v7tf

FOR THE HARVEST OF 1874.

THE ORIGINAL AND RELIABLE DOUBLE MOTION



ETNA MOWING & REAPING MACHINES MADE FOR TREADWELL & CO. SAN FRANCISCO Sole Proprietors Pacific Coast

Headley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & CO., San Francisco.

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,

36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7

JOSEPH SEYMOUR & SON,

12v7-3m

Syracuse, N. Y.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, Mar. 26, 1874.

Produce has remained almost stationary during the week under review. The weather has been mild and supplies of fresh articles of produce have been received in liberal quantity. Prospects for the coming crop season are still reported, from most sections of the State, as unusually favorable. It is expected that the yield of fruit will be very large, although it is unsafe at this date to form expectations, as there is always the chance of such another cold snap as happened last year on the first of April, which would soon alter the aspect of things. The area sown to wheat will be on the whole at least as large as last year, although in many places the soil was found too sodden with the late continued rains.

Receipts

Of Bay Produce during the week have fallen off in Grain, Potatoes, Onions, Beans, etc., and increased in Dairy Produce, etc. Total receipts have been as follows: Flour, 25,500 quarter-sacks; Wheat, 35,540 centals; Barley, 3,967 centals; Buckwheat, 63 centals; Corn, 425 centals; Oats, 1,464 centals; Hay, 6,651 bales; Straw, 267 bales; Potatoes, 2,623 sacks; Onions, 427 sacks; Beans, 350 sacks; Alfalfa Seed, 70 sacks; Coriander Seed, 10 sacks; Bran, 2,400 sacks; Middlings, 562 sacks; Wool, 22 bales; Pulu, 19 bales; Chicory, 94 bales; Hides, 1,120; Pelts, 92 bundles; Leather, 125 rolls; Butter, 131,300 lbs.; Cheese, 62,200 lbs.; Tallow, 61,800 lbs.; Wine, 16,022 gallons; Brandy, 170 gallons; S. P. Lumber, 6 M. feet.

Barley

Is weaker of late. Feed Barley is especially in abundance.

Beans.

Prices are firm, and it is expected will hold until the new crop comes into competition. Our New York advices report a much duller state of feeling in that market than here; except for Marrow, little inquiry is being made.

Broom Corn.

The same nominal rates hold, though there cannot be said to be any business in this article—at least we have heard of no sales being made during the week. Eastern prices are unchanged: 6@7c for Red and Red-tipped; 7@9c for Short and Medium, and 8@11 for best Green Hurl, 1/2 lb.

Dairy Produce.

Demand is fair, and though the market is tending downward, under heavy receipts, there has been no very great falling off in price since the first break was experienced. In fact, there does not seem to be much room for a further decline. The quality of Butter now in market is better, although a great deal is shipped in almost unmarketable condition and is disposed of at a price even below our lowest quotations. Cheese is quiet.

Eggs

Are plenty and have declined one more peg. California Eggs are now so common that there is little call for Eastern and Oregon.

Feed.

There has been a considerable advance in Hay, but other articles of Feed are quiet.

Flour.

The price of Extra has been reduced to \$6.00 to-day, with some prospect of regaining the last 12 1/2 c. lost. The market, as that of Wheat, is in a state of great uncertainty. The demand for export is said to have slackened noticeably. We do not make any predictions for the future, but do not see how Flour can well be put lower than it now is.

Honey.

There is only a jobbing trade being done in Honey. Prices remain about the same.

Hops

Are quiet. Californians are held at 35@40c. In New York, from which city a trade circular reports the market as dull, and adds: English and continental markets are favorable. Imports have now about ceased, and holders claim that no more foreign are likely to arrive unless our quotations advance. Prime goods are held with confidence, both here and in the interior, but inferior sorts are rather freely offered.

Onions.

The tendency of Onions is upwards. Prices are much firmer.

Potatoes.

For the second time Potatoes have touched \$2 per cental, and at that price are considered good property. The incoming crop is expected to be about a month later than usual, on account of the late cold weather. Last year the crop was an early one, so that the gap is increased two months, which has a natural effect in exhausting stocks. Besides this, the receipts for the year 1873-74 have been a trifle less, 11,000 sacks, than those of the previous year, while the demand has been greater. We have new Potatoes in market, but of infinitesimal size, and of very limited quantity, so that they have not the slightest effect upon prices of the old crop.

Poultry.

Turkeys are a shade higher. Hens, Roosters and Spring Chickens have advanced \$1.00 each per dozen. Geese are lower.

Provisions.

There is no change, except a hardening tendency in Eastern Hams and Shoulders.

Seeds.

Price remain unchanged. Business is fairly active, and will not fall off for some time to come. There is an advance in Flax Seed in the East.

Tallow.

Sales of 15,000 lbs. choice were recently made at 7c.

Wheat.

Rates have not fallen any lower, though the extreme

of \$1.95 can only be obtained for best milling samples, and the other figures weak in proportion. Sales of 250 tons of good quality were made yesterday at \$1.82 1/2. Liverpool quotations are: Average, 11s 10d@12s 1d, and Club 12s@12s 6d per cental, against 12s 6d@12s 8d for Average, and 12s 9d@13s for Club one week ago. The present prices are 6d in advance of those for corresponding period last year.

Wool.

There is very little being done in Wool here. All interest hinges on the reports from the Eastern centers. The telegraphic commercial letter of a daily contemporary, on the 21st, said: There seems to be an improvement since last week, particularly by an increased inquiry for Wool of all grades. Prices continue firm at the quotations previously given, with no indication of an immediate change, either from speculation or new arrivals. Though large sales of California have been made on favorable terms, no change can be noticed in the price, holders forcing their supplies and even making concessions to effect sales. Prime lots are to-day quoted 24 1/2 c, but some holders are asking a trifle higher. The rates and sales are, 612 bales, 178,000 lbs. at 34c for Spring, 21@24 1/2 c. for Fall, and 70c for scoured. There is no reason why the entire Spring clip of California should not be in the market before the Western clips come forward. The favorable accounts from abroad have so far influenced our market that manufacturers purchase with even less confidence now than they did six weeks ago. The sales of California are 172,009 lbs at 19 3/4-5c for Fall and 33 1/2@36c for Spring.

GENERAL MERCHANDISE.

WEDNESDAY M., March 25, 1874.

Fish are looking up a little. There are some pickled White Fish, from Chicago, in market, which we do not quote in our table, now selling at 20@30c per lb. Sugars are very firm, holding the advance well.

BAGS.

Eng. stand. Wh't	12 @ 13	Gas Light Oil	— @ 34
Cal. Machine	12 @ 13 1/2	Atlan. W. Lead	8 @ 11 1/2
Gilroy	12 @ 13 1/2	Putty	4 @ 4 1/2
do. 22x36, do. W	12 1/2 @ 14	Chalk	— @ 2 1/2
do. 22x40, do. W	14 1/2 @ 15	Paris White	2 1/2 @ 3
do. 23x40, do. W	15 @ 16	Ochre	4 @ 8
do. 24x40, do. W	15 1/2 @ 16 1/2	Venecian Red	3 1/2 @ 5
Flour Sacks	12 1/2 @ 14	Red Lead	8 @ 11
Stand. Ginnies	20 @ 22	Litharge	10 @ 11
" Wool Sacks	60 @ 62 1/2	Eng. Vermilion	1 00 @ 1 25
Hessian 5-lb. bags	— @ 11 1/2	China No. 1	6 1/2 @ 6 5/8
Burlaps, yard	— @ 10 1/2	do. 2, do.	5 1/2 @ 6

CANNED GOODS.

Ass'td Pie Fruits	in 2 1/2 lb. cans	2 75 @ 3 00
do. Table	do. 4 lb. cans	3 00 @ 3 25
Jams & Jellies	do. 4 lb. cans	4 00 @ 4 50
Pickles, 1/2 gal.	do. 3 @ 50	
Sardines, qr box	do. 2 @ 00	
do. 1/2 boxes	do. 3 @ 15	

COAL-Jobbing.

Antrelan, 30-ton	1 00 @ 12 00
Coos Bay	— @ 10 00
Bellingham Bay	— @ 8 50
Seattle	— @ 11 00
Cumbe'd, cks.	25 @ 28 00
do. bulk	— @ 28 00
Mt. Diablo	17 @ 25 25
Lehigh	— @ 17 00
Liverpool	— @ 12 00
West Hartley	— @ 12 00
Scotch	— @ 3 50
Scranton	— @ 2 00
Vancouver's Isl.	12 @ 14 00
Charcoal, 1/2 sk.	75 @ —

COFFEE.

Sandwich Island	do. 24
Costa Rica per lb.	25 @ 27
Guatemala	25 @ 27
Java	32 @ 35
Manilla	25 @ 26
Ground in os.	25 @ 30
Chicory	10 @ 10

TEA.

Pao Dry Ood, new	5 1/2 @ 6
cases	7 @ 7 1/2
Eastern Ood	— @ 7 1/2
Salmon in bbls.	8 50 @ 9 00
do. 1/2 bbls	6 50 @ 6 50
do. 2 1/2 cans	6 25 @ 6 25
do. 2 1/2 cans	2 50 @ 2 50
do. 1 1/2 cans	2 25 @ 2 25
Do Col. R. & B.	— @ —
Pick. Ood, bbls	22 @ 22
do. 1/2 bbl	— @ —
Bo. S. M. & H. 24	50 @ 50
Mack's No. 1, bbl	12 @ 12
" Extra	— @ 12 50
" in kits	2 75 @ 3 00
" Ex. mss.	3 50 @ 4 00
" Ex. mss. 1/2 bbl	15 @ 15
Sm. k. Herrg.	40 @ 50

SALES.

Assorted size, lb.	5 1/2 @ 7 1/2
Pacific Glue	— @ 25 00
Neat F. T. No. 1	— @ 21 00
Pure	— @ 25 00
Castor Oil, No. 1	— @ 85
do. No. 2	— @ 65
Cocoonut	— @ 65
do. Possel	— @ 75
Palm	— @ 9
do. Bagicalupi	— @ 10
Linseed, raw	— @ 10
do. boiled	— @ 12 1/2
China nut	— @ 3 1/2
do. bulk	— @ 70
Sperm, crude	— @ 72
do. bleached	— @ 20
Coast Whales	— @ 40
Cholera, refined	— @ 18
Sperm	— @ 40
Lard	— @ 95
Coal, refined Pet	37 1/2 @ 40
Oleophene	— @ 34
Devos's Brnt.	35 @ 37
Long Island	— @ 34
Enraka	— @ 37
Devos's Petro	34 @ 36
Barrel kerosene	— @ 26
Olive	— @ 40
Downer Kerosene	— @ 52 1/2

SALES.

Assorted size, lb.	5 1/2 @ 7 1/2
Pacific Glue	— @ 25 00
Neat F. T. No. 1	— @ 21 00
Pure	— @ 25 00
Castor Oil, No. 1	— @ 85
do. No. 2	— @ 65
Cocoonut	— @ 65
do. Possel	— @ 75
Palm	— @ 9
do. Bagicalupi	— @ 10
Linseed, raw	— @ 10
do. boiled	— @ 12 1/2
China nut	— @ 3 1/2
do. bulk	— @ 70
Sperm, crude	— @ 72
do. bleached	— @ 20
Coast Whales	— @ 40
Cholera, refined	— @ 18
Sperm	— @ 40
Lard	— @ 95
Coal, refined Pet	37 1/2 @ 40
Oleophene	— @ 34
Devos's Brnt.	35 @ 37
Long Island	— @ 34
Enraka	— @ 37
Devos's Petro	34 @ 36
Barrel kerosene	— @ 26
Olive	— @ 40
Downer Kerosene	— @ 52 1/2

SALES.

Assorted size, lb.	5 1/2 @ 7 1/2
Pacific Glue	— @ 25 00
Neat F. T. No. 1	— @ 21 00
Pure	— @ 25 00
Castor Oil, No. 1	— @ 85
do. No. 2	— @ 65
Cocoonut	— @ 65
do. Possel	— @ 75
Palm	— @ 9
do. Bagicalupi	— @ 10
Linseed, raw	— @ 10
do. boiled	— @ 12 1/2
China nut	— @ 3 1/2
do. bulk	— @ 70
Sperm, crude	— @ 72
do. bleached	— @ 20
Coast Whales	— @ 40
Cholera, refined	— @ 18
Sperm	— @ 40
Lard	— @ 95
Coal, refined Pet	37 1/2 @ 40
Oleophene	— @ 34
Devos's Brnt.	35 @ 37
Long Island	— @ 34
Enraka	— @ 37
Devos's Petro	34 @ 36
Barrel kerosene	— @ 26
Olive	— @ 40
Downer Kerosene	— @ 52 1/2

SALES.

Assorted size, lb.	5 1/2 @ 7 1/2
Pacific Glue	— @ 25 00
Neat F. T. No. 1	— @ 21 00
Pure	— @ 25 00
Castor Oil, No. 1	— @ 85
do. No. 2	— @ 65
Cocoonut	— @ 65
do. Possel	— @ 75
Palm	— @ 9
do. Bagicalupi	— @ 10
Linseed, raw	— @ 10
do. boiled	— @ 12 1/2
China nut	— @ 3 1/2
do. bulk	— @ 70
Sperm, crude	— @ 72
do. bleached	— @ 20
Coast Whales	— @ 40
Cholera, refined	— @ 18
Sperm	— @ 40
Lard	— @ 95
Coal, refined Pet	37 1/2 @ 40
Oleophene	— @ 34
Devos's Brnt.	35 @ 37
Long Island	— @ 34
Enraka	— @ 37
Devos's Petro	34 @ 36
Barrel kerosene	— @ 26
Olive	— @ 40
Downer Kerosene	— @ 52 1/2

SALES.

Assorted size, lb.	5 1/2 @ 7 1/2
Pacific Glue	— @ 25 00
Neat F. T. No. 1	— @ 21 00
Pure	— @ 25 00
Castor Oil, No. 1	— @ 85
do. No. 2	— @ 65
Cocoonut	— @ 65
do. Possel	— @ 75
Palm	— @ 9
do. Bagicalupi	— @ 10
Linseed, raw	— @ 10
do. boiled	— @ 12 1/2
China nut	— @ 3 1/2
do. bulk	— @ 70
Sperm, crude	— @ 72
do. bleached	— @ 20
Coast Whales	— @ 40
Cholera, refined	— @ 18
Sperm	— @ 40
Lard	— @ 95
Coal, refined Pet	37 1/2 @ 40
Oleophene	— @ 34
Devos's Brnt.	35 @ 37
Long Island	— @ 34
Enraka	— @ 37
Devos's Petro	34 @ 36
Barrel kerosene	— @ 26
Olive	— @ 40
Downer Kerosene	— @ 52 1/2

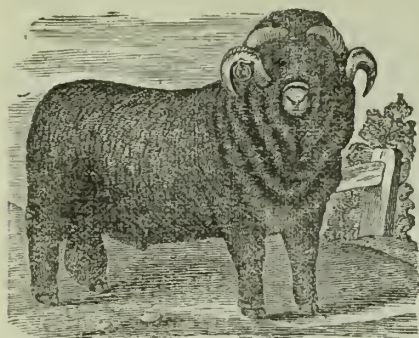
SALES.

Assorted size, lb.	5 1/2 @ 7 1/2
Pacific Glue	— @ 25 00
Neat F. T. No. 1	— @ 21 00
Pure	— @ 25 00
Castor Oil, No. 1	— @ 85
do. No. 2	— @ 65
Cocoonut	— @ 65
do. Possel	— @ 75
Palm	— @ 9
do. Bagicalupi	— @ 10
Linseed, raw	— @ 10
do. boiled	— @ 12 1/2
China nut	— @ 3 1/2
do. bulk	— @ 70
Sperm, crude	— @ 72
do. bleached	— @ 20
Coast Whales	— @ 40
Cholera, refined	— @ 18
Sperm	— @ 40
Lard	— @ 95
Coal, refined Pet	37 1/2 @ 40
Oleophene	— @ 34
Devos's Brnt.	35 @ 37
Long Island	— @ 34
Enraka	— @ 37
Devos's Petro	34 @ 36
Barrel kerosene	— @ 26
Olive	— @ 40
Downer Kerosene	— @ 52 1/2

SALES.

Assorted size, lb.	5 1/2 @ 7 1/2
Pacific Glue	— @ 25 00
Neat F. T. No. 1	— @ 21 00
Pure	— @ 25 00
Castor Oil, No. 1	— @ 85
do. No. 2	— @ 65
Cocoonut	— @ 65
do. Possel	— @ 75
Palm	— @ 9
do. Bagicalupi	— @ 10
Linseed, raw	— @ 10
do. boiled	— @ 12 1/2
China nut	— @ 3 1/2
do. bulk	— @ 70
Sperm, crude	— @ 72
do. bleached	— @ 20
Coast Whales	— @ 40

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.

Address N. GILMORE, El Dorado, El Dorado County, Cal.

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull, "DANDY JIM,"

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured.

CYRUS JONES. GEN. GILES A. SMITH. L. H. HICKS.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Duchesses, Rose of Sharon, Booths, Miss Willys, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara av. nue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO.,

2v7-3m San Jose, Cal.

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

Oak Home Ranch, Waterloo Road, three miles from Stockton.

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, imported last year, and bought of Hammond.

J. H. DODGE.

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal.

Angora Goats at Auction.

ON WEDNESDAY, MAY 6TH, AT 2 O'CLOCK P. M., I will sell to the highest bidder Seventy Head of Thoroughbred Angora Goats, imported by their owner, Mr. A. Euytchedes, from Asia Minor. Sale Positive. Terms cash, in U. S. Gold Coin.

I have also the best imported Alderney, Jersey and Ayrshire Cattle; Spanish and Silesian Merino Sheep at private sale.

Sacramento, March 10, 1874.

THE PEOPLE'S PUMP.

THE ONLY RELIABLE PUMP FOR

Farmers, Stockmen and Stable Keepers,

BEING A

NON-FREEZING FORCE PUMP,

Working in Wells from

6 to 100 feet deep.

Suitable for either Hand or Power use.

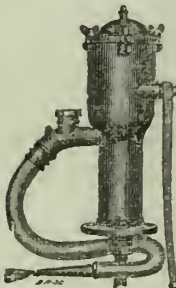
RATE IN PRICE, FROM \$12 UP.

Send for Circular.

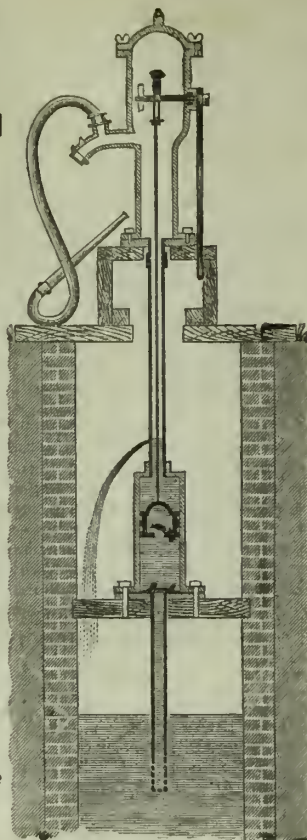
Depot for Pacific Coast,

CONROY, O'CONNOR & CO.,

SAN FRANCISCO.



13v4-2amly



Patent, First Premium Windmills & Horse Powers,

W. I. TUSTIN, Patentee.

Pioneer and Largest Manufacturer of Machinery (in this line) on the Pacific Coast.

FACTORY, Corner Market and Beale Streets, SAN FRANCISCO.

Send for Circular and Price List.



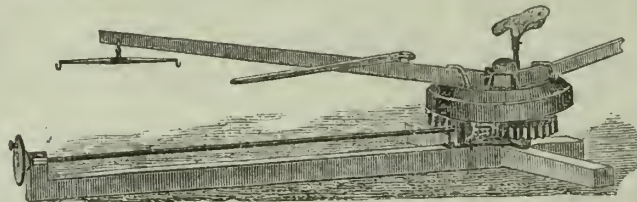
ECONOMY.



ECONOMY—For One or Two Horses.



EUREKA.



EAGLE—For One or Two Horses.

coast, and are in general use along their line, giving perfect satisfaction, which can be proved by reference.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

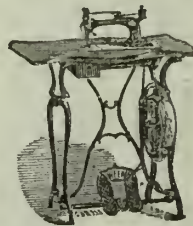
Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7 6m

CALVERT'S



CARBOLIC

SHEEP WASH.

Sole Agency on the Pacific Coast at

T. W. JACKSON'S,

416 Sacramento Street, San Francisco.

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street, Agents for the Pacific Coast.

11v7-3m

LONDON ASSURANCE CORPORATION.



1720

The Oldest and Wealthiest

Fire Insurance Company doing business in America.

Risks taken at current rates.

CROSS & CO., General Agents,

316 California Street, S. F.

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO.,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers, World Mowers, Clipper Mowers, Wood's Eagle Mowers,



Peerless Self-Rake Reapers. World Self-Rake Reapers. World Mower and Reapers, with Dropper.

World Reapers, and Mowers with Dropper and Hand Rakes—side delivery. Clipper Mowers and Reapers, with Dropper.

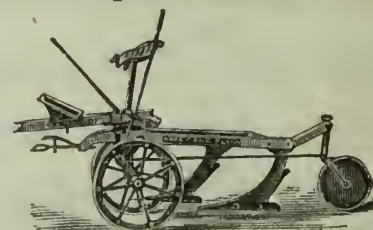
Oayuga Chief Mowers and Reapers. Snky Rakes—Furst & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

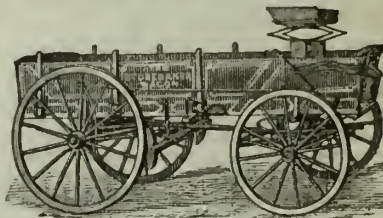
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps; Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators, Mortise Head Hay Rake, Scythes and Snaths,

Soule, Ketsinger & Co.'s First-Class

Farming Tools,

Gold Medal Forks, Hoes and Rakes,

Batchellor's Forks,

Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,

Road Scrapers,

Canal and Garden Barrows,

Hay Cutters—Burdick's

National, Belcher & Taylor's

Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

O. CREGO.

S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

-OF-

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Buggies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey;
Helfeld & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:
C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingles, etc., at wholesale and retail.

OREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,
24v5-3m San Francisco.**MATTESON & WILLIAMSON'S**

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be rolled upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m **MATTESON & WILLIAMSON,**
Stockton, Cal.

WM. ZARTMAN & CO.,**CARRIAGE AND WAGON MAKERS,**

Cor. English & Howard Sts., PETALUMA.
Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate.

SPECIAL RATES TO GRANGERS. 12v7-3m

THE BEST**SEWING MACHINE!****THE NEW IMPROVED FLORENCE.****BACK FEED AND SIDE FEED.**

The lightest running, most simple, and most easily operated Sewing Machine in the market.

Always in order and ready for work.

In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m Grand Hotel Building, S. F.

IMPORTANT TO FARMERS!**X Line to Liverpool.****DIRECT.****The A 1 Iron Ship**

DAVID CROCKETT.....BURGESS, Master

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to **E. E. MORGAN'S SONS,**320 California Street,
San Francisco.**H. H. H.****HORSE MEDICINE.**

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blonishes of all kinds are speedily removed by it.

WILLIAMS & MOORE, Prop'rs.
3v7-3m Stockton, Cal.**NURSERY NOTICES.****Fruit, Shade and Ornamental****EVERGREEN TREES AND****Plants for Sale,**

At the old stand, corner Oregon and Battery streets,
Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants
Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.

Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address

THOMAS MEHERIN,

516 Battery Street,

SAN FRANCISCO.

P. O. Box 722.

24v6-3m

METROPOLITAN NURSERY.**MILLER & SIEVERS, Prop'rs.**

We can now offer for sale a fine assortment of

NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A
CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,

(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.

Nurseries on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.

Letters by Mail or express will reach us.

ja10 **MILLER & SIEVERS.****O. W. CHILDS,****Horticulturist—Los Angeles, Cal.**

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

SUPERIOR**FRUIT TREES,**

TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSEYMAN.

T. CORLEY,

4v7-3m

No. 315 Washington St., S. F.

Oakland Nurseries.**HAMPTON & TURNBULL,**

Nurserymen and Florists, Cor. of Telegraph Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental Trees, Shrubs, Roses, GREEN HOUSE PLANTS, ETC.

We are constantly adding to our varied stock the NEWEST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call.

LANDSCAPE GARDENING attended to. ja24tf

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address,

W. H. & G. B. PEPPER,

21v6-1y

Petaluma, Sonoma Co., Cal.

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plums. The Tinley Peach, Georgia Freestone Seedling, the first offered in the State. Its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

4v7-2m

BRYAN & DOMINGOS,

P. O. Box 157, Sacramento, Cal.

**BAY NURSERY,**

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESAL AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Daphnes, Araucarias, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Euca-lyptus Acacias, Peppers, Cypress, Pines, Junipers, Cedar of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tube Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine.

2v7-3m

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN Trees, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good reference must accompany all orders. Lombardy Poplars, 1 1/2 to 2 inch trees, 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists,

K street, between 8th and 9th, SACRAMENTO, CAL.

4v7-3m

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Celler. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

Or C. J. CLAYTON,

Clayton, Contra Costa Co., Cal.

10v7-6m

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$1 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses. Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrus Decidua, or De- vine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubb's Hotel.

Send for Catalogue. ja10

THE FINEST COLLECTION OF PINES,

Cypress, Australian Eucalyptus,

EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices.

Send for priced Catalogue to

8v7-3m

A. D. PRYAL, Oakland, Cal.

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT TREES for sale, from three to five years old. The five-year old Orange Trees are the largest ever offered for sale in this county. For Price, address,

MILTON THOMAS,

6v7-2m

P. O. Box 304, Los Angeles, Cal.

**TO PLANTERS.**

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

THE ALDEN**Fruit Preserving Company**

OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

11v7-6m

G. W. DEITZLER, President.

W. M. WHERRY, Vice President.

FRANK PYLE, Sec'y and Sup't.

BANK OF CALIFORNIA, Treasurer.

H. K. OUMMINGS,

1858.

H. H. RALSTON,

1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washing-
ton, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer.

4v23-1y

NOTICE.**To Farmers and Grangers.****LAIRD'S PATENT SEAMLESS BAG.**

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m

304 California Street.

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF
EVERY VARIETY.

And raised by the most experienced and reliable grow-
ers of Europe, Eastern States and California.

My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegeta-
ble, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick,
(Rochester) and Monnice & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS
EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,
Red Clover, White Clover,

Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,
Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the
Pacific States and the Interior.

All the better grades forwarded by mail (post-paid),
at catalogue rates. Money forwarded in postal orders,
registered letters or express, at my risk.

My Agricultural Almanac and Price Catalogue is
ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

ALFALFA!**NEW CROP.**

For Sale, choice lot of fine CALIFORNIA-GROWN
ALFALFA, in lots to suit, for cash, at market rates.
Our Seed, unlike that imported from Chile, is fine and
free from Mustard or other foreign seed. Vegetable,
Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the
line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 24v6-1f

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.

19v6-1f

LOOK!

Buy your Eggs where you can get them
from the Best Imported Stock.



I am now prepared to furnish eggs
for the coming season at the follow-
ing rates: Light and Dark Brahmas,
Buff, Partridge, White and Black
Cochins, Houdan and Black Spanish,
at \$5.00 per dozen; White Leghorns,
Game Bantams, Cuckoo, Corn, Rouen
and Aylesbury Ducks, at \$6.00 per
dozen; Silver Spangled Hamburgs,
Golden Penciled Hamburgs, (first
premium at Buffalo, 1873), Silver Span-
gled Barded Poland, Golden Bearded
Poland, Black Poland, White Crests,
Brown Leghorns, White Sultans, La Fleche and Silver
Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland,

At \$8.00 per dozen. I claim to have the finest fowls
in the State, and cordially invite inspection of the
same at my yards. I have taken extra pains to procure
the best of stock selected for me by my agent in the State
of New York, who cannot be excelled as a judge of fancy
fowl. Birds of the above mentioned varieties will be fur-
nished at very reasonable rates. Also, a fine variety of
Fancy Pigeons on hand. Send in your orders for Eggs,
they will be carefully packed to arrive safely any distance.
Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 44 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the
premises of L. Blanchard. No Eggs or Fowls sent C. O. D.

6v7-1f

AVERILL'S**CHEMICAL PAINT**

Of any desired Shade or Color,

Mixed ready for application, and sold by the gallon

It is Cheaper, Handsomer, more Durable and Elastic
than the best of any other Paint.

Office, corner Fourth and Townsend streets, San
Francisco. Send for sample card and price list.

15v23-3meowbp HEALY & JEWELL, Agents.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and

Kearny, SAN FRANCISCO.

21v2-1v

FOR SALE.**ONE HOADLEY STEAM ENGINE, 8x12.**

One SEPARATOR, 36-inch cylinder; one SAW FRAME,

Hazelton Brothers' Piano Fortes

ARE CONSIDERED
By all Responsible Musicians
TO BE
FULLY EQUAL
TO ANY IN THE MARKET.

Their Superiority
HAS BEEN ESTABLISHED BY
THE MOST
THOROUGH TEST
—OF—
OVER 20 YEARS,



AND IN
NO INSTANCE
Have they failed to Give Satisfaction.
BEING MADE OF THE
BEST MATERIAL,
They will
Stand the Most Trying Climate.
EVERY INSTRUMENT
HAS A WRITTEN GUARANTEE
—FOR—
FIVE YEARS.

Send for Catalogue and Price List.

Agency at Eaton's Music Store, 138 Montgomery Street, Occidental Block, San Francisco.

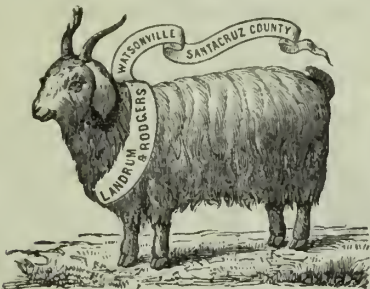
THE PACIFIC RURAL PRESS has a
larger Circulation than any other Pacific
Coast Weekly, independent of a daily issue.

BEST SHADE IN USE.
—THE—
RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture
IS FAST SUPERSEDING ALL OTHER STYLES OF
WINDOW SHADES IN USE
Wherever it has been introduced and its merits tested.
IT IS MADE OF WOOD, IS
Light, Strong & Extremely Durable.
It Lowers from the Top or Raises from the
Bottom.

And forms a complete and THE ONLY SUBSTITUTE
FOR INSIDE BLINDS.
When soiled it can be cleaned with water without the
slightest injury. Its fixtures are simple, work to per-
fection, and never get out of order.
Our facilities for the rapid manufacture of a perfect
article are now such that we defy competition in quality
and price with any window shade in the market. Or-
ders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,
No. 417 Mission Street, (Mechanics' Mill), by
GATES, JOHNSON & CO.
For sale by all Furniture and Carpet Dealers.
67-16p-3m



We respectfully invite the attention of wool growers
to our fine stock of Cotswold Sheep and Angora Goats.
We have 200 head of Pure Breed Angoras to select from;
we have some of the finest Goats in America; we
guarantee everything we sell to be as represented; our
prices are as low as any in America for the same grade
of stock. Call and see, or address,

LANDRUM & RODGERS,
13v7-cow-1f Watsonville, Cal.

BRONZE TURKEYS,
Largest and Finest Collection
on the Pacific Coast.

EMDEN GESE,
58 pounds to the pair, at maturity.
BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS,
COCHINS, BANTAMS, ETC.,
Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.
The Poultry Bulletin, a 32 page monthly, the best.
Subscription \$1.00 a year. Send stamp for copy. Agents
wanted.
Address: M. EYRE,
Napa, Cal.
Eggs for Hatching, packed to travel safely by
rail or stage. 3v7-3m-16p-sp

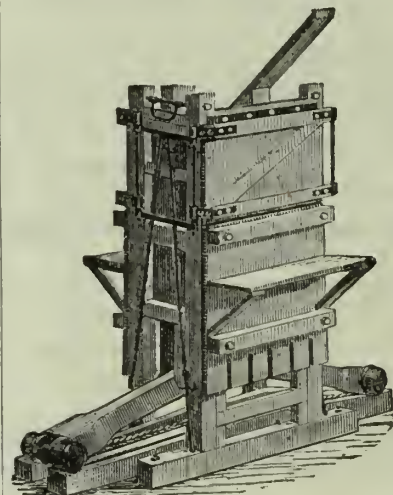


EGGS FOR HATCHING,
—FROM—
First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3
per doz; Buff Cochins, \$3 per doz; White Faced Black
Spanish, \$4 per doz; White Leghorn, \$5 per doz. Bdf
Cochin and Light Brahma Fowls for sale. Address:
G. A. DEAN, Pacific Straw Works,
12v7-3m-16p 335 Bush St., San Francisco.

For the very best Photographs go to BRAD-
LEY & RULOFSON'S GALLERY, with an "Elevator"
429 Montgomery street, San Francisco. 2v7-6m

"THE EAGLE HAY PRESS."
THE KIMBALL MANUFACTURING COMPANY,
OWNERS OF THE PATENT AND SOLE MANUFACTURERS ON THE PACIFIC COAST,
COR. FOURTH AND BRYANT STS., SAN FRANCISCO, CAL.



Several years were devoted by the patentee to the
perfection of this powerful press.
Its unprecedented sale at the East induced the Kim-
ball Manufacturing Company to introduce them in Cal-
ifornia and the Pacific States.
During the past season a number of important im-
provements have been made, in order to gain all the
power desired in condensing the weight and size of the
bales. The wood and iron of the frame have been in-
creased and strengthened, and it is now the most per-
fect and powerful press in use.
It Possesses Other Advantages:
Being cheap, simple to manage, with no intricate ma-
chinery to get out of gear, thus losing time waiting for
a new piece.
All who have used these presses pronounce them
superior to anything used heretofore.
The power applied by means of two levers increases
in ratio to the resistance; and as the levers approach a
perpendicular position, the power can be scarcely esti-
mated.
Three men, with one horse, can bale from ten to fifteen
tons per day; each bale weighing from 300 to 350 lbs.,
using less rope than any other press.
When a bale is pressed and fastened, the follower
runs down of its own weight and the bales can be
taken out on either side.
On account of its great power, it is well adapted to
pressing hides, rags, cotton or moss.
The particular attention of wool growers is called to
our improved Wool Press, constructed on the same
principle, which was tested at the State Agricultural
Hall, Sacramento, April 18th, 1871, and stood the test of
a bale of wool weighing 550 pounds. Reference,
Major Robert Beck.
These presses are manufactured in San Francisco by the Kimball Car and Carriage Manufacturing Co., who
have a stock constantly on hand. Prices \$250.00 for Hay Presses; \$350.00 for Wool Presses. Weight of Hay
Press, 2,500 lbs.; Wool Press, 3,500 lbs. Can be shipped in pieces or set up. 13v7-2am-3m

SEEDS! SEEDS!
CROP OF 1873.

I am now receiving a choice collection of
Vegetable,
Agricultural,
and Flower Seeds,
Containing all the BEST varieties, and selected with
great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER,
WHITE CLOVER.
FOR SALE AT WHOLESALE OR RETAIL.
GEO F. SILVESTER,
No. 317 Washington Street,
6v2-1y16p SAN FRANCISCO.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock;
one of the oldest and best yards of pure
bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:
Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure Whitefaced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California
Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-1f-16p2

PURCHASERS please say advertised in Rural Press.

J. WAGNER,

MANUFACTURER OF

FRENCH BURR MILL STONES AND
PORTABLE MILLS.



General Mill Furnishing. Portable Mills specially
adapted for Farmers' use. 113 and 115 Mission street,
San Francisco. 13v7-3m-2am

W. M. BRANDON. JACOB W. ROGERS

BRANDON & ROGERS,
California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property
throughout the State of California. Farms to exchange
for city property and city property for farms. Eastern
property to exchange for California property. Tracts
favorably located, furnished for Colonies. A large list of
property to select from. Money invested for other parties
on advantageous terms. Long experience in the business
and extensive acquaintance in California and the Eastern
States, enable us to effect speedy and satisfactory sales and
exchanges. 20v6-1y-16p

DR. ABORN, OCUList,
Catarrh, Throat and Lung Physician.

The Most Difficult Cases are invited to call.
Offices and Laboratory, 213 Geary street.
Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M.
13v7-1m-16p

[ESTABLISHED IN 1862.]

New York Seed Warehouse,
R. J. TRUMBULL,

427 Sansome street, San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants,
Ornamental Shrubs, Fruit and
Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of
Vegetable and Field Seed of all valuable kinds.
CHILE AND CALIFORNIA ALFALFA, of best quality, in
quantities to suit, at the lowest market rates.
MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD
GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS,
FIVE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER
SEED, etc.

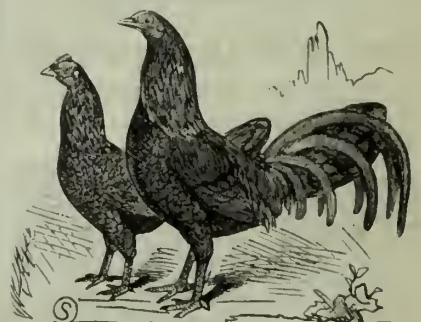
Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which
are offered at Nursery prices, free of freight charge to
San Francisco.

To parties desiring to purchase anything in the above
line, I will send any of my catalogues FREE OF CHARGE.
BULB CATALOGUE now ready. SEMI-TROPICAL CAT-
ALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE,
embracing Seeds of all the valuable varieties, Flower-
ing Plants, Ornamental Shrubs, Fruit and Shade Trees,
etc., ready Nov. 16th. R. J. TRUMBULL,
15v6-6m-16p 427 Sansome st., San Francisco.

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than
Poor Ones!

OAKLAND POULTRY YARDS,
COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.



GAME FOWLS!

Warranted to Stand Steel.

Prize winning strains of the following varieties, just
received from the East: Earl Derby Games, Red Pile
Games, Blue Pile Games, Heathwood Games, White
Georgian Games, Black Breasted Red Games and Silver
Duckwing Games. Eggs, \$12 per doz; guaranteed to
reach the purchaser safely.

For further information send stamp for Illustrated
Circular, containing a full description of all the best
known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed
9v1f

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas
and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.;
Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs
carefully packed and warranted fresh. Chickens for
sale. No Eggs sent C. O. D. P. J. PHILIPS,
11v7-1m 608 Clay street, S. F.

More than double the number of Farmers and
their families read the PACIFIC RURAL
PRESS than any other journal on this
Coast.



Volume VII.]

SAN FRANCISCO, SATURDAY, APRIL 4, 1874.

[Number 14.]

Lack of Flavor in California Apples.

When California pears were first shipped to the East, even the most partial of the local fruit growers there, at once admitted that these importations far excelled their own productions in size and in all points relating to beauty and attractiveness. They were also willing to concede their superiority in keeping qualities. But in regard to flavor they at once declared that they lacked character. The same charge, but in a still more emphatic manner, is made against our apples.

That our pears will not compare even in flavor with those of the Atlantic States, our fruit growers and home consumers, in general, deny; and even in the East, the question is now considered as possibly having two sides to it. But with regard to California apples, there can, we think, be but one opinion; namely: that they are, in a remarkable degree, lacking in strength and variety of flavor. Apple consumers here universally acknowledge it, and so little is expected from California apples in this respect that the growers give little consideration to the question of flavor; and as a consequence of this indifference in regard to all fruit qualities excepting size and beauty, varieties have become so confused that dealers, and even producers, scarcely know what they are selling, further than that they are apples.

A gentleman, lately from New York, wished to purchase some apples from a fruit grower, who was selling his stock of beautiful apples.

"What have you here?" asked the customer. "Why, apples, of course," replied the owner, rather pitying the greenness of his new customer.

"Yes, I see they are apples," said the gentleman, "but what kind are they?"

He was told that there was no particular name for them.

"There is one more question I want to ask about them," said the stranger: "Are they sweet or sour?"

"Well," said the patient owner of the apples, "they are not very sweet, nor very sour."

Here we have a just estimate, properly expressed, of the character of California apples. They are neither very sweet nor very sour. For, as we cannot produce as sour apples as are grown in the East—some of which, to use a standard expression, would make a pig squeal to eat them—neither are our sweet apples so very sweet as theirs.

Not only are these extremes of sweet and sour wanting in California apples, but we fail to secure the varied delicacies of flavors which characterize the scores of varieties of apples sold in the Eastern markets, and those varieties possessing marked individuality of flavor. The Spitzenberg, for instance, are greatly modified in flavor, when acclimatized here. Those who are familiar with the apple instanced above, as it is grown at the East, know that a plate of them placed upon the table in winter (and they should not be brought forth for eating until mid-winter) will fill the room with their invigorating odor; and they will also testify that the flavor is fully equal to the odor.

The most partial of Californians will scarcely claim that our Spitzenberg apples are up to this standard, though with us they are large, smooth and shapely; while at the East they are small, warty and one-sided.

But California is not alone in its inability to retain the strong flavors and odors of apples. A similar defect, but in less degree, is charged against the apples of Wisconsin. We have heard residents of that State declare, that in a darkened room they could distinguish between New York apples and those of Wisconsin by the odor alone.

For the fruit-growers of California and Wisconsin to deny that their apples lack the extremes of sweet and sour, and also the finer points in flavor and odor, would be but another instance of the unwarrantable sensitiveness to criticism, so characteristic of new country producers. And to neglect to supply this want as far as possible, would be short-sighted, and would spite nobody but ourselves. Our apples are not sufficiently sour to make good cider, or for cooking purposes, nor sweet enough for rich, delicious baking-apples. Besides, there are many fruit-eaters, who, for a common eating-apple, require one or the other of these extremes. Could we supply these wants, adding the minute differences of flavor alluded to

above, the satiety which follows the eating of fruit, which is "neither very sweet nor very sour," would disappear, and there would be vastly more fruit eaten; the advantage being as great to the consumer as to the producer.

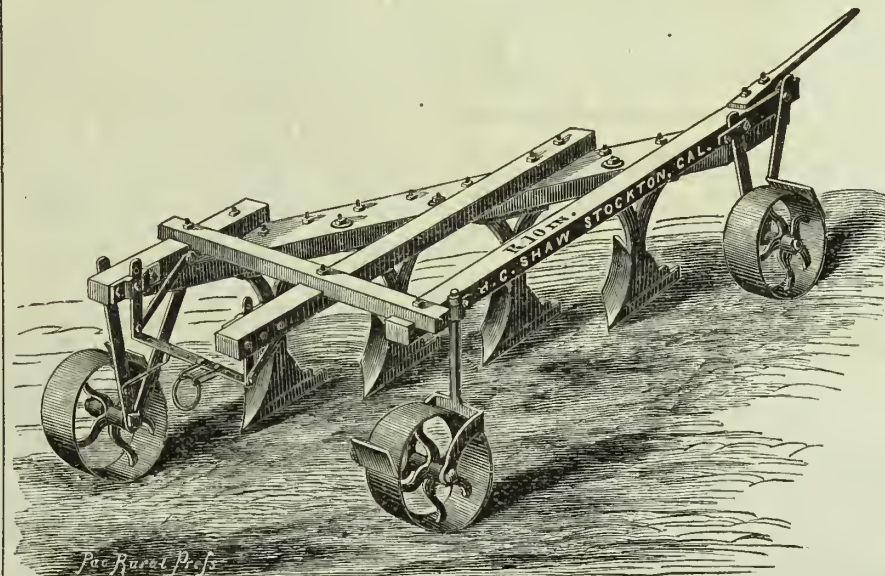
This "toning down" of the flavor of apples is undoubtedly produced by change of climate; and such being the case, we must not expect a "perpetual cure," even were we to introduce the most radical change. And in order to successfully compete with our Eastern rivals, we shall probably be compelled to keep up an importation of trees and scions belonging to varieties which possess these characteristics.

The acknowledgement of this inferiority and our indebtedness to our Eastern neighbors, should not occasion any mortification; for if we are forced to acknowledge that our friends in New York and the New England States grow

The Stockton Gang Plow.

In 1866 the firm of Webster Bros., Stockton, bought the patent right of the famous Baxter gang plow. For five years the popularity of this plow was very great, but in the present age of improvement something more was desired, and the customers of this old established agricultural implement house of Stockton began to ask for a new departure in the gang plow line. The implement which we herewith illustrate is the result of the attempt to perfect the old Baxter plow.

When Mr. H. C. Shaw succeeded Webster Bros., in 1872, by calling to his aid the experience of eighteen years' direct dealing with the farmers of the San Joaquin valley, both of him-



SHAW'S STOCKTON GANG PLOW.

sourer apples than we can; we think we can claim, as an offset, that Human Nature also loses a large portion of its acidity by exposure to the climate of California.

Farmers Shipping their own Wheat.

We have been furnished with the following facts and figures in regard to a cargo of wheat shipped from this port, last season, by the barque Kale. This barque was loaded by several farmers of San Joaquin county, through Lambert, Palmer & Co., of this city, as their agents.

The cargo was sold at Liverpool, in lots, between the 30th of September and 10th of October last, at an average of \$3.10 per cental, netting to the shippers, clear of transportation charges and interest on 70 per cent. advance, \$2.01½. In order that our readers may form some idea of the nature and amount of the various charges attending the shipment and sale of a cargo of wheat, we give the following bill of particulars, as rendered to Lambert, Palmer & Co., by their Liverpool agents, on the above cargo:

	£.	s.	d.
Marine policy stamp.....	1	3	9
Bill stamps.....	3	5	0
Cablegrams and Postage.....	15	9	2
Insurance.....	58	17	4
Dock and Town Dues.....	85	4	5
Dock charges, Weighing, Landing, Etc.....	75	12	3
Delivering, Busheling, Selecting, Etc.....	86	19	9
Fire Insurance.....	10	17	6
Commissions and Guarantee.....	576	6	8
Freight.....	3857	6	6
	4771	2	4

It will be seen from this statement that the charges in Liverpool for commission, port expenses, insurance, etc., amount to nearly one-quarter as much as the freight charges. In the above case no commissions were charged in this city.

It is estimated that eight thousand acres of grain more than usual have been sown this season in Santa Barbara county. The coming crop has been set at 300,000 centals of wheat and 600,000 centals of barley.

One Crop or Many.

We have again and again urged the necessity of a more diversified agriculture. It seems hardly necessary to return to the subject, and most of our friends have doubtless, at one time or another, suffered from depending upon the returns of a single crop, which may have fallen short or failed altogether; yet the matter still appears to need urging.

It is not always convenient to practice a system of division. An orchardist or small-fruit raiser can not well attempt at the same time to raise wheat or to graze; and the situation which enables him to successfully cultivate fruit and market vegetables, would hardly be suited to the more extended operations of grain growing. Our Oregon friends who cultivate cranberry marshes cannot be also general farmers, and those who are most successful in raising hops, tobacco and grapes, are those who devote their energies exclusively to the one definite purpose. When it happens to be a good year for a particular crop, that is, a year of good yield and also strong demand, the specialist profits largely; but, as it more often happens, something adverse turns up, and then the general farmer has the best of it.

In California, farms are generally much larger, as yet, than in the Eastern States, and each farmer is more dependent on his individual resources. So much the greater, then, is the necessity for a division in culture. So far as practicable, every farmer should be perfectly independent of outside aid. For a farmer to buy fresh vegetables, fruits, eggs, etc., which he could as well raise himself, simply argues a want of thrift.

The advantages of a diversity of products have thus been summed up: "The general system enables the farmer to more economically make use of his own or hired labor—work can better be distributed throughout the year. It is, as a rule, better adapted to retaining or increasing the fertility of the soil, and it secures the farmer from the evils following the fluctuations in price in all specialties." To go into detail would call for a much longer article than we have room for. But it is at least worth while to repeat that every farmer should have his own vegetable garden.

This need not be a very extensive affair, but should have a capacity of supplying the family with all the fresh vegetables necessary. Besides the more common, heavier ones, the delicate early and late varieties should be raised. In most cases it costs no more, in time and trouble, to produce the finer varieties than the coarse.

When the main reliance is made upon two or three principal crops, these should be, so to speak, antagonistic to each other; that is, of such a character that one will profit by moisture where another would rot; and maturing at as wide intervals as possible, so as to distribute and hence lighten the labor of harvesting. A selection can sometimes be made which will even admit of two crops a year. The rice crop of China is, we believe, practically a double one; the earlier may fail and the later succeed, or the reverse. We have similar crops.

One object made to raising many different crops is that the plan requires too close fencing, which is manifestly absurd, as on our large farms the sections into which they would thus be divided would be as large as could be handled easily, and besides, it is not always essential that there should be fences at all between the areas allotted to separate purposes.

"It seems paradoxical, but we cannot always afford to cultivate those crops alone which seem to pay the best." By keeping several irons in the fire, independence and comfort are assured; and these, after all, are, or should be, the great objects in farming.

THEY are using Chinamen as horses up in the tule lands and hitch a double team of them to a big rake to harrow in the seed.

It is said that the Agricultural Department at Washington has distributed plants of the Eucalyptus for the purpose of encouraging its culture, more especially in the Southern States.

An old farmer said: "When I die, I am going to leave behind me, as a heritage for my children, the home where they were born, made as beautiful as my means and educated taste would allow; pleasant memories of the home fireside, and of the sunny summer days, and a true regard for the dignity and worthiness of the calling which their father followed." It is a capital legacy.

THE area of cultivation in the delta of Kern river, though much larger than last year, will prove insufficient for the local demand.

CORRESPONDENCE.

The San Joaquin Irrigating Company.

EDITORS PRESS:—The letter from the San Joaquin and King's River Canal and Irrigation Company, addressed to Governor Booth, which appeared in print some weeks ago, is significant; and the true purport of the article seems to have passed unnoticed.

The Press commented briefly upon the letter, calling it a fair proposition from the company, and there the subject was dropped. The letter states that "the present irrigation corporation have expended \$600,000 in securing water rights, right of way, surveys, and in the construction of an irrigation canal, which is now completed some 40 miles in length, and that they are engaged in prosecuting the work. The enterprise was inaugurated by the present corporation, who are successors to the original projectors, in 1871. The enterprise was undertaken as a private speculation, and the corporation received from the Legislature the right to appropriate the inland water of the State for irrigation purposes, and gave the right of way over public lands for irrigation canals and ditches. And these proceedings on the part of the Legislature were sanctioned by the courts of the State.

"During the last year, and after the expenditure of a large amount of money on the undertaking, there has been much discussion by the press and the people, indicating a public sentiment in opposition to the ownership of such property by individuals and incorporations."

"We, the undersigned trustees of this company, do not wish to occupy an attitude in opposition to the public welfare. We therefore propose that a law be passed for the condemnation of the canal, surveys, water rights, lands, and all the property, contracts, etc., of the company, and that the land be appraised by a commission appointed by your excellency, or the Legislature, and taken by the State at the price that such commission may designate."

Such, in brief, is the substance of the letter which was signed by the trustees of the company. The communication is, no doubt, correct as far as it goes; but it does not give a full statement of the facts of the case. The letter says that no opposition was made to the project or proceedings of this irrigation company until within the past year. But not a word is said about the propositions which were made by them from time to time to the farmers of the San Joaquin valley in the form of contracts for subsidy. Not a word is said concerning the proceedings on their part, which led the opposition to their enterprise, which has been so decidedly manifested during the past year. And these little omissions I shall take the liberty of explaining, thus making this letter more comprehensive.

This first contract for subsidy asked for one-half of the land in the proposed irrigated district; the second, for a mortgage on all the land so situated; while the third contract was a combination of the other two, with the addition of some slight improvements.

So long as this irrigation corporation receives all the favors they asked from the Legislature and the people, so long as they could carry on their enterprise at the expense of the community whom they attempted to deceive, they were satisfied; but no sooner were their proceedings questioned, and their intentions made known—in a word, no sooner was their scheme exposed than they proposed to abandon it; but, true to their instincts, and observing the old adage—"put money in thy purse"—they do not propose to lose by the operation.

Finding they have not counted the cost of their undertaking, and that they have an unprofitable job on their hands, they coolly ask the State to rid them of it, by paying the price of the canal from the public treasury, making the people's money foot the bill at last.

I cannot see wherein the State is under any obligation to help this irrigation company out of their difficulties, more than it would be to make good the hopes of some San Joaquin farmer who had sowed some thousands of acres of ground to wheat and lost his expected crop some season of drought.

The San Joaquin Irrigation Company's canal has been managed by experienced engineers familiar with the work of constructing similar ditches in foreign countries. But their works as carried on here have been severely criticised. It is thought that the enormous expense incurred in the construction of their canal is owing to mistaken management. I do not know how much truth there may be in these statements; but some of their works have washed away, and it was thought by many that a wet season such as this has been would prove disastrous to the canal, destroying the banks and making the work and expense of repairing the damages almost equal to the expense of constructing the ditch.

Irrigation canals are as yet an experiment in this State; and the San Joaquin canal may have been managed as well by the company who owns it, as it would have been by any other corporation; and if it has proved a failure, instead of a success as was expected, the company must take the consequences. Let them accept the situation and make the best of it, instead of trying to saddle their "elephant" on the shoulders of a State which is already burdened by the grievances of numerous scheming corporations.

SAN JOAQUIN FARMER.
Lockford, March, 1874.

A Question About Seed.

EDITORS RURAL PRESS:—Permit me to call your attention to the great importance of having good seed, and to my experience and mishap in not getting it. A year ago last November, your paper contained an illustrated sample of choice carrots for sale by Trumbull of your city. Having ground eminently adapted to their growth and being anxious to avail of any improvements in kind, I sent to Mr. Trumbull and got ½ lb of each variety, and sowed them in drills my usual way, but nary a carrot came up, and I thought I might possibly have put them in too late, as the dry winds soon set in.

This year I again prepared my ground, and sent again for seed of Trumbull, and put them in in splendid condition during the warm spell in January, and nary a carrot has made its appearance; and this too in fine sandy loamy soil richly manured, and I am quite confident the seed is not good.

I also note one of your correspondents from San Diego makes similar complaints of bad seed and is obliged to send East for his. Why should a seedsman here not have as good seed as at the East; and why should they sell seed without knowing it to be good? It is a serious and aggravating matter to a farmer to be thus imposed upon, and a serious loss. Why cannot a seed store be started under the auspices of the Granges? Respectfully yours, SONOMA.

Sonoma, March 22, 1874.

[We showed the above letter, in proof, to Mr. Trumbull, the seedsman referred to, in order that his defense should be published in the same issue as the complaint of our correspondent, "Sonoma." In explanation, therefore, Mr. Trumbull makes the following answer.—EDS. PRESS.]

EDITORS PRESS:—Permit me to thank you for your kindness in showing me the letter you received from "Sonoma," which reflects rather seriously on my wares, if not on my honor, and which you feel called upon to publish. Your courtesy affords me an opportunity of replying, and to you I feel very much obliged. Very much might be said, but I will be as brief as possible.

The seed (carrot) sold to "Sonoma" last year, was from the identical stock sold to all my customers. "Sonoma" says that "not a carrot came up." He is the only one to whom I sold the seed who has complained either by private letter or who has ventured to publish his ill success in the RURAL or any other press, if any such there be. More, I took packets of the same seed and gave them to my gardener, who "sowed them in drills" in my garden, and in the very poorest part of it, and succeeded to such a degree that he occupied his spare time in thinning. I have a few of these carrots still growing, which I will be happy to show "Sonoma" or any other party skeptically inclined; or if he cannot come, which I would be really glad to have him do, I will send him a sample by mail.

About two months and a half ago I had a small lot of ground plowed, and into it I had harrowed a mixture of barley and oats. Instead of a uniform growth, which I expected, after a lapse of two months I found a growth of two to three inches in spots so remote that I ordered the field re-sown and re-harrowed. As yet I have not denounced the party from whom I purchased my seed-grain, nor have I yet determined on publishing him in the RURAL. I have no doubt about the freshness and vigor of the seed I had sown, nor that the labor attending its sowing was well performed, yet it "did not come" as I had expected it would. Why? The weather proved very unfavorable, and what was not rotted, beside the little that did come, was carried off by birds. This is my philosophy. But why did "Sonoma" not succeed in raising carrots from the seed he purchased from me? I am willing to admit that his soil is good, that it was properly prepared, and that the seed was uniformly covered, and yet all these precautions will not bring success, if moisture and warmth are wanting.

There is no doubt in my mind that the want of moisture last season, and the excess of moisture this season, with the continuous cold weather, are the causes of his failure. Possibly small birds may have preyed upon the germinating seeds, as they do in some sections to a very great degree. In my own garden, birds have cleaned entire rows of germinating cabbage and radish this season, but whether the carrot is as sweet a morsel to their taste I do not know. My carrots are not sown yet this season, but will be, I hope, within a few days; and the seed I shall use will be from the same stock as that sent on "Sonoma's" order a few days ago, and I expect a crop. Why "Sonoma" should send an order to me for a second supply of carrot seed this season, when, as he states in his open letter, that seed purchased from me a year ago produced no carrots, and that from seed purchased from me this season, though sown in January, "nary a carrot has made its appearance," and being "quite confident the seed is not good;"—why, in the face of all this, he should order any more of it, I don't understand. On his order of the 21st instant, I sent him two varieties of carrot, half a pound of each. If he is "quite confident the seed is not good," why does he order it? The reader may answer this for himself.

Your San Diego correspondent may have just cause for aught I know, to complain about the seeds he has purchased on this Coast. I will venture the assertion that none of them

were purchased from me. I aim to get the very best seed to be had, ignoring altogether the cost of the same. If Mr. Henderson furnishes reliable seeds, I do the same, for most of my vegetable seeds originally come from the same source from which he receives his supplies. If Mr. Vick furnishes reliable flower seeds, I do the same, for most of my flower seeds come originally from the same source from which he receives his supplies. I exercise the utmost care in the selection of seeds, and come from where they may, or by whomever grown, if I have any doubts about their freshness, or truthness, I test them, and if not good, they are destroyed. Our main dependence, as yet, for a supply of good seeds is on the Atlantic States and Europe. Very few varieties of seeds are grown here, and peas and beans almost entirely make up these few, so far as garden seeds are concerned. For the coming season, I have completed arrangements for growing a variety of seeds for my own trade. I am confident our California soil and climate are well adapted to maturing seeds, superior perhaps to those grown in any part of the world.

If "Sonoma" will inquire of the Grange officers who are purchasing seed of me, and in large quantity, he will find that they do not think they have cause for complaint. This seed subject is one of great importance to all classes, but more especially to our agriculturists. I wish it was better understood by them, in which event honest seed-dealers would be less exposed to the attacks of the few whose ignorance of the subject should cause them to hide their heads. R. J. TRUMBULL.
San Francisco, March 28th, 1874.

A Farm Hand's Complaint.

EDITORS PRESS:—I feel like giving the public a few ideas about the way farm hands are treated by some of the farmers. There has been a good deal written on this subject lately, especially since the organization of the Granges. I will speak from my own experience.

I have been a farm hand for seven years, and have worked for a great many different farmers during that time. Now I am going to lay prejudice aside and speak the truth. The worst class of farmers to work for are those who farm on a large scale; those who are able to provide better for their hands if they would. If we work for a poor farmer we get a bed in the house, and sit at the same table with the family, and sit at his fire and read his papers, and enjoy the comforts of his house generally. But with the large farmers we have to furnish our own bed, if we have any; if not, may be he will be kind enough to give us an old piece of blanket or quilt, or a few old sacks to cover ourselves with. He will tell us to go out in the barn or in the granary, or to the hay stack to sleep. Then when we get up in the morning and take care of our teams, we stand around the barn until the cook (a Chinaman usually) says breakfast is ready. Then we walk around the house to the kitchen; there we find a place to wash ourselves out of an old barrel or a milk pan; then we wipe on the towel or piece of barley sack, that hangs there for us only; then comb our hair—that is, if we happen to have a comb of our own. As a general thing we have plenty to eat, such as it is; but it is cooked in such a style that we can scarcely eat it. The farmer expects us to go to the field and do as much work as though we had plenty of the best to eat and a good place to sleep. If we want to go any place we have to walk; he would not let us have a horse to ride to save our lives; he will tell us to be on hand to go to work in the morning. If we are walking along the road and one of them overtakes us we scarcely ever ask for a ride, because we know that he does not like to have us ride with him.

If the farmer gets good steady hands, as he calls them, he will keep them just as long as he has plenty of work for them, and just the minute the work is done they must go, rain or shine. He doesn't say "Boys, stop until the storm is over." No, he would not let them stop if they offered to pay for their board, he would not have them around his place; they have to take their blankets and clothes on their back and march—to town or through the country—to look for another place to work; and thus they are treated by the rich farmers.

I have noticed a considerable change in regard to the treatment of hands since the organization of the Granges, and if they continue to prosper we soon will have nothing to complain of.

It is a rule with most of the farmers to give their hands but two meals on Sunday, especially in the harvest season. Now I think it would be much better to give three meals, because they would not go off to town or a hotel to get their dinners. They would stop at the place and be on hand to work on Monday morning. Men who follow a threshing machine are worked very hard by every farmer they work for, and they ought to have plenty to eat and drink on Sunday as well as any other day.

FARM HAND.
Stauislaus county, March 15, 1874.

[Our correspondent's lines seem to have fallen in rather hard places. There are, no doubt, such farmers as he describes, but we are sure that they are exceptions, not the rule. It is not characteristic of California farmers, as a class, to be either unjust or close. If such is the character of those for whom "Farm Hand" has worked, we can only sympathize with him and hope that, guided by the mirror of this plain speaking, they may change for the better.—EDS. PRESS.]

Native California Coffee.

EDITORS PRESS:—Your correspondent's description of wild coffee was such that the coffee was easily recognized. I send you a sample which I found under a bush. Although at this season of year the berries are either growing, or have been destroyed, I found by careful scratching among the pile of rocks, under a bush, a few seeds, but not enough to test their value as coffee. If this proves to be real coffee in a wild condition—it has all the appearance of the genuine—the chapparal belt can produce enough to supply the State.

The bush has only been considered a nuisance, as it grows near springs of water on land suitable for gardening purposes. I have remarked that when the berry is black ripe it is greedily devoured by cattle, sheep and goats. By many it has been thought to be poisonous. For want of a better name, it has been dubbed bastard willow. The coffee and the willow grow together in perfect harmony, and require about the same conditions.

If it really is valuable, there will be no difficulty in propagating—the trouble has been to get rid of it, for so long as a rootlet remains there will be a bush. You will notice that one of the seeds sent has sprouted. Sand and rocks seem to be best for starting them. Only prove that the sample forwarded is good coffee, and these good-for-nothing chapparal hills will give you all the coffee necessary to break up the "rings." JOHN TAYLOR.
Mount Pleasant, March 15, 1874.

Another Specimen.

EDITORS PRESS:—Five years ago, while out on a hunting trip in Calaveras valley, I chanced to see some seeds of this shrub or tree. It was in a secluded spot, and the seeds were among the droppings of a bear, or other wild animal. They had the coffee-shape, though plump and inclining to roundness, with a cut-like indentation on one side, not quite so long as some of the cultivated kinds, but which, I conceived, must be a variety of coffee growing wild. I only raised one tree from the seed I planted, now six feet in height, and well-formed by pruning. It is identical with some I saw many years ago, on the western borders of the Sierra Nevada mountains, upon which the fruit, as I then supposed it to be, was growing. I found the kernel (which I supposed to be the cherry pit) covered with a fleshy skin, which I found bitter to the taste, and which reminded me of the wild, black cherry, in its general shape and bitterness, though not so smooth or lively in color. I will send you a branch from my tree. Would like to know if it is the same as that referred to in your last issue. I. A. W.
Santa Clara, March, 1874.

[The sample sent is identical in nature with those previously noticed by other correspondents, and by them forwarded to us.—EDS. PRESS.]

Still Another.

EDITORS PRESS:—Please answer if the enclosed is the wild coffee plant spoken of in your paper lately. We call it coffee berry, the seeds of the berry resembling coffee; and the only thing I know the plant to be fit for is honey, of which the flowers furnish a rich supply. The berries look good enough to eat, but one taste of them is usually sufficient. Yours truly,
J. M. GRAHAM.

Colfax, March 25, 1874.

[It is the wild coffee. The leaves are larger and somewhat heavier than other samples we have received, but this is owing, probably, only to the more advanced stage at which they were plucked.—EDS. PRESS.]

Walnut Creek.

EDITORS PRESS:—Thinking a few notes from this secluded valley, the San Ramon and Walnut creek section, might be of some interest to the many readers of the ever-welcome RURAL, which never fails to come to hand filled with the general agricultural prospects throughout the Pacific coast, it is truly gratifying to know how our brother farmers are getting along.

In reference to this locality, the farmers are backward with their work, owing to the continued moisture of the ground, many of our prominent farmers being unable to get in land which was last year fallowed, but will be planted to corn. The dry sowing looks very promising. Some of our farmers are intending to put in flax, as an experiment, and some are turning their attention to alfalfa. A Mr. Adams has got in fifteen acres of the latter; others are putting in small quantities to try it. I have no doubt but that it will do well in this valley. Mr. J. Larkey, one of our thorough-going farmers and Patron, is planting out a large number of Eucalyptus trees, which will add much to the beauty of his ranch, of eight hundred acres. It is his intention to encircle it in lots at a distance of twenty feet apart on each line. Others are putting out small quantities.

The town of Walnut Creek is situated at the junction of the San Ramon and Walnut creeks; it is as beautifully located a village as there is in the State. It is on the west side of the famous old Mount Diablo. There are three principal stores, one hotel and two blacksmith shops. The Methodist church is a neat building, erected at a cost of \$15,000. We have also a good school house, which cost the same. The Patrons of Husbandry occupy a comfortable hall, over one of the stores. A GRANGER.
Walnut Creek, March 16, 1874.

The Duty on Jute and Grain Sacks.

EDITORS PRESS:—In your last week's issue, I see a report of a committee appointed, by the San José Farmers' Club, to consider the matter of petitioning Congress to repeal the duty on jute and sacks. The report has a true ring; it is a true representation of the wrongs suffered by the farmers, mechanics and day laborers, and significantly asks the question, "How long will the farmers suffer these wrongs? Will the present organization of farmers in this and other States take hold of this question (the tariff question,) or will they waste their time and strength on less important ones?" They also truly say that railroad discriminations against the farmers are but a speck upon the horizon compared with the tariffs.

There is but one conclusion in the report which the farmers should dissent from, which is this: That if Congress will not repeal the duty on sacks, we should petition Congress to suspend the duty on jute machinery for two years. I would willingly ask Congress to suspend or repeal the duty on jute machinery, if they would also repeal the duty on sacks; but for the farmers to pay duty on sacks and interest themselves in securing machinery free of duty, would only be to strengthen the hands of the oppressors; to build up a business that would profit by our taxation, whose interests would always lead them to oppose the reduction of the duty on sacks. Suppose we should secure the repeal of the tariff on machinery, and thereby cause the manufacture of fourteen millions out of the fifteen millions of sacks needed in California; does any one suppose that we would get our sacks for any less than we would if all were imported?

If we should add to our population the number necessary to manufacture our bags, and add to that all the workmen engaged in the cotton, woolen and iron manufactures in the United States, we would still have thousands of tons of surplus wheat to seek a market abroad, the price of which surplus would still govern the price of the entire wheat crop, and we would get no more for it than we do now. I am not opposed to manufactures, but do not want to be taxed for their benefit. Wealth, population and manufactures are always found together; it is a common fallacy that population and wealth follow manufactures; the reverse is true—i. e., manufactures follow population and wealth, and no hot-house process can bring manufactures into the requisite healthy existence, where population and wealth do not exist. M.

Dixon, March 20, 1874.

Dissolving Strychnine.

EDITORS PRESS:—In RURAL PRESS of November 29, 1873, Mr. Anderson gives information how to dissolve strychnine; I have tried hot water, boiling water, vinegar and muriatic acid—but I cannot dissolve it. If somebody would give another way to dissolve strychnine, I would be very much obliged, and perhaps more of your readers.

To destroy cabbage lice the striped bug, etc., the easiest and cheapest way is a decoction of tobacco leaves or stems, applied with a little syringe. J. E. ARNOLD.

Yuma, Arizona, March 20, 1874.

[The strychnine used by our correspondent must have been at fault. The ordinary mode of making a strychnine solution, as practiced by druggists, is to dissolve in acetic acid. Vinegar, which is the same acid in an impure state, will also answer, provided it be strong enough. The method of dissolving strychnine—sulphate of strychnine—as stated in the United States Dispensatory, is to use "water acidulated with sulphuric, muriatic, nitric or acetic acids." The acid need not be in large proportion—a dilute mixture would suffice.—Eds. Press.]

VACA VALLEY.—A correspondent, writing from Vaca Valley, says that the continued rains in that locality have seriously injured farming prospects. A neighbor, who had sowed wheat on corn land, last November, which had been drowned out, made a second attempt in February, and met with the same misfortune. Toward the end of February the farmers got a good run with the plows. Many in Pleasant valley planted corn and beans. Our correspondent planted in nineteen acres of corn, and said that he expected to give the ground a good harrowing when dry enough, and plant again. In Pleasant valley, corn on ridges, in sandy soil, escaped rotting—otherwise not. Tomato plants were looking rather puny; some had failed altogether. Five thousand plants, on the farm of our correspondent, were in first bloom March 15th. Pruning in the vineyards was being done by Chinese, in their own fashion, and it is expected that in future there will be more complaint about the vines being sun-burnt.

Good Advice.

EDITORS PRESS:—"Bachelor," in RURAL of March 21, wants to learn how to make a good graham loaf, without taking so much time as the receipts require. The best way that I can think of, is for him to get a wife who knows how. The thing which I most deride, is a man who is trying to do woman's work. Visit "Bachelor" in his kitchen while he is fussing

over the stove, and he will very likely try to impress you with the fact that he is not just then interested in graham gems.

The only interest that nature intended that he should take in them, is to cause them to disappear behind his vest pattern. Hoping that this warning voice will reach other bachelors, similarly inclined, but not past redemption, I subscribe myself, the "Bachelor's" friend, ANNE.

Stock.

The Death of the \$40,000 Cow.

The forty thousand dollars lost by the death of this cow is only an item in the list of damages to which the owners of choice stock have been subjected by losses from the same cause, abortion. This has been truly a disastrous calamity in the old dairy districts, where no efforts have been spared to secure blooded stock. The evil has prevailed during a period of several years, and though the owners are not disposed to go back to no pedigree stock, many of them look upon abortion as hereditary among blooded stock. Others consider it an epidemic which is destined to have its day.

But are we not justified in charging the breeders and owners of this choice stock with being greatly to blame in this matter, through an unwarrantable eagerness to obtain one or two points by breeding, to the neglect of other characteristics essential to the health and usefulness of the animal? Among dairymen, the only consideration is milk. They want an early milker and late milker; a flush milker and rich milker. And when, by breeding and management, they have attained, as nearly as possible, all these properties in one cow, they take the calf away from the mother too soon for the good of either, and continue milking too close upon the next coming in.

These cows, through the whole course of their lives, are pampered and petted, and put through a course of treatment, as detrimental to fruitfulness as is the routine of life adopted by the women of this country. In regard to the latter, enough is being said, and we only allude to it here to draw a parallel; and we think the parallel is so apparent, and the consequences of the violation of the laws of health are so similar, that it would be worth while to consider it, and govern our management of choice stock accordingly.

But we have even less reason to expect healthy progeny, or indeed any progeny at all from our choice stock, when we trace out the record of the lives of the males. Have our readers ever visited the stalls of any of our celebrated bulls? If they have, and have duly considered the inevitable consequences of the violation of the laws of animal health, they must, we think, have come to the conclusion that however reliable the animal may be in transmitting the characteristics of his breed, he certainly cannot be expected to transmit physical health and fruitfulness.

It is true the animals' abiding place is more like a parlor than a stall; and in feed, bedding, cleanliness and everything pertaining to stable management, he is cared for thoroughly, and even excessively. But there he stands, day after day, scarcely conscious of the changes of the seasons, his feet becoming tender, his limbs swollen, his eyes lusterless, and his flesh flabby and soft. His "out-door life" consists in being led to the water trough twice a day, and back again to his harem, at a slow and solemn pace. Yet this is the source from which the neighborhood is to be supplied with its blooded stock. Comment is scarcely necessary.

We had the honor of calling upon the celebrated Duchess, whose decease has been telegraphed to all parts of the country, and have seen her and other members of the noted family in Mr. Campbell's stable, and we are able to judge of these results from actual observation.

We hope the owners of blooded stock on this coast will provide against this danger, and see that a system of management is adopted less injurious to the health of the animals. It is a matter in which the welfare of all departments of stock is concerned, though cattle and poultry are probably the greatest sufferers.

Mange.

A correspondent writes: I send you the following clipping, from the New York Sun, containing a remedy for mange on horses, a disease which is quite prevalent in this State some years. My own horses have been troubled with it, and heretofore I did not know how to treat it. The hint may be of use to some of the RURAL readers:

Itch, or as it is more generally termed, mange, on horses, is caused by a minute insect, which burrows in the skin, causing sores, just as another nearly related species affects human beings. Of course this disease is very contagious, rapidly spreading from one animal to another whenever they are brought in contact. To cure mange it is only necessary to destroy the insects which cause it, and this may be done in the following manner: First groom the horse thoroughly, rubbing every part of the skin with a brush, and removing all the dust from the hair and the scurf from the skin. Prepare a liniment of the following kind: Animal glycerine, four parts; creosote, half a

part; oil of turpentine, one part; oil of juniper, half a part; mix all together and shake well before using. The above proportions can be followed for a large or small quantity, and it will require from a pint to one quart for a good application, according to the size of the animal. After the horse's coat has been well cleaned as directed, apply the liniment to every portion of the skin from the tip of his ears to the tip of his tail, for much depends on doing this work thoroughly. Let the liniment remain three or four days, and then wash off with warm soap suds and rub the skin dry. Wait one day and then apply the liniment again, and repeat the washing as before. Two applications will usually cure even severe cases; but if there are other animals in the same stable or pasture affected with mange, all must be treated in the same manner or your labor will be in vain. Mange is not a dangerous disease, but one that is sometimes very troublesome.

Shampooing Cattle.

The advantages attendant upon the thorough currying of the hair and hide are additional beauty, a better digestion, hence greater ease of fattening and on less amount of food, and directly and indirectly, an influence for good on the whole animal health, among which may be mentioned less liability to diarrhoea. Every stable, whether for horse or cow, should have its curry-comb and brush; to these some add the card; and there should be also a tub of water or weak soap suds, and a sponge. These should be used at least once in two days in warm weather, and any farmer who has not tried it will be astonished at the marked improvement in his cattle if he will only adopt this plan as an experiment even for a few days. Every one who has enjoyed the luxury of shampooing by a skillful barber after a long, dusty ride, can have some idea of how improved a cow or an ox will feel to have his or her skin cleansed of dust after a long, hot summer day. The cow thus treated will yield more and better milk; the ox or work horse, after his skin is cleansed, sleeps well and is rested; the next morning he goes forth to his work with an elastic step and a consciousness in every movement of health and strength. The time and care taken in cleaning their skins is more than returned in a better product or increased labor. —New York Times.

POULTRY YARD.

Capons For Rearing Chickens.

In a recent issue of the PRESS, we promised to give our readers a more detailed account of this process which the most advanced of poultry men have adopted. The considerations which have induced them to adopt it are precisely the same that should insure its general use.

The advantages claimed for it are, that capons will cover a larger brood of chickens than hens; they will adopt a promiscuous group of different ages and parentage, they are less restive when in repose, and better protection in time of danger; they are less partial in distributing food among the chicks, and rarely trample upon or throw them about by violent scratching. They exhibit more judgment in taking home and housing their broods; their time is less valuable than that of the hens, and that they manifest more real attachment to the young in their charge than is bestowed upon them by their mothers.

Our readers will be less ready to admit this last claim than any other in the list. We confess that we were a little incredulous in regard to other points as well as this, and it was to satisfy these doubts that we made an especial visit to one of the most noted poultry yards in the State; and, judging from observation and reliable testimony, we are prepared to endorse this, with other claims for the capon for rearing chickens. The broods fed in our presence were kindly as well as judiciously cared for by their mail guardians.

Some of the points mentioned above may possibly seem trivial in the estimation of many, but we apprehend that the failure to make poultry keeping pay is attributable in a great degree to the neglect of these and other points which go to form a thorough system, without which the department will never be satisfactory in any respect.

The process for training capons for raising chickens is short and simple. One or two days before the sitting period ends, the fowl is put into a box, the top of which is so low that he cannot stand up in it, thus being kept in a brooding position. The time required varies from 12 to 36 hours. The box is so constructed in its circumference as well as in height, that he cannot shift about, or even examine the chicks as they are placed under him. They should not be given to him until they are thoroughly dry. Begin by giving him one or two only, taking pains to place them under him properly. The front of the box being barred, so the chicks can go out and in, the capon will, within a very few hours, manifest an anxiety for their welfare when they go out, and the first clucking for their return may be taken as evidence that the little foundlings are duly adopted, and others may now be added, putting in a few at a time until the whole number is supplied. Fifteen chicks is a moderate

number for a capon to take in charge. This brood, as we stated above, may be made up from different settings and ages. The brood with their guardian may now be liberated, or placed in an ordinary coop; and there will be less cause for anxiety on the part of the owner than if there were one or more hens at the head of the family.

Probably a prominent cause for this sensible practice receiving so little attention in this country, arises from the fact that the caponizing process is so little understood here. If the absence of this practice is to be attributed to our high sense of propriety, it may be truly said that we have not shown a corresponding delicacy in regard to any other of our stock departments; and we are certainly sacrificing to this prejudice the advantages which are derived from its practice on cattle, swine, etc., namely: delicacy of flavor in the meat, and great economy in fattening. We are either far behind, or greatly in advance of our neighbors, in this matter; for, among several foreign nations, nearly all the males, among fowls, are caponized, the proportion left for breeding purposes being no larger than that among horses, cattle and swine.

Mr. Mechi on Poultry.

This eminent English agriculturist has the following to say about poultry: No one item on a farm pays so well as a good stock of poultry properly managed. With them everything is turned to account; not a kernel, wild seed or insect, escapes their scrutinizing eyes. Their industrious claws are ever at work, uncovering, ready for appropriation, every hidden but consumable substance. Fowls must have free access to chalk or lime to form the shells of their eggs, and grit or gravel to grind the food in their gizzards. They luxuriate on grass or clover, which are a necessity for them. In winter they like mangolds or swedes. They must have access to plenty of pure water. The quality of the eggs depends upon the quality of the food. They, like ourselves, like shade in summer, and warm, sheltered corners in winter. They must have access to shelter in wet weather. Fowls will not be long healthy on the same ground or yards—the earth gets tainted; therefore, to prevent disease, lime and salt your yards and their usual pasture once a year, say in autumn, when the rains will wash it well in and sweeten the surface.

Broods of chickens never do better with us than on the grassy brows of patches abutting upon the growing crops, either of corn or pulse, into which they run either for insects or for shelter. The roofs of the coops should be water-tight, and the coop should often be removed, having only the natural ground for the floor. The ground soon gets tainted unless you remove the coop.

You can hardly make some people good managers of poultry if they lack observation and judgement. These are especially necessary in the breeding of poultry. Your male birds should be often changed, say at least once in two years, and they should be young and vigorous. Breeding in and in will not do any more than it will with animals.

I consider winged game, poultry and birds the farmer's friends. My poultry have access at all times to my fields. Fowls are very useful in cleaning off flies. I have often been amused at seeing the neat and quick manner of their taking flies from reposing bullocks and sheep, much to their comfort.

MORTAR AND PESTLE FOR POUNDING SHELLS. To keep poultry in thrift, and furnish material for egg-shells, lime in some form is very necessary. Oyster-shells and clam-shells are much used. To pound these, a log of wood may be slightly hollowed at one end, and surrounded with a piece of tin, an opening being left to admit the handle of the pestle, which is like a wooden mallet, the striking end being armed with small bolts driven into the wood so as to leave the heads exposed. A ring to prevent splitting will be an improvement. —Poultry World.

THE earliest known mention of "wire drawers" and "wire millers," as those who produce wire by drawing were variously called, occurs in the 13th century, in the histories respectively of Augsburg and Nuremberg. Previous to that time we have only accounts of "wire smiths," or those who fabricated wire with the hammer. For the making of iron wire the best and toughest wrought iron is selected. Formerly this iron was prepared for drawing by hammering it out into convenient rods of nearly a half inch thickness. These rods were then extended and further reduced by a machine in which a pair of pincers were made to advance to the draw-plate, seize the protruding end of the rod, and being moved back and drawing the metal thus far, to relax their hold, advance again to the plate and repeat the process. At the present time iron, and usually steel, are prepared for the final drawing by passing between grooved rollers very accurately made and adjusted. The sizes of wire are conveniently distinguished in commerce and in their employment, by naming the actual diameters, and more commonly by a set of numbers corresponding.

CHEESE FACTORY WANTED.—From Franklin, Sacramento county, a correspondent writes that dairymen in his section desire that some one should start a cheese factory there, for which purpose liberal inducements would be offered. The milk of from five to eight hundred cows could be obtained for the factory, as in the neighborhood mentioned many persons make a specialty of dairying.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 32, California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

California Subordinate Granges.

[This list contains the names of Masters and Secretaries, so far as reported to us, elected to serve during the year 1874. Secretaries and others will gladly oblige us by making needful corrections.]

ALAMEDA COUNTY.

CENTREVILLE GRANGE, Centreville, Alameda Co.: JAMES PRINCE, Master; J. L. HARRIS, Sec'y.
EDEN GRANGE, Hayward, Alameda Co.: THOS. HELLMER, Master; W. L. PEARCE, Sec'y.
LIVERMORE GRANGE, Livermore, Alameda Co.: DANIEL INMAN, Master; F. R. FASSETT, Sec'y.
SUNOL GRANGE, Sunol Station, Alameda Co.: E. M. TEMESCAL, Master; W. MILLARD, Sec'y.
CARR, Master; J. L. GRANGE, Oakland, Alameda Co.: E. S. JORDAN, Sec'y.

BUTTE COUNTY.

CHICO GRANGE, Chico, Butte Co.: W. M. THORP, Master; J. W. SCOTT, Sec'y.
NORD GRANGE, P. O. Nord, Butte Co.: G. W. COLBY, Master; ALBERT CARMEN, Sec'y.

COLUSA COUNTY.

ANTELOPE VALLEY GRANGE, Colusa, Colusa Co.: H. A. LOGAN, Master; A. T. WELTON, Sec'y.
CENTRAL GRANGE, P. O. Colusa, Colusa Co.: J. P. KIMBLELL, Master; W. G. SAUNDERS, Sec'y.
COLUSA GRANGE, Colusa, Colusa Co.: W. K. ESTELL, Master; R. JONES, Sec'y.
FRESHWATER GRANGE, P. O. Colusa, Colusa Co.: I. H. DURHAM, Master; R. A. WILSEY, Sec'y.
FUNK SLOUGH GRANGE, Colusa, Colusa Co.: E. C. HUNTER, Master; G. B. HARDEN, Sec'y.
GRAND ISLAND GRANGE, Sycamore P. O., Colusa Co.: J. J. HICK, Master; J. C. WILKINS, Sec'y.
PLAZA GRANGE, Olimpo, Colusa Co.: F. C. GRAVES, Master; W. F. GREEN, Sec'y.
PRINCETON GRANGE, Princeton, Colusa Co.: A. D. LOGAN, Master; R. R. RUSH, Sec'y.
SPRING VALLEY GRANGE, Spring Valley, Colusa Co.: D. H. ARNOLD, Master; L. T. HAYMAN, Sec'y.
UNION GRANGE, P. O. Princeton, Colusa Co.: M. DAVIS, Master; ISAAC L. McDANIEL, Sec'y.
WILLOWS GRANGE, P. O. Princeton, Colusa Co.: J. W. ZUMWALT, Master; GEO. T. HICKLIN, Sec'y.

CONTRA COSTA COUNTY.

ANTIOCH GRANGE, Antioch, Contra Costa Co.: J. P. WALTON, Master; J. D. DABY, Sec'y.
DANVILLE GRANGE, Danville, Contra Costa Co.: CHAS. WOOD, Master; JOHN B. SYDNER, Sec'y.
POINT OF VIEW GRANGE, P. O. Contra Costa Co.: R. G. DEAN, Master; J. E. WARE, Sec'y.
WALNUT CREEK GRANGE, Walnut Creek, Contra Costa Co.: NATHANIEL JONES, Master; WM. K. DALY, Sec'y.

EL DORADO COUNTY.

CLARKSVILLE GRANGE, Clarksville, El Dorado Co.: ROBT. T. MILLS, Master; I. MALLEY, Sec'y.
PILOT HILL GRANGE, Pilot Hill, El Dorado Co.: P. D. BROWN, Master; A. J. BAYLEY, Sec'y.

FRESNO COUNTY.

ADAMS GRANGE, Big Dry Creek, Fresno Co.: T. P. NELSON, Master; THOS. WYATT, Sec'y.
BORDEN GRANGE, Borden, Fresno Co.: J. W. A. WRIGHT, Master; J. S. PICKENS, Sec'y.
FRESNO CITY GRANGE, Fresno City, Fresno Co.: Master; THOMAS HYATT, Sec'y.
FRESNO GRANGE, Fresno City: H. W. FASSETT, Master; F. DUKY, Sec'y.
GARRETSON GRANGE, King's River: W. J. HUTCHINSON, Master; W. PHILLIPS, Sec'y.

HUMBOLDT COUNTY.

ELK RIVER GRANGE, Eureka, Humboldt Co.: THEO. MEYER, Master; MORE MEYER, Sec'y.
FERDALE GRANGE, Ferndale, Humboldt Co.: F. L. BOYNTON, Master; G. W. GRIFFITH, Sec'y.
KIWELETT GRANGE, Arcata, Humboldt Co.: LEWIS R. WOOD, Master; D. AVERILL, Sec'y.
ROSEVILLE GRANGE, Roseville, Humboldt Co.: B. T. JAMESON, Master; H. S. OAKS, Sec'y.
TABLE BLUFF GRANGE, Table Bluff, Humboldt Co.: JACKSON SAWYER, Master; B. H. O. POLLARD, Sec'y.

KERN COUNTY.

BAKERSFIELD GRANGE, Bakersfield, Kern Co.: S. JEWETT, Master; JEROME TROY, Secretary.
KERN ISLAND GRANGE, Kern Island, Kern Co.: P. D. ROSE, Master; J. F. GORDON, Sec'y.
NEW RIVER GRANGE, P. O. Bakersfield, Kern Co.: JOHN G. DAVES, Master; JAS. DIXON, Secretary.

LAKE COUNTY.

GUENOC GRANGE, Guenoc, Lake Co.: H. A. OLIVER, Master; A. A. RITCHIE, Sec'y.
KESEYVILLE GRANGE, Kelseyville, Lake Co.: D. P. SHATTUCK, Master; T. ORNSTON, Sec'y.
LAKEPORT GRANGE, Lakeport, Lake Co.: O. CUTTER, Master; N. PHELPS, Sec'y.
LOWER LAKE GRANGE, Lower Lake, Lake Co.: A. E. NOEL, Master; HORACE STOW, Sec'y.
UPPER LAKE GRANGE, Upper Lake, Lake Co.: D. V. THOMPSON, Master; D. Q. MCCARTY, Sec'y.

LOS ANGELES COUNTY.

ALLIANCE GRANGE, El Monte, Los Angeles Co.: S. S. REEVES, Master; J. W. MARSHALL, Sec'y.
AZUSA GRANGE, El Monte, Los Angeles Co.: W. W. MAXEY, Master; J. C. PERSTON, Sec'y.
COMPTON GRANGE, Compton, Los Angeles Co.: C. W. COLTREN, Master; J. A. WALKER, Sec'y.
ENTERPRISE GRANGE, Los Angeles, Los Angeles Co.: A. M. SOUTHWORTH, Master; W. T. HENDERSON, Sec'y.
EL MONTE GRANGE, Los Angeles Co.: G. C. GIBBS, Master; P. O. Los Angeles, J. H. GRAY, Sec'y; P. O. El Monte.
EUREKA GRANGE, Spadra, Los Angeles Co.: T. C. TANNER, Master; JOSEPH WRIGHT, Sec'y.
FAIRVIEW GRANGE, Anaheim, Los Angeles Co.: EDWARD EYER, Master; D. E. ROY, Sec'y.
FLORENCE GRANGE, Los Angeles, Los Angeles Co.: JOSHUA RUSSELL, Master; WILLIAM PORTER, Sec'y.
FRUIT LAND GRANGE, Tustin City, Los Angeles Co.: A. B. HAYWARD, Master; E. R. NICOLDS, Sec'y.
LO ANGELES GRANGE, Los Angeles Co.: T. A. GARET, Master; T. D. HANCOCK, Sec'y.
LOS NIETOS GRANGE, Los Nietos, Los Angeles Co.: E. B. GRANDON, Master; P. O. Los Angeles; J. F. MAROCIA, Sec'y; P. O. Anaheim.
NEW RIVER GRANGE, Los Nietos P. O., Los Angeles Co.: WILLIS NEWTON, Master; S. G. BAKER, Sec'y.
ORANGE GRANGE, Richland, Los Angeles Co.: JOSEPH BEACH, Master; J. W. ANDERSON, Sec'y.
SILVER GRANGE, Los Nietos, Los Angeles Co.: H. L. MONTGOMERY, Master; W. P. MC DONALD, Sec'y.
WESTMINSTER GRANGE, (Anaheim, P. O.) M. B. CRAIG, Master; HENRY STEPHENS, Sec'y.

MARIN COUNTY.

NICASIO GRANGE, Nicasio, Marin Co.: H. T. TAFT, Master; J. W. NORTON, Sec'y.
POINT REYES GRANGE, Point Reyes, Marin Co.: N. H. STINSON, Master; A. H. STINSON, Sec'y.
TOMALES GRANGE, Tomales, Marin Co.: WM. VANDERBILT, Master; K. H. PRINCE, Sec'y.

MENDOCINO COUNTY.

LITTLE LAKE GRANGE, Little Lake, Mendocino Co.: B. G. MAST, Master; W. A. WRIGHT, Sec'y.
MANCHESTER GRANGE, Manchester, Mendocino Co.: JOSEPH WOODEN, Master; B. F. McCLEURE, Sec'y.
POTTER VALLEY GRANGE, Potomac, Mendocino Co.: J. MEWHINNEY, Master; T. McCOWAN, Sec'y.
UKIAH GRANGE, Ukiah City, Mendocino Co.: W. D. WHITE, Master; A. O. CARPENTER, Sec'y.

MERCED COUNTY.

BADGER FLAT GRANGE, Kreyenhagen's P. O., Merced Co.: G. H. GILROY, Master; W. F. CLARK, Sec'y.
HOPETON GRANGE, Hopeton, Merced Co.: JOHN RUDLE, Master; T. EAGLESON, Sec'y.
LOS BANOS GRANGE, Kreyenhagen's P. O., Merced Co.: G. H. GILROY, Master; W. M. VINER, Master; A. MCLEAN, Sec'y.
MERCED GRANGE, Merced, Merced Co.: W. E. ELLIOT, Master; F. E. TADLOCK, Jr., Sec'y; Agent, W. P. FOWLER.
SNELLING GRANGE, Snelling, Merced Co.: DANIEL YEAGER, Master; W. L. HAMILIN, Sec'y.

MONTEREY COUNTY.

HOLLISTER GRANGE, Hollister, Monterey Co.: J. D. FOWLER, Master; S. F. FOWLER, Sec'y; Agent, J. D. FOWLER.

SALINAS GRANGE.

EL Salinas, Monterey Co.: N. L. ALLEN, Master; J. L. CASILLAS, Sec'y; Agent, W. L. CARPENTER.

NAPA COUNTY.

FOGA GRANGE, Calistoga, J. N. BENNETT, Master; HOPKINS, Sec'y.
APA GRANGE, Napa City, Napa Co.: JAMES M. THOMPSON, Master; J. WALTER WARD, Sec'y; Agent, W. A. FISHER.
RUTHERFORD GRANGE, Yountville, Napa Co.: G. S. BURRECH, Master; J. H. GRAB, Sec'y.
ST. HELEN GRANGE, St. Helena, Napa Co.: J. H. ALLISON, Master; J. L. EDWARDS, Sec'y.
YOUNTVILLE GRANGE, Yountville, Napa Co.: J. M. MATFIELD, Master; FRANK GRIFFIN, Sec'y; Agent, J. M. MATFIELD.

SACRAMENTO COUNTY.

ELK GROVE GRANGE, Elk Grove, Sacramento Co.: OBADIAH S. FREEMAN, Master; DELLOS GAGE, Sec'y.
ENTERPRISE GRANGE, P. O. Brighton, Sacramento Co.: J. M. HELL, Master; MORRIS TOOMEY, Sec'y.
FLORIN GRANGE, San Joaquin Township, Sacramento Co.: CALEB ARNOLD, Master; WM. SCHOLEFIELD, Sec'y.
FRANKLIN GRANGE, Franklin, Sacramento Co.: AMOS ADAMS, Master; J. C. JEFFERDS, Sec'y.
GEORGINA GRANGE, Rio Vista, Solano Co.: F. M. KITTRELL, Master; GEO. A. KNOTT, Sec'y.
ROSEVILLE GRANGE, Roseville, Sacramento Co.: A. D. NEHE, Master; I. NEHE, Sec'y.
SACRAMENTO GRANGE, No. 12, Sacramento, Sacramento Co.: W. S. MANLOVE, Master; A. S. GREENLAW, Sec'y.

SAN BERNARDINO COUNTY.

RIVERSIDE GRANGE, Riverside, San Bernardino Co.: E. G. BOYNE, Master; W. W. KIMBALL, Sec'y.
SAN BERNARDINO GRANGE, P. O. San Bernardino, San Bernardino Co.: Master; J. F. GOULD, Sec'y.

SAN JOAQUIN COUNTY.

ATLANTA GRANGE, Morano, San Joaquin Co.: W. J. CAMPBELL, Master; Mrs. J. W. MOORE, Sec'y; P. O. Morano, San Joaquin Co.
OASTORIA GRANGE, Lathrop, San Joaquin Co.: SEWELL, Master; J. C. THORAN, Sec'y.
COLLEGEVILLE GRANGE, Collegeville, San Joaquin Co.: ALEX. MAYREY, Master; J. C. MCINTOSH, Sec'y.
ELLIOTT GRANGE, Ellis, San Joaquin Co.: HENRY H. WEST, Master; N. S. MISNER, Sec'y.
FARMINGTON GRANGE, Farmington, San Joaquin Co.: J. M. GROVES, Master; O. L. SHILS, Sec'y.
GRAYSON GRANGE, Grayson, San Joaquin Co.: I. G. GARDNER, Master; GEO. H. COPELAND, Sec'y.
LIBERTY GRANGE, Acampo, San Joaquin Co.: JUSTUS SCHOMP, Master; J. J. EMISLE, Sec'y.
LINDEN GRANGE, Linden, San Joaquin Co.: JOHN WATLEY, Master; JAMES WATLEY, Sec'y.
LOCKEFORD GRANGE, Lockeford, San Joaquin Co.: G. C. HOLMAN, Master; SOL S. STEWART, Sec'y.
LODI GRANGE, Lodi, San Joaquin Co.: J. W. KEARNY, Master; MRS. L. KEARNY, Sec'y.
RUSTIC GRANGE, Lathrop, San Joaquin Co.: J. A. SHEPHERD, Master; HENRY MOORE, Sec'y.
STOCKTON GRANGE, Stockton, San Joaquin Co.: WM. OVERHISER, Master; A. M. G. PHELPS, Sec'y.
WEST SAN JOAQUIN GRANGE, West San Joaquin Co.: M. LAMMERS, Master; GEO. E. MCATY, Sec'y.
WILDFORD GRANGE, Wildwood School House, San Joaquin Co.: JOS. LEIGHTON, Master; A. B. MUNSON, Sec'y.
WOODBIDGE GRANGE, Woodbridge, San Joaquin Co.: J. L. HUTTON, Master; A. S. THOMAS, Sec'y.

SAN LUIS OBISPO COUNTY.

ARROYO GRANDE GRANGE, Arroyo Grande, San Luis Obispo Co.: W. H. NELSON, Master; D. F. NEWSON, Sec'y.
CAMBRIA GRANGE, Cambria, San Luis Obispo Co.: C. H. TINS, Master; HERBERT OLMSTAD, Sec'y.
MORO CITY GRANGE, Moro, San Luis Obispo Co.: A. J. MOTHERSHEAD, Master; H. Y. STANLEY, Sec'y; Agent, A. J. MOTHERSHEAD.
OLD CREEK GRANGE, Old Creek, San Luis Obispo Co.: ISAAC FLOON, Master; R. M. PRESTON, Sec'y.
SAN LUIS OBISPO GRANGE, San Luis Obispo, San Luis Obispo Co.: WM. JACKSON, Master; E. L. REED, Sec'y.
SANTA MARIA GRANGE, Sney Station, San Luis Obispo Co.: JOEL MILLER, Master; M. D. MILLER, Sec'y.

SAN MATEO COUNTY.

OCEAN VIEW GRANGE, Ocean View, San Mateo Co.: I. G. KNOWLES, Master; EDWARD ROBSON, Sec'y.
PESCADERO GRANGE, Pescadero, San Mateo Co.: B. V. WEEKS, Master; H. B. SPRAGUE, Sec'y.

SANTA BARBARA COUNTY.

CARPENTERIA GRANGE, Carpinteria, Santa Barbara Co.: O. N. CADWELL, Master; G. E. THURMAN, Sec'y.
CONFIDENCE GRANGE, Guadalupe, Santa Barbara Co.: A. COPELAND, Master; J. T. AUSTIN, Sec'y.
SANTA BARBARA GRANGE, Santa Barbara, S. B. Co.: O. L. ARROTT, Master; O. KENNEY, Sec'y.

SANTA CLARA COUNTY.

MAYFIELD GRANGE, Mayfield, Santa Clara Co.: F. W. WEISSHAAR, Master; JAS. M. PITMAN, Sec'y.
SAN JOSE GRANGE, San Jose, Santa Clara Co.: G. W. HENNING, Master; MISS JETTORA WATKINS, Sec'y.
SANTA CLARA GRANGE, Santa Clara, P. O. Santa Clara Co.: H. M. LEONARD, Master; I. A. WILCOX, Sec'y.
SARATOGA GRANGE, Saratoga, Santa Clara Co.: FRANCIS DRESSER, Master; MISS JENNIE FARWELL, Sec'y.

SANTA CRUZ COUNTY.

PAJARO GRANGE, P. O. Watsonville, Santa Cruz Co.: D. M. OLOUGH, Master; G. W. ROADHOUSE, Sec'y and Agent.
SANTA CRUZ GRANGE, Santa Cruz: G. O. WARDWELL, Master; J. W. MORGAN, Sec'y.
WATSONVILLE GRANGE, Watsonville, J. McOALLAN, Master; A. F. RICHARDSON, Sec'y.

SOLANO COUNTY.

DENVERTON GRANGE, Denverton, Solano Co.: J. B. CARRINGTON, Master; G. C. ARNOLD, Sec'y.
DIXON GRANGE, Dixon, Solano Co.: J. C. MERRYFIELD, Master; J. H. GARDNER, Sec'y.
ELMIRA GRANGE, Vacca Station, Solano Co.: J. A. CLARK, Master; M. D. COOPER, Sec'y.
MONTEZUMA GRANGE, Collinsville, Solano Co.: THOS. T. HOOPER, Master; C. KNOX MARSHALL, Sec'y.
RIO VISTA GRANGE, Rio Vista, Solano Co.: A. B. ALST, Master; J. H. GARDNER, Sec'y.
ROCKVILLE GRANGE, Urdella, Solano Co.: W. A. LATTIN, Master; J. R. MORRIS, Sec'y.
SUISUN VALLEY GRANGE, Suisun, Solano Co.: J. M. LEMMON, Master; D. E. ROY, Sec'y.
VACAVILLE GRANGE, Vacaville, Solano Co.: E. R. THURBER, Master; OSCAR DORRINS, Sec'y.
VALLEJO GRANGE, Vallejo, Solano Co.: G. O. PEARSON, Master; CHAS. B. DEMING, Sec'y.

SONOMA COUNTY.

BENNETT VALLEY GRANGE, Santa Rosa, Sonoma Co.: J. DE TURE, Master; J. H. PLANK, Sec'y.
BLOOMFIELD GRANGE, Bloomfield, Sonoma Co.: WM. H. WHITE, Master; A. B. GLOVER, Sec'y.
BODEGA GRANGE, Bodega, Sonoma Co.: J. H. HEGLER, Master; W. SMITH, Sec'y.
CLOVERDALE GRANGE, Cloverdale, Sonoma Co.: CHAS. H. COOLEY, Master; J. C. COOLEY, Sec'y.
GEYSERVILLE GRANGE, Geyserville, Sonoma Co.: CALVIN M. BOSWORTH, Master; R. LEIGH, Sec'y.
HEADSBURG GRANGE, Headsburg, Sonoma Co.: CHARLES ALEXANDER, Master; MRS. S. A. PECK, Sec'y; Agent, P. S. PECK.
PETALUMA GRANGE, Petaluma, Sonoma Co.: L. W. WALKER, Master; D. G. HEALD, Sec'y; Agent, W. M. HILL.
SANTA ROSA GRANGE, Santa Rosa, Sonoma Co.: GEO. W. DAVIS, Master; J. A. O'BRIEN, Sec'y.
SEBASTOPOL GRANGE, Sebastopol, Sonoma Co.: M. C. HICKS, Master; JOSEPH PURRINGTON, Sec'y.
SONOMA GRANGE, Sonoma Co.: P. O. Sonoma, Sonoma Co.: WM. MCP. HILL, Master; W. A. BERRY, Sec'y.
TWO ROCK GRANGE, Two Rock, Sonoma Co.: JOHN R. DOSS, Master; JOHN H. FREEMAN, Sec'y.
WINDSOR GRANGE, Windsor, Sonoma Co.: A. B. NATLEY, Master; J. H. McCLELLAND, Sec'y.

STANISLAUS COUNTY.

BONITA GRANGE, Crow's Landing, Stanislaus Co.: J. W. TREADWELL, Master; A. B. CROOK, Sec'y.
CERES GRANGE, Westport Precinct, Stanislaus Co.: W. B. HARR, Master; J. H. GARDNER, Sec'y.
COTTONWOOD GRANGE, Hill's Ferry, Stanislaus Co.: J. L. CRITTENDEN, Master; J. J. DOYLE, Sec'y.
OAK DALE GRANGE, Oak Dale, Stanislaus Co.: A. S. EMERY, Master; C. B. INGALLS, Sec'y.
ORISTIMA GRANGE, Hill's Ferry, Stanislaus Co.: W. J. MILLER, Master; THOS. A. CHAPMAN, Sec'y.
SALIDA GRANGE, No. 8, Modesto P. O., Stanislaus Co.: B. F. PARKES, Master; A. H. ELMORE, Sec'y.
STANISLAUS GRANGE, Modesto, Stanislaus Co.: J. D. SPENCER, Master; VITAL E. BANGE, Sec'y.
TURLOCK GRANGE, Turlock, Stanislaus Co.: A. S. FULKERTH, Master; JOHN A. HENDERSON, Sec'y.

WATERFORD GRANGE, Waterford, Stanislaus Co.: R. R. WARDER, Master; W. C. COLLINS, Sec'y.

SUTTER COUNTY.

SUTTER GRANGE, Meridian, Sutter Co.: W. C. SMITH, Master; M. O. HENOFFORD, Sec'y.
YUBA CITY GRANGE, Yuba City, Sutter Co.: GEO. OHLVEY, Master; S. R. CRANDALL, Sec'y.

TEHAMA COUNTY.

FARMINGTON GRANGE, Farmington, Tehama Co.: ADIRON J. LOOMIS, Master; S. B. L. BLOSSOM, Sec'y.
RED BLUFF GRANGE, Red Bluff, R. H. BLOSSOM, Master; JOHN CURTIS, Sec'y.

TULARE COUNTY.

CHRISTMAS GRANGE, P. O. Visalia, Tulare Co.: A. B. COREY, Master; W. H. STEART, Sec'y.
DEEP CREEK GRANGE, GE. Farmersville, W. G. PENNEBAKER, Master; F. G. JEFFERDS, Sec'y.
FRANKLIN GRANGE, GE. Kingstons, F. WYBUCK, Master; A. B. CROWELL, Sec'y.
LAKE GRANGE, E. Kingstons; M. S. BABCOCK, Master; E. J. BENEDICT, Sec'y.
TULE RIVER GRANGE, Porterville, Tulare Co.: G. A. WILKINSON, Master; N. T. BLAIR, Sec'y.
VISALIA GRANGE, Visalia, Tulare Co.: WILEY WATSON, Master; H. G. HIGHE, Sec'y.

VENTURA COUNTY.

PLEASANT VALLEY GRANGE, Pleasant Valley, Ventura Co.: D. RONDREUSE, Master; B. BROWNING, Sec'y.
SATICOY GRANGE, P. O. San Buenaventura, Ventura Co.: MILTON WASSON, Master; E. A. DUVAL, Sec'y.

YOLO COUNTY.

ANTELOPE GRANGE, W. J. OLARK, Master; O. L. N. VAUGHN, Sec'y; P. O. Antelope, Yolo Co.
BUCKEYE GRANGE, Yolo Co.: B. O. BUCKEY, Yolo Co. Wm. SIMS, Master; L. MOODY, Sec'y.
CACHE CREEK GRANGE, Cache Creek, Yolo Co.: D. B. HENRICH, Master; L. D. STEPHENS, Sec'y.
CAPAY VALLEY GRANGE, Capay, Yolo Co.: R. R. DABRY, Master; P. M. SAVAGE, Sec'y.
DAVISVILLE GRANGE, Davisville, Yolo Co.: OHAS. E. GREEN, Master; JOHN KREML, Sec'y.
HUNGRY HOLLOW GRANGE, P. O. Yolo, Yolo Co.: G. L. PARKER, Master; C. O. PERKINS, Sec'y.
WEST GRAFTON GRANGE, Yolo, Yolo Co.: A. W. MORRIS, Master; GEO. W. PARKS, Sec'y.
YOLO GRANGE, Woodland, Yolo Co.: W. M. JACKSON, Master; D. SCHINDLER, Sec'y; Agent, W. M. JACKSON.

YUBA COUNTY.

MARYSVILLE GRANGE, Marysville, Yuba Co.: O. G. BOCKUS, Master; JAS. M. CUTTS, Sec'y.

Deputies who organize new Granges are requested to send the list of officers, and the names of all charter members, with other facts of interest, for free publication in the RURAL PRESS, as early as possible.

ORDERS FOR GRANGE MATERIAL.—We are constantly receiving orders from newly organized Granges for regalia, blank books, implements and other articles for Granges, mostly accompanied by remittance per P. O. order. In our issue of January 3d we announced that one of Bro. H. Baxter would furnish such supplies from that date. The prices of the goods are payable in coin, and all orders should be addressed to W. H. BAXTER, State Agent P. O. H., No. 320 California street, San Francisco, Cal.

We have been requested by Bro. Baxter, to state that prices affixed for all Grange supplies, furnished through his office, are upon a gold basis; and that gold instead of currency must in all cases be forwarded in payment.

New Granges.

AMERICAN RIVER GRANGE, BRIGHTON, SACRAMENTO COUNTY, was organized on the 23rd ult., by Deputy Manlove, of Sacramento, with full list of 30 charter members, which Bro. M. states could have been raised to 50 had it been admissible. The following is the list of officers elected and installed: E. G. MORTON, Sr., M.; J. A. EVANS, O.; KILGORE, L.; W. W. BRISON, S.; T. G. SANLSBURY, A. S.; NEWELL KANE, Sr., C.; WILLIAM DETERDENG, T.; CYRUS WILSON, S.; D. TAYLOR, G. K.; A. D. MORTON, Ceres; CHRISTINA DETERDENG, Flora; E. G. KILGORE, Pomona; CARRIE BRISON, L. A. S.

In addition to the above, we have also received notice of two more organizations, as follows:

OJAI GRANGE, SAN BUENAVENTURA, VENTURA COUNTY.—Organized March 19th by Deputy Milton Wasson, C. E. Soule, M.; Joseph Hobart, Sec'y.

GILROY GRANGE, GILROY, SANTA CLARA COUNTY.—Organized March 26th by Deputy D. W. Henning, W. L. Angney, M.; H. Coffin, Sec'y.

The Sewing Machine Question.

A. H. Elmore, of Salida Grange, Modesto communicates as follows:—"I write to inform you that Salida Grange has passed resolutions similar to those adopted by Dixon Grange, obligating ourselves as a Grange, not to patronize those Sewing Machine companies which have refused to carry out their agreement with the Executive Committee of the State Grange. I agree with you, that it is unnecessary to publish the Resolutions of every Grange, as long as they all refer to the same matter and are similar in language. Consequently will not send you the Resolutions as adopted, but simply notify you that such action has been taken."

In addition to the above, we have also, during the past week, received letters forwarding similar resolutions from Adams Grange, Fresno county; from Hollister Grange, Monterey county; from Capay Valley Grange, Yolo county, and from Walnut Creek Grange, Contra Costa county. The letters from the two last named contained some other matters of action, which will be given next week.

In connection with the above we would take this occasion to say that arrangements have just been made by which any Patron desiring a good sewing machine may procure the same through the Grange agency in this city, on terms much more favorable than those offered by the companies who have gone back on their contract. For particulars address J. G. Gardiner, Grange Agent, San Francisco.—Eds. Press.]

CAUSE FOR EXPULSION.—One of the county Councils in Michigan has formally resolved that it should be considered sufficient cause for expulsion where a Patron willfully reveals, or in any way makes known to any person not a Patron, the name or place of business of the firm, or manufacturer or individual with whom the said committee have business relation, which should be kept secret. The idea is undoubtedly correct.

The Beginning of the End.

The magnitude which the Grange movement has assumed, points clearly to the fact that its sources and springs of power are far deeper and far more comprehensive than might at a casual examination appear. Its growth is not the passing frenzy of a moment, nor the unheralded, unlooked-for caprice of a day. The causes which have called it forth have been in silent operation for years, and will as surely produce their effect as the melting snow on the mountain side will find its way to the valley below. It is an axiom of philosophy that there can be no cause without a corresponding effect, nor any effect without its preceding cause; and this great up-rising of the masses is no exception to the universal rule. The causes in this case, through the long years they have been in operation, have not been hidden, but their importance has been unrecognized; and their effects, now so plainly apparent, were only concealed by the most stupid blindness. They are found in the lack of education among the masses; in that, and in nothing else.

The far-seeing founders of our educating and educated government were the initiators of this movement of to-day; but we doubt, broad and comprehensive as were their views, whether they recognized the full extent of the work they were initiating. But, whether they fully realized, or faintly dreamed of it, the fact remains the same; that, in their liberal provision for common schools, academies and colleges, they infused a source of power in our land as subtle, all-pervading and all-accomplishing, as are the hidden forces of electricity, or chemical action.

It is impossible for ignorance to tyrannize over intelligence; and the wand of power that has enabled statesmen, soldiers, capitalists and orators to mold the great masses of the people into subservience to their wills, finds not its efficacy in any sorcery or blind fate, but in superior knowledge. They have heretofore ruled the people. They oppressed and led them at their pleasure, simply because they were the wiser—because knowledge is the most powerful of all powers—hence, we easily see in the oppressions of the educated over the less so, the causes of the necessity of this movement; and, in the ever spreading, ever tending efforts to equalize the education of our hitherto oppressed working classes, the sources from which it derives its power. Let him, who would look upon it with scorn and contempt, first pause and consider the immensity of that power—the high standard of intelligence to which our farmers and laboring classes have already attained—and, certainly, the rashest will stand from under.

The Grange, which is the exciting element in this great movement, is supplementary to the common school and the academy. It is the place in which the young men and young women of our agricultural districts may be taught their relations to society. It is the great common family of the community where we meet to develop a higher manhood and womanhood. It is the place where our young men may be taught to properly exercise their duties as members of a self-governing community. It is the symbolic farm, where, as farmers, we all meet on common ground to interchange opinions and experience, to the end that each may be benefited by the knowledge of all.

There is yet another point in connection with this revolution, to which we point with pride: It is the beginning of a revolution unparalleled in the annals of history—a spectacle of a grand and irresistible power, rising in its might and trampling under foot wrong and injustice, without bloodshed. It is this element of bloodlessness which so utterly isolates it from all kindred movements. Greece, Rome and Carthage, of ancient days, had their struggles against oppression; France, England, the United States, with many others of our own time, have re-enacted the scenes then initiated; but every step in the direction of reform or liberty has been taken through the blood of fellow beings, until this last and greatest uprising. The reason is obvious: other attempts at reform have been guided by passion, goaded on by a confused, bitter sense of injustice; in this movement, the result of education, cool reason and conscious power have the helm; and, in this fact, lies our greatest cause for just pride, and it should also stimulate us to quickly and decisively put down any symptoms of communitism; to use our might only for the right.

ANTIOCH GRANGE, CONTRA COSTA COUNTY.—J. D. Darby, Secretary, writes: This Grange is improving, and we have cause to think that as the season advances our number will increase still more rapidly. We have a class of five now on the way, and applicants anxiously waiting their turn. Crops in this vicinity that were put in early, where there were no weeds, are looking well; but there are many in this county who put their grain in dry where there was three years weed seed on the ground. There are others who waited until the last of February or first of March to do that work, and then did it very poorly. Such men are the first to complain if they do not raise a good crop. There is some summer following in the county this year, and we do hope there will be more next, for it is a self-evident fact that that is the only successful way to farm in a dry country. Hoping that your paper will continue as good as it now is, and be profitable to yourselves as well as to others, I remain, etc.

From the Granges.

NORD GRANGE, BUTTE COUNTY.—A sister writes, under date of March 24th as follows: "This Grange: 'If any one remembers how stormy it was one week ago last Saturday, and will give us credit for enterprise, in meeting at the Grange and initiating four candidates, (one a lady), in the second degree. A ride of three and a half miles brought us to Nord, our place of meeting. After starting, the wind and rain so increased, that no one thought that any but himself would venture out. But we found a number already assembled—and others dropped in—drenched and dripping, but in excellent humor; so we concluded not to lose so good an opportunity of showing ourselves superior to circumstances. Our hall was undergoing repairs, so securing an adjoining parlor, we proceeded to business. The warm, cosy room furnished a grateful contrast to the cold and storm without, and the music sounded none the worse for the accompanying refrain of the elements that whistled about the windows. We have now a class of five ready for the third degree, and more waiting for the first and second. We bid fair to exhibit the spirit of a certain Grange reported by a sister, who declares that when bidden 'to sing, they sing; to eat, they eat; to dance, they dance.'"

"It makes one smile at the ignorance!" (that's the word he uses in speaking of us) of the editor of the *Atlantic Monthly*, who, only last October, was so fond of rounding his periods with the assertion that, so far as could then be seen, "the Grange movement would come to nothing;" and, further, "that farmers had never been able to tell what they want, nor how to get what they want!" It would seem that California farmers do know, with reasonable certainty, "what they want;" and, perhaps, how to secure it. We shall see. We have faith in the truth of the good old song, "The good time coming," and feel like reminding the brotherhood that, as to better days:

"Though they've been moving very slow,
They must be close by now."

SANTA MARIA GRANGE, SAN LOUIS OBISPO COUNTY.—At a meeting of the Santa Maria Grange, March 21st, 1874, the following preamble and resolutions were unanimously adopted:

WHEREAS, It was the intention of our worthy benefactors, in embodying the principles of the Grange, and instituting the Order for the purpose of encouraging agricultural pursuits, and to bring about a general reform, to protect the honest classes from the vices and devices of evil-minded men; to discourage all acts of our leaders, tending to oppression; and, whereas, we desire to encourage temperance, fidelity and charity, and a general progressive development. Therefore,

Resolved, 1st, That Santa Maria Grange will heartily co-operate with the National, State and Subordinate Granges, in all acts for the good of the Order, and welfare of the human race at large.

2d, That we endorse the action of the Healdsburg Grange, in reference to our State and County Fairs, and that we believe it to be the duty of our Legislative and Executive bodies to look after and see that these institutions are properly carried out, and that the public funds appropriated should be judiciously expended.

3d, That we endorse the action of the Santa Clara Grange, in reference to those houses of trade who have gone back on their agreement with our Executive Committee.

4th, That a copy of these resolutions be forwarded to the *PACIFIC RURAL PRESS*, and *California Granger*, for publication.

Our Grange is flourishing finely. We have 58 full members, with 18 candidates to start in our next class.

Crops look fine; an abundant harvest is almost a sure thing with us; some of the early grain is beginning to head out already. More anon.

M. D. MILLER.

SNELLING GRANGE, MERCED COUNTY.—Secretary W. Lee Hamlin, under date of March 26th, writes: We are having another glorious rain to-night, and from the appearance of the "weather gauge" to-day, a bountiful harvest is sure. Our Grange is in a prosperous condition, with 44 full-fledged members, besides several in wake for initiation. Brother A. B. Anderson was chosen agent at our last meeting, and we have under consideration the propriety of establishing a Grange bank. At our last meeting the letter to the Grange from the sewing machine companies was read and received with proper notice, and it was unanimously ordered that the Secretary should forward the following resolutions to the *RURAL PRESS*, with request that they be published:

Resolved, That we will not purchase at any price, and will use our utmost influence to keep others from purchasing sewing machines from those manufacturers or their agents. Furthermore, it having come to the knowledge of this Grange, that other firms have been guilty of adding commissions on Patrons' purchases, instead of discounting their bills. Therefore be it

Resolved, That the members of Snelling Grange "will ever be on the alert" to checkmate all manufacturers or firms that do not deal strictly in accordance with their agreements, and obligations, with the Patrons of Husbandry, and that we shall at all times report any deviation from their agreements to those in authority.

FUNK SLOUGH GRANGE, COLUSA COUNTY.—J. G. Wolfe, Secretary writes as follows: Our Grange was organized October 8th, 1873. Since that time until February, we have been laboring under many disadvantages, meeting alternately at school houses that were not suitable for the purpose, and traveling over muddy roads and through rain, it was hardly possible for those even who felt most inspired to manifest much interest in the cause. But now, how different! We have a hall conveniently arranged near the center of what we think to be the largest Grange District in the county. The Harvest Feast is something with which we are favorably acquainted. The bachelor brothers think them splendid. We now expect to confer the fourth degree on a class of four at our next regular meeting—the first Saturday in April. This fact is mentioned here to assure our brethren elsewhere that they will be hospitably received whenever they can make it convenient to give us a call. The number of proposals for membership is highly flattering, and we promise to show a good account at the end of the year. Following is the list of officers as installed for the current year: E. C. Hunter, M.; L. D. McDow, O.; T. B. McDow, T.; George B. Harden, S.; Wm. Daly, A. S.; R. De Lapp, L.; J. Serthou, C.; J. G. Wolfe, Sec'y; Chas. Kepper, G. K.; Mrs. L. D. McDow, Ceres; Miss Fannie Harden, Pomona; Miss Anna Serthou, Flora; Miss Emma Benjamin, L. A. S.

SANTA CLARA GRANGE, SANTA CLARA COUNTY. Secretary I. A. Wilcox writes:—The Santa Clara Grange graduated another large class on Saturday, and twenty more applications were made for membership. The Harvest Feast was attended by a number of invited guests in addition to our own numbers, who were most of them on hand—100 at least. We had some encouraging remarks from visitors, and an able address from Bro. Oliver, one of our charter members, who had been necessarily absent, almost during our entire existence.

Bro. O. was much surprised and delighted at the progress we have made in efficiency, and the increase of our members. The organizing of the farmers of the county, for purposes of self-protection and general advancement, he regarded as the best guarantee for the preservation of their liberties.

UPPER LAKE GRANGE, LAKE COUNTY.—D. D. McCarty, Secretary, writes to the *Granger*: We celebrated our second harvest feast March 10, with general interest, and a happy social time was enjoyed by all present. We have a class of twenty-five to start with at our next meeting, which is very encouraging. We have to record the death of our worthy Secretary, W. W. Meredith. We shall miss him much, as he was noted for his kindheartedness and generosity, as well as sociability. Who can supply his place?

San Louis Obispo County Council.

In response to a call issued to the various Granges of this county on February 21st, 1874, by Cambria Grange, delegates from the following named Granges assembled in the Grange Hall, San Louis Obispo, on Tuesday, March 17th, 1874: Cambria, Confidence, Old Creek, Morro and San Louis Obispo.

On motion, Bro. Geo. Steele, of San Louis Obispo Grange, was elected temporary chairman, and Bro. J. M. Mannon, of Cambria Grange, was elected temporary secretary. A Committee on Credentials was appointed by the chair, consisting of Sister Ivins and Bros. Mothershead and Barrett. Committee reported credentials of the following named persons correct: Cambria Grange, Mrs. Sada Kaetzel, Mrs. Maggie Leffingwell, Mrs. M. E. Ivins, Mr. J. C. Baker, Mr. Wm. Leffingwell, Sen., and Mr. J. M. Mannon. Confidence Grange, Mr. O. Miller. Old Creek Grange, Mr. Isaac Flood, Mr. C. S. Clark and Mrs. C. S. Clark. Morro Grange, Mr. A. J. Mothershead, Mr. H. Y. Stanley and Mr. A. J. Mothershead. San Louis Obispo Grange, Mr. Wm. Jackson, Mr. Geo. Steele, Mr. Thos. Barrett, Mr. G. W. Hampton, Mrs. Wm. Jackson, Mrs. D. M. Johnson and Miss Barrett.

Report of the Committee received and adopted. The following names were appointed a Committee to draft a Constitution: J. C. Baker, A. J. Mothershead, Wm. Jackson, Mrs. Wm. Jackson and Mrs. M. E. Ivins. On motion, adjourned to meet on Wednesday, March 18th, at 8 A. M.

WEDNESDAY MORNING Council reassembled, Bro. Steele in the chair. Committee on Constitution reported, and after a few alterations and amendments of their reports, the following Constitution was adopted. [We will endeavor to find room for the Constitution next week.—Eds.]

The Council at once proceeded to elect officers, with the following result: A. J. Mothershead, M.; Wm. Jackson, O.; C. S. Clark, L.; O. Miller, C. H.; J. M. Mannon, Sec.; J. C. Baker, T.; Thos. Barrett, S.; M. E. Ivins, C.; Mrs. Jackson, F.; Mrs. Clark, P.; Maggie Leffingwell, L. A. S.; Isaac Flood, G. K.

Board of Trustees: Wm. Leffingwell, Sen., Isaac Flood, H. Y. Stanley. Geo. Steele, O. Miller.

On motion, the Board of Trustees were instructed to correspond with various lines of transportation, and to report at next meeting. Secretary was instructed to publish a report of proceedings of this Council in *PACIFIC RURAL PRESS*, *California Granger* and *San Louis Obispo Tribune*. Adjourned to meet in San Louis Obispo, on Tuesday, April 7th, at 12 M.

J. M. MANNON, Sec.

West San Joaquin Council.

Delegates from the Subordinate Granges of Los Baños, Badger Flat and Cottonwood, in the county of Merced, and Oristimba, in the county of Stanislaus, met at Cottonwood on Saturday, the 14th ult. for the purpose of forming a Council. They were called to order by T. L. Crittenden, Master of the Cottonwood Grange, who stated the object of the meeting. W. J. Miller, Master of Oristimba Grange, was chosen temporary Master, and T. A. Chapman, Secretary of Oristimba Grange, Secretary *pro tem*. A committee consisting of T. L. Crittenden, Cottonwood Grange; W. W. Parlin, Badger Flat Grange; B. F. Davis, Los Baños Grange, and T. A. Chapman, Oristimba Grange, was appointed to prepare a constitution. After a short recess the committee presented the following

Constitution.

Article 1. This Association shall be known as the West San Joaquin Council of P. of H.

Art. 2. The objects of this Council are to facilitate the transaction of business, in buying, selling and shipping, and otherwise to promote the good of the Order.

Art. 3. The Members of this Council shall be composed of delegates, from the several Granges represented as follows: One for each Grange at large, who shall be the Master thereof, and one for each fifteen members, or fraction of fifteen, equal to ten said delegates, to be elected for one year by the Subordinate Granges, the year to date from the first day of January.

Art. 4. The Officers of this Council shall consist of a Master, Overseer, Chaplain, Secretary, Treasurer, Steward, Gatekeeper, and Board of Trustees composed of one member for each grant represented, neither of whom shall receive any pay for services rendered, and neither of whom shall be Master, Secretary, or Treasurer.

Art. 5. Each Grange representative in this Council shall pay an annual due of one dollar for each representative.

Art. 6. The Council shall hold at least one regular meeting, at such place as it may from time to time determine, every three months; but all special meetings, called as hereinafter provided, shall be deemed regular meetings.

Art. 7. Special meetings may be called by the Master at his discretion, or at the written request of seven members of the Council.

Art. 8. Nine members shall constitute a quorum for the transaction of business.

Art. 9. Officers of the Council shall be elected by ballot at the first meeting in each year.

Art. 10. It shall be the duty of the Master to preside at all meetings of the Council, sign all orders on the Treasurer, and perform such other duties as usually devolve upon that officer.

Art. 11. It shall be the duty of the Overseer to preside in the absence of the Master.

Art. 12. It shall be the duty of the Treasurer to receive all moneys due the Council, giving duplicate receipts therefor, one of which shall be sent to the Secretary by the person receiving them, to pay all orders signed by the Master and Secretary, and to allow the Trustees, or any member of the Council to, examine his books at any time. He shall give bonds in such sum as the Trustees may require.

Art. 13. It shall be the duty of the Secretary to keep an accurate record of the proceedings of the Council, and the accounts with the members thereof, and draw and countersign all orders on the Treasurer, and have his books ready at any time for inspection by the Trustees or any member of the Council.

Art. 14. The Trustees may employ an agent when deemed necessary by the Council, who shall be confirmed by the Council, and who shall give bonds in such sum as the Trustees may deem sufficient. His duties shall be defined by the Trustees, and he shall receive for his services a certain per centage as may be fixed by the Council. The Trustees also shall have a general supervision over the business of the Council.

Art. 15. This Constitution shall be in force from and after its ratification by the Granges represented.

Art. 16. This Constitution may be amended at any regular meeting of the Council, by a two-thirds vote of the members present; provided, that the notice of any proposed change shall have been given to the subordinate Granges through their Secretaries, at least two months prior to action thereon.

The above constitution was, on motion,

adopted by the Council.

An election for officers of the Council and Board of Trustees was also held, with the following results: Master, W. J. Miller, Oristimba Grange; Overseer, W. W. Parlin, Badger Flat Grange; Chaplain, W. M. Vining, Los Baños Grange; Treasurer, E. L. Sturgeon, Cottonwood Grange; Secretary, Thomas A. Chapman, Oristimba Grange; Gate Keeper, D. M. Wood, Los Baños Grange; Board of Trustees, T. L. Crittenden, Cottonwood Grange; A. P. Merritt, Badger Flat Grange; S. A. Smith, Los Baños Grange, and W. H. Broad, Oristimba Grange.

The following resolutions were also adopted: Resolved, That we will not purchase any sewing machines of the manufacturers or their agents, who have signed an article refusing to make any reduction in their prices to Patrons of Husbandry, from those charged to regular retail purchasers; and that we will use our endeavors to prevent any of the Granges represented in this Council, from purchasing of any of the signers of that article.

Resolved, That a copy of these proceedings be sent for publication to the *PACIFIC RURAL PRESS*, *California Granger* and *Mercad Tribune*.

On motion, the Council adjourned, to meet on Saturday, March 28, 1874.

A. CHAPMAN, Sec'y.

MEMORANDA OF RECENT DECISIONS.—1. Granges must be opened in the degree in which it is intended to work, it being irregular to open in a low degree and work up to the degree intended to be conferred. 2. A member of another Grange cannot be admitted unless he can work in, even if he be known. The provision of the rule is express: "No one can vouch for a member of another Grange." 3. The Overseer should see and know that no one approaches the Master's office without coming up the lawn. 4. The State Grange of Indiana has decided that to be eligible to membership a man must "rely more upon the products of his farm for his income than upon those of any other occupation." 5. There is no reason for keeping constitutions and by-laws out of the hands of outsiders.

Dixon Grange on Tariffs and Patents.

Our attention has been called to some resolutions passed some weeks ago by the Dixon Grange, expressive of the opinion of its members on the tariff and patent questions. We omit the preamble and give only the resolutions, which read as follows.

Resolved, first—That we are in favor of a tax upon imports for the sole purpose of revenue.

Second—That such tariff should be so regulated as to bear as equally as possible upon all classes, and that no unnecessary discrimination should be made, either in favor of or against any special interest, but that such tax should, to as great an extent as possible, be levied upon luxuries and on articles which enter into general consumption, but which are neither produced nor manufactured in the United States.

Third—That while we recognize the justice and policy of encouraging and protecting new inventions by means of patents—yet all patents are necessarily monopolies—and we believe that the time for which all patents are originally issued is ample, and that the usual practice of extending the time at the expiration of the original patent is pernicious and detrimental to the best interests of the whole people, and should therefore cease.

Fourth—That believing our interests in these matters to be identified with the interests of our brethren of the Atlantic States, we pledge ourselves to unite with them in using all honorable means to secure the adoption, by the general Government, of the policy briefly set forth in these resolutions.

WALNUT CREEK GRANGE, CONTRA COSTA COUNTY.—W. L. H. writes that this Grange is prospering finely. The meetings are held semi-monthly, at the Masonic Hall, with a good attendance. All are alive to the work. The Master, though on the shady side of sixty, walks four miles to attend the meetings.

San Jose Farmers' Club.

The Club met at the usual hour, and was called to order by President Casey.

On motion, the Constitution was amended so as to make all the offices elective.

The petition to the Legislature presented by the Committee at a former meeting asking for a change in the present school laws, was taken up and on motion adopted.

Mr. Holloway suggested that the School Trustees, together with the County Auditor, who shall be County Superintendent, be empowered to select text-books.

Mr. Erskson read an interesting article on the improvement in oats, which demonstrated that with proper cultivation they could be kept up to a very high standard.

"Cruelty to Animals, its prevention, etc.," was selected as the question for discussion at the next meeting.

Mr. Holloway explained why the Club had been so tardy in taking action on the school law question. Some weeks since a measure was introduced into the Legislature to give the School Trustees a little more power and discretion, and it was promptly voted down. Mr. Holloway stated that three Representatives from this county opposed the measure. This discouraged him, for he saw that with the present Legislature there was no show to procure any desirable amendment to the present unjust school system. On the subject of text books, the speaker thought it was a shame and an outrage the way the people were imposed upon. The Trustees and County Superintendent have no voice in the matter, but are under the arbitrary rule of the State Superintendent and the State Board of Examination. This state of affairs, he thought, was oppressive, demoralizing and degrading.

The speaker also paid his respects to the Tuttle school bill, which he denounced in unmeasured terms, and as incapable of working anything but an injury to the sparsely populated school districts in the State. He doubted the propriety of taxing one locality for the purpose of benefitting another and wealthier one. He thought that each school district in the State should be compelled by enactment to hold so many months in the year, and that the taxes should be raised in a manner as each district might see fit. This plan would induce economy, and could not but be universally satisfactory.

Mr. Bergland thought the theory was wrong which says that one man who has no children shall pay taxes to support schools for the benefit of those who have children. He believed the furnishing of school books should be let to the lowest bidder; also that every office in the nation should be let to the lowest bidder.

Mr. Holloway was opposed to paying such high taxes for the support of schools. Let the support be carried on by individual enterprise when it comes down to colleges, academies, etc.

Mr. Bergland thought we had too much education in the land. The best educated men in the country are the most worthless. He was in favor of making all those who desired other than a common school education pay therefor themselves, or else obtain aid through individual enterprise, and not by a system of general taxation.—*Mercury*.

[We are afraid our friend, the *Mercury*, has got things twisted in reporting the remarks of Mr. Bergland. It is hardly conceivable that a person can be found rash enough to say that "the best educated men in the country are the most worthless." If such was the statement, the only inference is, that the person making it cannot be in a position to judge of its truth. The common school education would, of course, suffice for the masses, were it thorough in the elementary branches of study,—which, unfortunately, it never is. The whole question has been thoroughly ventilated, and, we thought, put at rest long ago.—Eds. Press.]



The People's Advent.

'Tis coming up the steep of Time,
And this old world is growing brighter!
We may not see its dawn sublime,
Yet high hopes make the heart throb lighter!
Our dust may slumber in the ground,
When it awakes the world in wonder;
But we have felt it gathering round!
We have heard its voice of living thunder!
'Tis coming! yes, 'tis coming!

'Tis coming now,—the glorious time
Foretold by seers and sung in story,
For which, when thinking was a crime,
Souls leapt to heaven from scaffolds gory!
They passed. But see the work they have wrought,
Now the crown'd hopes of centuries blossom!
How the live lightning of their thought
Is flashing through us, brain and bosom!
'Tis coming! yes, 'tis coming!

Orcs, empires, systems, rot with age,
But the great people's ever youthful!
And it shall write the future's page
To our humanity more truthful;
The garliest heart hath tender chords
To waken at the name of "Brother!"
'Tis coming when these scorpion words
We shall not speak to sting each other!
'Tis coming! yes, 'tis coming!

Out of the light, ye Priests, nor fling
Your dark, cold shadows on us longer!
Aside, thou word-wide curse, called King!
The people's step is quicker, stronger!
There's a divinity within
That makes men great when'er they will it;
God works with all who dare to win,
And the time cometh to reveal it.
'Tis coming! yes, 'tis coming!

Freedom, the tyrants kill thy braves,
Yet in our memories live the sleepers;
And, though doomed millions feed the graves,
Dug by death's force, red-handed reapers,
The world will not forever bow
To things that mock God's own endeavor!
'Tis nearer than ye wot of now,
When flowers shall wreath the sword forever!
'Tis coming! yes, 'tis coming!

FRATERNITY! Love's other name!
Dear heaven, connecting link of being!
Then shall we grasp thy golden dream,
As souls, full-statured, grow far-seeing!
Thou shalt unfold our better part,
And in our life-cup yield more honey!—
Light up with joy the poor man's heart,
And love's own world with smiles more sunny!
'Tis coming! yes, 'tis coming!

Aye, it must come! The tyrant's throne
Is crumbling, with our hot tears rusted;
The sword earth's mightily have leant on
Is cankered—wilt our best blood crusted!
Room for the men of Mind! Make way
Ye Robber Rulers!—pause no longer!
Ye cannot stay the opening day!
The world rolls on, the light grows stronger—
The People's Advent's coming!
—Gerald Massey, in *Western Rural*.

Farm House Chat.

[Written for the Press by MARY MOUNTAIN.]

The good things in late RURALS have been so abundant and suggestive that, as H. W. Beecher hath it, I am in danger of "slopping over," and responding to these nimble pens in the gushing style of a Mutual Admiration Society.

People in lonely homes far from the sound of aabbath bells have been silently comforted by the sermon from Carmel Valley; perhaps have read it three times over as I did.

And like old-fashioned bean-porridge it was better every time.

The temperance talk from the same quarter comes at the right moment, when the hosts of wronged and ruined ones all through the land are moved by one common hope and prayer. I am glad friend Berwick speaks in behalf of a law that shall help these pleading women; and when public opinion is ready to sustain and enforce such a law, doubtless we shall have it.

Editors, authors, speakers, good men and women everywhere may do their best work now in helping to make up this strong, imperative public opinion.

The best law of all would strike at the root of the matter and forbid such wholesale manufacture of the fascinating poison.

Anything short of that is too much like "sawing at the spigot and wasting at the bung-hole."

One of our Santa Cruz editors intimates that we must expect no help from legislation, either of sweeping enactments or half way schemes; but that woman alone must make the fight by devoting herself more closely to domestic duties, and to the supreme duty of pleasing, refining, and permanently attaching the sympathies of man.

Within the Home Circle.

It is a very good text, and very good talk. But this matter of making home pleasant is a strictly mutual affair.

I am willing to admit that women may have greater inclination and ability for "pleasantness." But that is no good reason for declaring that the whole responsibility rests upon them, and that because the "average woman" fails and makes a mess of her domestic duties—therefore, the whole nation of women must fight alone, and unsaid by law, this great national evil of dram-drinking.

Very much of such talk would convert me to Suffrageism, and I should cry aloud "Give woman then the law making power. Such a big job of work needs all possible tools."

It is easy enough to scold about thoughtless and inefficient women. But when equally thoughtless and inefficient men are let off too easily, and the burden of their criminal weakness thrown upon the "average woman"—I feel very much like taking up the cudgels in her behalf.

Truly both men and women are terribly to blame, and can do no better than make common cause against the greatest curse that darkens human life.

Pray, what are we in the world for if not to take a hand in the never ending struggle of right vs. wrong?

Yet I cannot quite agree with Mrs. N.—that, "the world has no further use for putty women or putty men."

Truly we need them just as much as ever.

They are so comfortable, so adjustable, so reliable, and still serenely beaming, whether found to be right in the wrong place, or wrong in the right place.

We might more easily get along without pin-cushions; and it will be a serious loss if forbearance (otherwise putty) shall be declared null and void, and ignored from the social fabric.

The people I have loved best were made up before it went wholly out of fashion.

Mrs. N. asks—"why do you hide behind a mountain?" The because is that I found myself hidden behind mountains, and feeling more helpless and forlorn than a woman with no putty in her composition can possibly imagine. Could I scratch my way out with a pen? Nay, it was an absurd hope; but I could claim kinship with my huge neighbors, assume the family name and try to enjoy their society.

Here among their shadows it does not seem a very fantastic notion; but I have not much to say in defence of a *nom de plume*.

The Hired Help Discussion

Has been interesting, and having had various queer bits of experience, I was about to add them to the general fund.

But then I thought of the Grangers. If their eloquence about the "nobility of labor" and all the other agricultural enthusiasm means anything, it means honor and profit and social enjoyment for the humble laborer as well as for other hard-handed folks—except the middlemen. And actually I have known a middleman or two that nobody could curse very heartily. Ah, the muddle of these human affairs is such that when you come slashing around in the name of justice, down go the innocent along with the guilty.

Of course "the line must be drawn somewhere," and if this difficult engineering is done by the golden rule 'twill be well done—a work for the admiration of men and angels.

Graham Bread.

The contributors will please accept thanks for my share of the good things they have served up.

The wife of a rural editor has just sent to me for information about gems, graham bread and muffins. The buttermilk gems are my nearest approach to muffins, and the method is given in RURAL No. 1 for this year.

A little search through late RURALS will give her several excellent methods for gems and bread; but here is another from a Vermont paper which I have tried and find excellent; also convenient when wishing to make at the same time both white and brown bread.

Set sponge as for wheat bread; in the morning take one pint of sponge, $\frac{1}{2}$ pint of warm water, $\frac{1}{2}$ teaspoon of syrup, one teaspoon of soda, and enough graham flour to make a thick batter, as thick as can be stirred with a spoon. Let it rise, and after beating down put it in a three-pint basin and when again risen enough bake slowly two hours. When the crust begins to brown put a baking tin over it. An Elmira Granger wants to know how I make the cold water gem. Alas, I don't make 'em. Mr. Mountain is epicurean and declares that,

"Of gems that all are praisings
Give buttermilk gems to me."

But the discomfited Irishman said—"Faith-an-be-jases I've got a brother in Ireland who oan fight the bear just as aisy."

So I have a sister in Knights Ferry who can make the tip-toppest cold-water gems, and her method is almost precisely that given by "Hygienic" in a recent RURAL.

Speaking of Knights Ferry reminds me that some of the facts given by your correspondent C. M. D. are simply astonishing. He must have a remarkable head for figures, or else the ghosts of Auld Lang Syne have been playing him tricks with their 500 picks, in dearest old claims that still may be seen in hill-side and ravine. But the claims and the names of the ghostly 500 are dimly remembered and no longer numbered. Yet if any folks in the world deserve to have generous, big things said of them, the Knights Ferrys certainly do; and prosperity, real and imaginary, will never spoil them. They are used to it—can stand any amount of it—God bless them.

A Troy editor took his wife to New York the other day. The conductor, when he came along, recognized our Troy brother as entitled to a free passage; not knowing the lady, whispered to him: "Is this lady a friend of yours?" "No, no," said the Troy editor in haste, "she is my wife."

[Written for the RURAL PRESS.]

The Commissioner's Returns.

The Value of Middlemen.

Farmers are not the only parties who pay dearly for the services of the middleman. We once knew a wealthy capitalist who owned, with other productive property, a piece of land in the suburbs of Utica, N. Y. He, and the land also, patiently awaited the demand for city lots. But he was not a man disposed to fold his hands and wait in idleness for the coming of fortune.

He prided himself on having nothing that was entirely unproductive, and the future city lots were accordingly planted with potatoes. Nearly all the labor bestowed on the crop, after the plowing, was performed by himself; for being a self-made man, he took to work naturally.

In attending to the wants of his potato-patch his hands became hardened, his face bronzed, and his work afforded him many an escape from the cares and turmoils of business.

Autumn came "on time," and among other green and beautiful things, that fell beneath its blighting frosts, were the vines of the capitalist's potato-patch. But they were fully prepared for their latter end, and the matured tubers at their roots proved that they had not lived in vain.

Well, the harvest-time had come; and though the November mornings were cold and frosty, our friend the capitalist was a-field with his hoe as early as the regular farmers. When he had nearly completed his harvest labors, a man from the city, with whom he was slightly acquainted, came along in his lumber wagon, and of course put the amateur potato-grower through the usual questions: as to the variety of the potato, the yield, the manner in which they had been worked, etc., and concluded by asking the owner what he proposed to do with them?

Mr. P. replied that he should sell them, as he had no use for them. Whereupon the neighborly visitor remarked, that having the facilities for moving the crop, and having had at an earlier period of his life some experience in disposing of farm products, he could perhaps dispose of them to better advantage than their owner. The latter acquiescing in this sensible view of the subject, the potato-crop was turned over to the hands of the middleman; it being agreed that he should make his returns at any convenient time after selling.

But Mr. P. being in no need of money, and the agent being in no hurry to make his returns, months passed by without the parties coming to a settlement. Finally they met upon the street one day, as all debtors and creditors are bound to meet at some time, when the unsettled potato-account was brought upon the carpet, or rather upon the brick sidewalk.

Yes, they met as debtor and creditor; but the producer was unexpectedly forced into the latter unenviable position; for his agent produced a bill at the bottom of which Mr. P. was proved to be in debt to him to the amount of forty cents.

There was no man in all that close-figuring community who paid his bills with a better grace than the producer of these same potatoes; but, like a true business man, he invariably gave them a close examination. But there it was; in black and white; and although his faith in the old saying, "figures won't lie" had been somewhat weakened in the course of his extensive business experience, still he was willing to accept them, as the most reliable guide in business transactions yet discovered.

The agent, however, accommodatingly threw in some verbal explanations: such as the depressed condition of the potato market; the high price of horse-feed; the deplorable condition of the roads; wear and tear of wagon, harness, conscience, etc., with numerous statements of a more general character, altogether showing an account which there was "no getting around."

Mr. P. accordingly did not attempt to get around the matter. On the contrary he struck out in a straight line for home, with his head inclined even lower than usual, and still more upon his right shoulder than was his wont. That clear practical head meanwhile was busily at work solving the much muddled question as to the proper way to dispose of our farm products. But he has not yet come any nearer to its solution than the rest of us. And though he expresses some mortification at appearing in so ridiculous a light, (the loss of the potato crop with the attendant forty cents is nothing to him), he is partially reconciled to his fate, by the evidence from all over the industrial world that the producing classes generally, and more especially the tillers of the soil, like himself, are "in the same boat."

An idle young man was complaining to a prosperous friend that, although he had tried his luck in all sorts of fairs and lotteries, he had never been able to draw anything. "Indeed," said his friend. "Well, suppose you try a hand-cart? You can draw that."

"WILL you have some strawberries?" asked a lady of a guest. "Yes, madam, I eat strawberries with enthusiasm." "Do tell! We haven't anything but cream and sugar for 'em this evening," said the matter-of-fact hostess.

Exercise.

Two friends are in a canoe in the Mozambique Channel. A sudden flaw of wind upsets the boat. Before they can right her, she fills with water, and sinks; and the two men are swimming for their lives. "Ah, well!" says one of them to the other, "it is a long pull to the shore; but the water is warm, and we are strong. We will hold by each other, and all will go well." "No," says his friend. "I have lost my breath already; each wave that strikes us knocks it from my body. If you reach the shore,—and God grant that you may!—tell my wife I remembered her as I died. Good-by! God bless you!" and he is gone. There is nothing his companion can do for him. For himself, all he can do is to swim, and then float, and rest himself, and breathe; to swim again, and then float, and rest again,—hour after hour, to swim and float, with steady, calm determination that he will go home; that no blinding spray shall stifle him, and no despair weaken him,—hour after hour, till at last the palm-trees show distinct upon the shore, and then the tall reeds, and then the figures of animals. Will one never feel bottom? Yes, at last his foot touches the coral, and with that touch he is safe.

That story that man told me.

Now, what is the difference between those two men? Why does one give up the contest at once, and resign himself to what people call his fate, while the other fights the circumstances for hours, and wins the battle? On shipboard one was as strong as the other. He was as brave. He was as prudent as the other. "What if he was?" you say. Strength and bravery and prudence were all needed in the crisis; but something else was needed also. The man had never trained himself to swim. He knew how to swim, if knowing a method were of much use, where one has not trained himself to the habit. But that training he had never given.

We are beginning in our time to acknowledge the same work and the same results in other victories and in their companion failures. A country town sends two men to the legislature,—one because he understands all about the flowing of the meadows on the river, which is the great interest of that year; and another—well, because he has made a good speech at the town-meeting. But everyone understands that the first is worth five times as much as the second, and that his opinion is of five-fold value. Yes, so it is, in a certain sense. But when the great day comes, when that meadow business is to be explained to the House, our solid friend, laden with facts and figures, tries to explain it; and he begins at the wrong end. He takes for granted just what the House does not know. He empties the hall; and he sits down, with his speech only half spoken, ready to weep for mortification. It is then that his fresh, good-natured, ready colleague whispers him out into a committee room; takes the manuscript of the outspoken speech, and reads it; fixes in his mind the four essential things, and makes sure that he is not confused about them; goes back into the House; waits till the right moment; and then, just before the debate is closed, speaks for ten minutes only. And then, all this which was so dull becomes interesting to us all, and that which was so obscure becomes perfectly clear; and the whole business of the meadows is set right for a century. What is the difference between those two men? You have to confess there, that training, thorough exercise, applies not alone to swimming and fencing, and playing the piano, and other matters of muscle and nerve. It applies also, it seems, to memory, reasoning and imagination. It gives this young fellow confidence and presence of mind in face of an unfriendly audience, just as it gave the other confidence and perseverance in face of blinding spray.—Edward E. Hale.

THE LIMITS OF CARICATURE.—The third and last volume of Forster's biography gives some curious facts, which seem to show that Dickens recognized no limits in caricature. He sketched Walter Savage Landor as Bozthorn, in "Bleak House," and made Leigh Hunt masquerade as Harold Skimpole. This caricature was so exact that friends persuaded him to soften it, and to change the first name from Leander to Harold. Leigh Hunt was bitterly hurt by the abuse of friendship. Miss Mowcher was copied from a lady friend, who complained of the insult offered her. The world knows, and is sorry to know, that Mr. Dickens' own father served as the model for Wilkins Micawber. Mr. Forster gives some Micawber-like sayings of the elder Dickens: "I am about to proceed to Paris to consolidate Augustus' French." "The Supreme Being must be an entirely different individual from what I have every reason to believe Him, if he would care in the least for the society of your relations." The world has not hitherto known that Dickens' mother was used as a bait for popular laughter and applause as Mrs. Nickleby. Nothing could be worse than this. Those who heard the great novelist read while in this country, despite their enjoyment, have almost regretted an evening that has made them think of Dickens as a man with a flower-garden in his button-hole, and with two glaring gold chains looped across a purple velvet waistcoat. It is unfortunate that we shall hereafter have to remember him as the man who caricatured his own mother.—Chicago Tribune.

Second Love.

The Charleston (S. C.) *Courier and News*, which touches upon queer topics in a quaint sort of way, inquires why it should be a reproach to be called a second-hand swain, and goes on as follows: "The title is a patent of nobility—a token that the possessor is terribly in earnest. It is a sign of courage, a proof to perseverance. Nor can it be said that new things are always the best. That depends, we know, upon the quality of the article; whether it is made to sell or to last. Many a second-hand thing, although somewhat battered and bruised, is more highly prized than its tawdry, flashy neighbor, which will fall to pieces as soon as any strain is put upon it. Repairing broken hearts is seldom either expensive or difficult. Horrible but true. How often does a man marry the woman with whom he first fancied himself in love? Adam did it. There was only one woman in existence. Since the Adamatic age, where is the man who has married his first love? It is not in nature. Boys are slower of development than girls, and their first essay is generally with a charmer older than themselves. They grow out of it; take a slight attack of love as they take the whooping-cough and measles. It is foolish to say that the mature love of a man is less worth than the spooniness of the boy. There is a Dora and Agnes in well nigh every life. Is the first novel or the first song, or the first poem as likely to live as the riper productions of later years? Not it. There are men who become famous by a single speech or by a single verse; so there are men, perhaps, who have but one love. They are not many, and 'tis better so. The world would soon come to a stand still without the help of second-hand swains!"

Toes.

We are accustomed to use our toes so very little, that for all the practical purposes of life we might almost as well be without any. They were intended, in the first place, to give flexibility to the foot, and to help us in our walking; but the modern custom of cramping them up in tight shoes renders them almost as immovable as if they grew together. So the help they give us in walking is not so much after all. And as to putting them to any other use, we abuse them dreadfully sometimes; we cramp and torture them, and pinch them out of all likeness to their original shape, until they would never be known for the pretty, perfect little toes that we like to cuddle, and count, and go to market with, grown up. Who, for instance, would ever imagine that the second toe is intended to be longer than the first? And yet in a perfect foot it always is, though we are obliged to go to statues and paintings to find it out. And who, putting a foot and a modern narrow-toed shoe side by side, would ever suspect that they were intended for each other? The fact is, our toes are our most abused members, and so we don't get half the good from them that we might. The Chinese and the Japanese and the Bedouin Arabs, it is said, from continual practice use their toes nearly as well as their hands. They can pick up their tools with them, and even work with them, while they do something else with their hands. Arabs braid ropes with their fingers and toes working together in concert.—*Chicago Advance*

"Rules and Regulations for Parents' Paradise."

1. Shut every door after you, without slamming it.
2. Never call to persons up stairs, or in the next room; if you wish to speak to them, go quietly where they are.
3. Always speak kindly and politely to the servants if you would have them do the same to you.
4. When told to do, or not to do a thing, by either parent, never ask why you should or should not do it.
5. Tell of your own faults, not of those of your brothers and sisters.
6. Carefully clean the mud or snow off your boots before entering the house.
7. Be prompt at every meal hour.
8. Never sit down at the table or in the parlor with dirty hands or tumbled hair.
9. Never interrupt any conversation, but wait patiently your turn to speak.
10. Never reserve your good manners for company, but be equally polite at home and abroad.
11. Let your first, last and best confidant be your mother.—*Oliver Optic's Magazine*.

THE OLD SCOTCH SERVANT.—Dr. Robert Chambers tells a good story, in his "Scrapbook," of a Mr. Erskine, of Dun, who "had an old man servant, who took great liberties in virtue of his long and faithful service. He had grown quite gray in the family, and no one thought of taking amiss almost anything he said, though he often spoke very bitter things. At length, getting into an altercation one day with his master, he so far forgot himself as to call Mr. Erskine a leech. "Well, Gabriel, this cannot be put up with any longer, we must part at last." Hoot, toot, laird; where wad your honor be better than in your ain house?"

A bad habit to get into—a coat that is not paid for.

Young Folks' Column.

Little Miss Meddlesome.

Little Miss Meddlesome, scattering crumbs, into the library noisily comes—
Twirls off her apron, tilts open some books,
And into the work-basket, rummaging, looks.

Out go the spools, spinning over the floor;
Beeswax and needle-case stepped out before;
She tosses the tape-rule, and plays with the floss,
And says to herself, "Now, won't mamma be cross?"

Little Miss Meddlesome climbs to the shelf,
Since no one is looking, and, mischievous elf,
Pulls down the fine vases, the cuckoo clock stops,
And sprinkles the carpet with damaging drops.

She turns over the ottoman, frightens the bird,
And sees that the chairs in a medley are stirred;
Then creeps on the sofa, and, all in a heap,
Drops out of her frolicsome mischief asleep.

But here comes the nurse, who is shaking her head,
And frowns at the mischief asleep on the bed;
But let's hope when Miss Meddlesome's slumber is o'er,
She may wake from good dreams and do mischief no more.

"Who'll Be Victim?"

This is a game which may be played by any number of persons—the more 'players' the better. The Victim and the Leader are the more important persons in the game. Care must be taken by the Leader to ascertain that the Victim does not know the game. This done he is requested to retire from the room and wait until summoned. The Leader then arranges his company in a semicircle and instructs them that they are to imitate every action of the Victim from the time he has been informed of his duty, which is to find the name of a word thought of. He is now requested to enter the room. The Leader gives him the following instructions:

"You are, if you please, to watch the actions and the words of the company, and from them elicit the word thought of."

Now begins the fun. The Victim looks around him, and very likely twirls his mustache—a very natural action expended in the first nervous curiosity to discover his whereabouts. The players simultaneously twirl real or imaginary mustaches, and make any other restless motion the victim may make, imitating his smile, and so closely watching his movements that if he attempts to beat a retreat to the door all must follow.

Let us illustrate:—The Leader has introduced his Victim. Victim says, "Well, this is a comical situation." Chorus of voices:—"Well, this is," etc. Victim laughs. All the players laugh. Victim puts a question. All repeat it. After many attempts to solve the riddle, probably he plunges his hands in his pockets and says, "I'll give it up," when he is informed that the word is "Imitation."—*Rural New Yorker*.

A PUZZLED PIKE.—In the great aquarium at Brighton, England, a pike was introduced among the trout and other fish. At first its behavior was quiet and commendable, but after a while the discovery was made that it had a great fondness for the trout—such an extreme liking, indeed, that it did not hesitate to chase, catch and eat them. Various plans were tried to stop the havoc it made, all of which failing, a plate glass partition was inserted in the aquarium between it and the trout. The pike watched its former companions swimming around on the other side of the glass, and darting at them with great velocity, succeeded in bumping its nose violently against the thick plate. Evidently wondering what was the matter, it repeated the experiment several times, until, convinced that there must be something wrong, it reluctantly ceased its efforts.

A HINT TO YOUNG STUDENTS.—It is a most excellent study to write off sentences or whole pages which have pleased you, and then putting books and manuscripts both aside, again write the ideas or facts, clothing them in your words and not referring either to the written or printed page. If the practice is persevered in for one year, the student will be surprised at the facility he has gained in the expression of ideas and in breadth of thought. The boy or girl with energy enough to try this will also be bright enough to vary the exercise in a dozen ways, making it at once more interesting and of more value.—*Ohio Farmer*.

"PAPA, what does the editor lick the price current with?" "Whip it! he don't whip it, my child." "Well, this 'ere paper says, Price Current carefully corrected; and when I gets corrected I gets licked, hey, don't I?"

"OWING to the peculiar arrangement of the programme, no piece can be repeated," was the answer Mr. White received from his landlady (with whom he boarded) upon asking for a second piece of pie at dinner.

"Has the cookery-book any pictures?" asked a young lady of a bookseller. "Not one," replied the dealer in books. "Why," exclaimed the pretty miss, "what is the use of telling us how to make a good dinner, if they don't give us no plate?"

"How long will my chop be, waiter?" angrily asked a hungry old man in a restaurant. "About five inches, sir," was the accurate reply.

Domestic Economy.

Oatmeal.

We propose to devote a short article to oatmeal and its uses. Perhaps this may be the more suitable, as the present price of breadstuffs is so very high that many who cannot easily afford to purchase wheaten bread in the quantity and of the quality which they have been accustomed to use, may be glad to hear of a substance at once good and comparatively cheap, by which it may be partially replaced. To a very great number of people the value of oatmeal is little known; although the prejudice against it, long entertained, as an article of food rather fit for the lower animals than for human beings, has of late, in some measure, given place to a more just opinion, especially amongst the educated classes, who are capable of appreciating the value of the favorable verdict of chemists and physiologists. It is now well known that no other kind of grain is so nutritious as oats; and the facility with which it is grown on soils not rich enough, and in situations not warm enough for wheat, recommends it very strongly, as fitted to yield a very considerable part of our food supply. Oatmeal is a principal article of food of the peasantry of Scotland, and until nearly the end of last century amongst those of the north of England.

In more ancient times oats formed the principal corn crop of most parts of England; but as agriculture improved and the cultivation extended, wheaten bread was naturally preferred by those who could afford it; the use of oatmeal became more and more limited to the poorer classes; and on this very account was as much as possible avoided by those who, in respect of wealth, birth, or profession, made pretensions of superiority. Another circumstance which greatly tended to restrict the use of oatmeal where it was formerly general, was the convenience with which wheaten bread could be procured from the baker's shop, a matter of especial importance when almost all the members of a family were employed in manufactories. The revived popularity of oatmeal has recently led to the exposure of different kinds of it for sale in bakers' and other shops, particularly in Scotland.

The grain of oats intended for human food is generally prepared by being ground into meal; although it is also used in the form of groats; that is, of grain denuded of its husk, and merely broken into fragments. Oatmeal is of two kinds—both common in all shops in which it is sold—fine meal, and coarse or round meal. For various purposes some prefer the one and some the other. There is no difference in quality, but merely in the degree in which the grain has been triturated in the mill.

Oatmeal is principally used in two ways, for the making of porridge and of oat-cakes. Porridge is a principal article of food of the Scottish peasantry, generally accompanied with milk, when milk can be obtained; although when milk is scarce butter is sometimes used, sometimes sugar, and sometimes treacle beer. For most people, in a sound condition of health, there is no more wholesome article of food than porridge and milk, none that contains a larger proportion both of flesh-forming and heat-producing substances; whilst to almost all who have ever been accustomed to its use, it is extremely palatable. Generally speaking, there is no better article of food for the nursery, none more likely to maintain a healthy condition of the stomach, or to give vigor to the frame; although there are exceptional cases, both among the young and among adults, in which the use of porridge is unsuitable, producing painful distension of the stomach and indigestion. Whilst the caprices of children ought not to be heeded in such a matter, the actual conditions of their constitution ought to be carefully observed and regarded. Porridge is in general made by simply boiling oatmeal in water, stirring all the while to prevent singeing, and to secure the thorough mixture of the meal and water into a homogeneous mass, without knots. The quality of porridge very much depends on the amount of boiling which it receives. It cannot be too thoroughly heated. Imperfectly boiled oatmeal porridge is a very coarse article of food; and, unfortunately, much of the porridge used is of this character; and the porridge prepared for the nursery is often no better, through the carelessness of the servants who wish to get through their work with as little trouble as possible. It is not nearly so digestible, and therefore not so nutritious as porridge really well made. A common mistake in the making of porridge must also here be noticed, as tending much to the deterioration of its quality, the adding of meal by degrees whilst the boiling goes on, until the proper thickness is acquired; the result being that part of the meal is imperfectly boiled. The cook ought to know the proper proportions of meal and water—knowledge not very difficult to acquire—and mix them at once, so that all the meal may be equally well boiled. But it is to be observed that the water must be boiling before the meal is put in, which is not to be introduced in a mass, but, as it were, strained through the fingers, handful by handful, as quickly as possible.

Whey is sometimes used, instead of water, for the making of oatmeal porridge, and affords a very agreeable variety to those in the habit of

using porridge every day. Milk porridge is another variety esteemed as an especial luxury by the Scottish peasantry, and is certainly both a very agreeable and a very nutritious article of food.

Whether fine oatmeal or coarse oatmeal should be used, for the making of porridge is merely a matter of taste.

The most hastily prepared and imperfectly boiled porridge is very superior to brose, yet brose is a form in which oatmeal has long been very generally used, at least in Scotland, and is still used by many of the agricultural laborers. It is made by merely pouring boiling water upon oatmeal and stirring it about. The result is a coarse, pasty mass, with numerous knots imbedded in it, of oatmeal almost raw; a very coarse kind of food, on which, however, with the addition of milk, many farm laborers mainly subsist, often using it as their only article of diet three times a day.

Oatmeal is made into bread by being merely mixed with water, kneaded, and rolled out, by a wooden roller, into thin cakes, which are baked on an iron plate (*Scottice*, a *girdle*), suspended over a fire. Sometimes oat-cakes are made with hot water and sometimes with cold water; but those made with hot water are tougher than those made with cold water; which, if otherwise well made, are preferable. Much, however, depends on the kneading, and the question: "Is she a good baker?"—meaning a good baker of oatmeal—used to be a common one before the engagement of a domestic servant in some parts of Scotland.

Oat-cake can hardly be made too thin; the thinnest oat-cake is almost certainly the best. Oat-cake soon loses its agreeable character by imbibing water from the atmosphere; but if placed before the fire till dried, and cooled, it becomes almost as good as when newly made. With butter, or with cheese, it is a most agreeable article of food.—*Food Journal*.

WASHSTAND BASINS AND CABINET STANDS.—In fitting on the marble top, the portion at front should not be kept any broader than is necessary for strength, as it is disagreeable for the parties using the wash-stand to have to lean forward too far. In arranging the basin on the stool, the plumber ought, therefore, to see that at most the stool only projects about one-half inch beyond the outer top edge of the basin or cabinet stand. In setting cabinet stands and basins, the plumber generally uses putty, or a mixture of putty and white lead; and to make the putty adhere, the bottom of the basin is well rubbed with a softened piece of tallow, or a tallow candle, or the bottom of the basin may be heated and then rubbed over with the tallow.—*Manufacturer and Builder*.

HOW TO KEEP BUTTER COOL.—Get a large flour pot, plug up the hole with a sound cork and seal it. Now put a quarter-brick or other square, heavy body in the bottom, to serve as a support for a second, but smaller pot, which must be plugged up in the same manner. Place a dish under the outer pot, and cover with any cover you please, provided it be not metallic. Now fill the space between the inner and outer pot with water. The butter will keep as firm as a rock, as cool as a cucumber.

CLEANSING LACE.—Point, or any kind of fine lace, may be cleansed easily by soaking it in a preparation of sapoline and warm water. If this is not procurable, ammonia may be used with almost equal effect. Let it soak till fit to rinse in pure warm water; then lay it on the ironing-board over clean linen, and iron lightly on the wrong side with a cool iron. Afterward pin the lace on the linen-covered board, inserting a pin in every open loop to keep the pattern clear.

A GOOD TABLE SAUCE.—Take one gallon of tomatoes, wash and simmer in three quarts of water until nearly done; strain through a sieve; add two tablespoonfuls of each of these spices, ginger, mace, black pepper, allspice and salt, and one of cayenne pepper; boil down to one quart; pour in one-half pint best vinegar, and then pass through a hair sieve. Bottle in half-pint bottles; cork and seal securely, and keep in a cool place.

TO POLISH TINS.—First rub your tins with a dry cloth; then take dry flour and rub it on with your hands; afterwards, take an old news paper and rub the flour off, and the tins will shine as well as if half an hour had been spent rubbing them with brick dust or powder, which spoils the hands.

FOR BLEACHING MUSLIN.—One pound of chloride of lime to forty yards of muslin; soak the muslin in soft water over night, melt the lime in a pot of water; then put the muslin in for half an hour; then rinse three times; soak in soft water over night; then hang out to dry.

FURNITURE OIL.—Mix half a pint of olive oil with one pound of soft soap. Boil them well, and apply the mixture to your oiled furniture with a piece of dry cotton wool. Polish with a soft, dry flannel.

TO CLEAN MARBLE.—To cleanse marble stained with iron rust, apply lemon-juice to it with a clean rag and wash with warm water. If soiled with dirt, wash it with soap and Paris white.

FLOOR OIL-CLOTHS.—Have the dust wiped from them often; but use soap and scrubbing-brush seldom, as they wear off the paint. Use no hot water.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 6.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, April 4, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Lack of Flavor in California Apples; Farmers Shipping their own Wheat; The Stockton Gang Plow; One Crop or Many, 209. Failure of Seed; Recent Patents; The Approaching International Exposition of Chili, 216. Hints on Hop Growing—No. 3; A Short Horn Herd of Monterey; A True Statesman; Close of the Legislature, 217. Patents and Inventions, 220.

ILLUSTRATIONS.—Shaw's Stockton Gang Plow, 209. Charles Sumner, 217.

CORRESPONDENCE.—The San Joaquin Irrigating Company; A Question About Seed; A Farm Hand's Complaint; Native California Coffee; Walnut Creek, 210. The Duty on Jute and Grain Sacks; Dissolving Strychnine; Good Advice, 211. Trinity County Notes—Continued, 219.

STOCK.—The Death of the \$40,000 Cow; Mangle; Shampooing Cattle, 211.

POULTRY YARD.—Capons for Rearing Chickens; Mr. Mechl on Poultry; Mortar and Pestle for Pound-ing Shells, 211.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 212-13.

HOME CIRCLE.—The People's Advent (Poetry); Farm House Chat; The Commissioner's Returns; Exercise; The Limits of Caricature, 214. Second Love; Toes; "Rules and Regulations for Parents' Paradise;" The Old Scotch Servant, 215.

YOUNG FOLKS' COLUMN.—Little Miss Meddlesome (Poetry); "Who'll be Victim?" A Puzzled Pike; A Hint to Young Students, 215.

DOMESTIC ECONOMY.—Oatmeal; Washstand Basins and Cabinet Stands; How to Keep Butter Cool; Cleansing Lace; A Good Table Sauce; To Polish Tins; For Bleaching Muslin; Furniture Oil; To Clean Marble; Floor Oil-Cloths, 215.

USEFUL INFORMATION.—A New Method of Staining Wood; Separation of the Mercury in Thermometer Tubes; Variegated Cotton Thread; The Corrosion of Boilers; The Detection of Blood Spots; Cleaning Glassware in the Laboratory; Adulteration of Tea; The Anglo-French Tunnel; The Patent Safety Blasting Powder; Water Clocks; Monster Engine Belts; Friction Matches; Smilifier, 218.

AGRICULTURAL NOTES from various counties in California, 220.

MISCELLANEOUS.—San Jose Farmers' Club, 213. Finding the Latitude at Sea; Apparatus for Measuring Gas; Engraving in Relief, 219.

Farm Maps.

A matter which should be insisted on, in the course of study prescribed for our common schools, is map-making. The subject is touched upon at times, but seldom brought to any practical application. The ability to make a fair, intelligible map, on occasion, is an acquirement which comes of use to all who possess it. Learning the art of plotting out, and reducing or enlarging by squares, is rather play than work, and every farmer's child should attempt it.

On our large farms and ranches a reliable map of the various natural features of the place, its elevations, depressions, water-ways and woods, together with the artificial divisions of fences, ditches, etc., will vastly facilitate the farmer in planning out his campaign. Each plot, field or pasture should be measured with tolerable accuracy, and designated on the map by some name or number, accompanied by figures representing its linear dimensions and area. This will show at a glance what perhaps would require a ride or walk about a farm, or at least an effort of the memory. The exact amount of plowing and quantity of seed necessary, together with the probable capacity of each division, are thus presented.

When instructions are to be given to the hands, and especially new ones, the work of explanation is greatly lessened, and a clearer idea of what is wanted becomes attainable. Even down to the laying out of a kitchen garden, a pre-arranged map of the beds is very serviceable; and when landscape gardening is practiced, is absolutely necessary. The hint has probably occurred to our readers often before, but it will hear dwelling upon.

ON FILE.—We acknowledge, with pleasure, the receipt of communications from J. E. A., with sample of Arizona cotton; A. R. W., Arizona; W. H. L., Salem, Oregon; M. T. E., Stanislaus Co.; F. M. S., on Cheap Transportation; A. F. R., Watsonville; "Sandy," Vacaville; W. A. D., San Francisco; H., San José.

Failure of Seed.

On another page of this impression there is some correspondence on the much vexed question as to the responsibility of seedsmen, which suggests naturally a few thoughts on this subject.

At this time of year and later in the season, failures of plantings are annually reported from all quarters. Seed which has been sown in hope, lies profitless in the ground, and becomes only a source of disappointment. There are, as in all things, variations in the results, and there is always a wide field for speculation as to probable causes. Seeds may remain wholly inert, and die without presenting a vestige of growth above ground; they may sprout irregularly in spots, leaving wide inter-spaces of barrenness; or they may flourish vigorously and not be true to name. There are two parties upon whom the blame may rest, without considering the haps and mishaps of fickle weather. He who sows may bear fault, though apparently every precaution has been taken. Often one is puzzled to imagine how so much care and foresight have counted as naught, though more frequently the error is easily detected. When we consider the multifarious processes which have to be performed in preparing the soil, planting, cultivating the growing crop, and finally harvesting it, the probabilities of a mistake somewhere seem alarmingly in the ascendant. Nature, so provident of her own, acts mysteriously and complexly. When man attempts to assist the operation of natural laws, confessedly in great part ignorant of their character, it is no wonder that he sometimes makes a bungling job.

An agricultural writer says: "A main cause of failure is sowing too deep, and actually burying the seed. In a state of nature all seeds germinate on the top of the ground, protected with a slight covering of fallen leaves or blades of grass. There is a golden rule to guide us in sowing seed, and that is, never to cover it with a greater thickness of soil than the diameter of the seed itself. There are, of course, exceptions; but in sowing radishes, for instance, the ground should be forked or dug level. The seed should be sown, and if a shower of rain falls, nothing more is required, as it will break down the rough ground sufficiently to cover the seed. Many amateurs suppose that rakes are for the purpose of clearing the ground of stones, the very pores of the soil by which light, heat and moisture reach the roots of all plants. The consequence is, you have a surface washed flat by the rain and baked hard by the sun, and, as the soil so cultivated is sown, and consequently cannot be disturbed, it becomes an eyecore for months.

There is one fact which is not always considered: that while nature prudently distributes the chances of growth, by continuous planting under varying conditions of soil and exposure to air, moisture and warmth, her imitators are obliged, from obvious reasons, to stake all on a single attempt, uniform in time and mode. During the history of agriculture, however long that may be, men have learned to cultivate the earth with a reasonable certainty of success; and yet, every now and then, some inexplicable failures baffle them.

The most important thing is, of course, the starting point. Without good seed there can be no success, and too much care can not be bestowed upon its production and selection. And this brings us to the question discussed by our correspondents: How far is the one who furnishes the seed responsible for its quality?

Most kinds of seed are grown solely for the purpose of planting. Every care is taken to insure perfect, mature kernels of the best varieties, and high prices are put upon this produce. Yet, with all the care which seed-growers take, who have their reputation to sustain, and who undoubtedly exert themselves to furnish a good article, it frequently occurs that the seeds which they sell are poor or worthless. Next to the seed-grower comes the seed-dealer. Seedsmen, too, have a name to keep up, else the deception and carelessness of one year may bear evil fruit the next. If we could conceive of a man, who, for the sake of a profitable course of fraud during one year, would disregard the succeeding ones, it would be easy to understand why such a plan might be adopted. But it is evidently absurd. There are undoubted cases, too frequent indeed, in which seeds bad or not true to name are palmed off on the unsuspecting purchaser, who has, perhaps, no means of knowing the worth of his bargain until the planting season is past; and too late, the truth is seen. The seedsmen who has sold not only the seed, but also the purchaser, would certainly be remembered against another spring-time, and the evidence of a few victims to a certain attempt to deceive, on his part, would ruin his business. Hence we think that, if only from policy, nearly all seedsmen are honest.

The seed-dealer is responsible thus far: He is bound to procure his goods of reliable persons, whose name upon a packet has been proved to be a solid guaranty of the merit of its contents; he is not to shirk paying fully for what he in turn charges, and is acknowledged to be worth, fair and even high prices; he is to test seed of which he has doubts, and refrain from selling such until his suspicions are removed by personal trial; he is to place such information as he possesses regarding the seed wholly at the disposal of his patrons; and, it is hardly necessary to add, is to be thoroughly honest in naming and pricing.

We are not living in the millennium, and

there are dishonest seedsmen as well as dishonest persons in all other branches of business. The laws, as they now stand, should be made a sufficient barrier of restraint. Where fraud, or the intent to commit fraud, can be proven, a recourse to litigation should bring but one result—conviction of the guilty. A special law, requiring pecuniary amends for losses incurred through the dealer's carelessness might be enacted, but would be an endless source of suits and counter-suits, and would be met in the end by another act, removing the responsibility one step, upon the seed-grower. The latter could probably find some one hack of him to prosecute, so that in this view all would be happy.

Recent Patents.

Among the patents recently obtained through Dewey & Co.'s Scientific Press American and Foreign Patent Agency, the following are worthy of mention:

EYE GLASS.—Louis A. Berteling, San Francisco, California. This invention provides an improved saddle or clamp for fastening the eye glasses upon the bridge of the nose. It consists in attaching the shoes or clamps to a spring in such a manner that they will possess an elasticity both at the top and bottom. The clamps will then adjust themselves to the seat or shape of the nose without pinching, and at the same time have a stronger and firmer hold.

CAR PROPELLER.—Fayette Mace, Jackson, Amador county, California. An arrangement by which a running stream is made to propel a car in either direction along its bank. Mr. Mace proposes to construct a railroad track alongside a mining stream or ditch which has a current, and place upon it a car. This car will be provided with a shaft which extends out over the stream. A wheel, similar to a paddle wheel is attached to the end of this shaft so as to dip in the water. A gear wheel on this shaft engages with a gear on one of the bearing wheels of the car so that when the current revolves the wheel and shaft the bearing wheel of the car is turned so as to carry the car up the stream, when the car has arrived at the head of the stream and received its load the gear wheel on the shaft is disengaged from the bearing wheel, and the shaft is fixed by a clutch so that it cannot revolve. As one or two of the hockets or wings of the wheel will then be in the water the current will carry the car down the stream. This arrangement is especially adapted for propelling a wood or lumber car from the foothills down to some shipping point.

PLANK ROADWAYS.—Cornelius McGowan, San Francisco, California. This invention consists in constructing plank roadways of boards which are thicker at one end than at the other and in placing the thickest portion in the middle of the roadway where the most wear occurs, while the thin portion is placed next to the sidewalk where there is the least travel.

SHIRT FRONT.—Ismael Zacharias, San Francisco, California, provides a shirt front the upper half of which is made of linen while the lower portion is made of colored material. At the point of junction in the middle of the shirt bosom is a flap the upper surface of which is linen (usually an extension of the upper half of the shirt bosom) while the under part is formed of the same material as the lower portion. By turning the flap up and buttoning it upon each side of the neck the linen portion is covered and the colored side exposed, but by turning the flap down the linen front is exposed.

VACUUM RELIEF VALVE FOR STEAM CYLINDERS.—Andrew J. Stevens, Sacramento, California. This invention provides a relief valve in the steam dome of the boiler, which is connected with the steam cylinder so that when the throttle is closed and the locomotive is running on a down grade without steam, the vacuum usually formed by the pumping action of the piston will be relieved and the piston lubricated.

IRRIGATION PIPE.—Nehemiah Clark, S. F., Cal. This invention relates to an improved arrangement for coupling underground irrigation pipe by which the water is allowed to escape at the joints, without danger of clogging the escape opening.

CUTTING APPARATUS FOR HARVESTERS.—Philoander Kitts, Monticello, Cal. This invention consists in an improved cutter bar for headers by which the heads of grain are prevented from dropping in front of the sickles after it is cut. The improved arrangement also strengthens the cutter bar while it is rendered much lighter than formerly.

SEED SOWER.—John B. Nixon, Cottonwood, Cal. Relates to an improvement in broadcast seed sowers, and consists in providing a simple arrangement, whereby the direction of the rotation of the distributor can be reversed so as to scatter the grain in an opposite direction alternately thus sowing it more uniformly.

To get rid of stumps, some one suggests boring a hole in the center of each stump, filling with salt-peter, allowing the latter to be absorbed, and then igniting by means of kerosine. It is said that the stump will smoulder away to the roots. It would be easy enough to try the experiment, but we doubt its success.

The Approaching International Exposition of Chili.

Some of our local cotemporaries have given this proposed exposition a passing notice, but it is evident that the importance of the matter has not been duly considered. Fairs or exhibitions, general and local, are among the most powerful means employed by modern civilization, for the purpose of bringing the people of various countries together, and of promoting their advancement by the means of the interchange of ideas and of products, thus secured. The republic, (Chili) which does not omit any measure to strengthen its ties with the States of this continent, is now preparing one of those grand, civilizing fairs, and calls the attention of the world, and especially America, to the fact.

The coming exposition affords an opportunity by which America's business enterprise can secure both honor and profit. The efforts of those who have looked after the interests of our foreign trade, have hitherto been too exclusively devoted to securing a few "big customers," for a limited number of our products, to the neglect of numerous moderate buyers, by whom we could secure a more diversified trade.

Probably no country in the world is in closer sympathy with ours, by the form and character of its government, than the Republic of Chili. Added to this, which is a decided advantage to start with, the people of Chili are particularly well disposed toward Americans; and we speak advisedly when we declare that if the trade representatives of all the nations of the earth were to offer their respective products in the markets of Chili, the merits and prices of the articles being equal, those of the Americans would meet with a decided preference. Yet our government, by being too much absorbed in its dealings with the "great powers," and our commercial representatives, by failing to realize even the present importance of the trade with Chili, have derived but little profit from these advantages.

Californians especially are too much inclined to slight all commerce which is not in direct communication with the port of San Francisco; but, if they will take, for instance, Chili's import of American wines, which is already considerable, and is steadily increasing, they will be able to realize that the wine-producers of California may receive substantial benefits from its trade with Chili, even though the wine be sent thither from Eastern ports. We are assured that there is here an opening market for California wines which we should be careful about slighting.

There is evidently a popular mistake in regard to the ability of our South American neighbors to go beyond their absolute wants in making their purchases. Especially is this a mistake when applied to Chili. Her imports of articles of luxury, compared with those of necessity, are remarkably large. Jewelry, costly furniture, gold and silver-ware, wines and tobacco, are among the articles which the people buy largely, and pay for liberally.

The American exports to Chili of the more substantial articles of trade, during the fiscal year ending June 30, 1873, range as follows: agricultural implements, \$75,713; harley, \$12,178; coal, \$5,100; railroad cars, \$31,106; cotton, raw and manufactured, \$249,053; iron, and manufactures of, \$401,763; refined illuminating oils, \$126,939; lubricating oils, \$6,970; larl, \$48,608; sewing machines, \$43,321; spirits of turpentine, \$40,295; sugar and molasses, \$290,575; tobacco and manufactures of, \$36,000; wood, and manufactures of, \$212,262; household furniture, \$150,638. The exports of Chili are also worthy our commercial consideration. Her production of copper alone is equal to two-thirds of all the rest of the world.

This is the second International Exposition of Chili, the first occurring in 1869. It is by the decree, and under the protection of the government. The approaching exposition is to be opened at Santiago, September 16, 1875. The rules that have governed International Expositions throughout the world have been adopted, and have been published in a neat pamphlet, which contains a full programme, list of officers, and explanations of the objects and general management of the exposition.

Those of our readers who are more particularly interested in this matter will receive the requisite information by calling on Francisco Casanueva, Consul-General of Chili, at his office, 506 Battery street, Room 27, San Francisco. This officer deserves the highest commendation, both from the government which he represents, and from our own citizens, for the zeal which he has manifested in this matter, as well as for the thorough and agreeable manner in which he has fulfilled the duties of his office during the two years of his official residence here. And we can insure the prospective exhibitors of American products at the coming exposition, that they will meet with a pleasant reception, and receive the hearty co-operation of this efficient and gentlemanly official.

ALSIKE CLOVER, says an English journal, is inexhaustible in its powers of production, as proved by the wonderful formation of the plant. From its single crown, innumerable heads are constantly being produced all over the ground. It is a plant of very hardy nature, as is proved by the fact that it hears transplanting. It is best adapted to low, moist soils. We have, besides, noticed very favorable reports in the bee papers of its merits as a honey-producer.

Hints on Hop Growing—No. 3.

On Planting.

As we were about putting the following article in the hands of the printer we received a note from a correspondent at Santa Rosa, Merced county, containing the following enquiries, which we here give in order, with answers appended: "Have you published any description of how to cultivate hops in California?" Our correspondent will find in Nos. 11 and 12, of the 14th and 21st ultimo, "hints on hop growing," containing suggestions and information intended more especially for the benefit of new comers and beginners like himself. "What kind of soil is required?" Our views on this point are fully expressed in the following hints on planting. "Will they need irrigation?" This is a question which can hardly be answered until a few more seasons of hop-growing in California have passed; though from the deep growth of the roots, and the vines attaining their growth in the early season, we have faith in their ability to withstand the dry season. "What is the yield per acre?" The reports from our California hop-yards are so meager as yet that we have no data upon which to form an estimate; but so far we see no reason why we may not expect as large a yield as the hop-growing districts of the East produce—namely, from one to two tons per acre. Having answered the enquiries of our correspondent, who has our best wishes for success in this or in any other undertaking, we will begin our regular article, beginning with

Selection of Soil.

There is scarcely anything that will bear, or, in fact, demands earlier planting than hops. To say that this crop requires a rich mellow soil, is but repeating what is truly said of almost every crop. Still, this condition is not absolutely essential. The roots of the hop-vine strike deep and spread wide, and will consequently find nourishment where many other crops would fail to find sustenance. But this does not furnish us with a reasonable excuse for neglecting to replace this sustenance when it becomes exhausted; and the hop is a very exhaustive plant. The new land in Sauk county, Wisconsin, just reclaimed from the oak forest, and which has only received one season's superficial cultivation, produced the first season after planting, two tons of hops to the acre, and of a quality which commanded the highest price in the New York market.

One of the first things to attend to is

Procuring the Roots.

And in hop-districts this is a matter involving little trouble or expense. The trimmings of the roots of one hop-yard (and all yards should be trimmed every year) will furnish cuttings to plant several yards. As these root-cuttings are a mere incumbrance to the yards trimmed, there being only an occasional demand for them, the price at the yards should be merely nominal, say from 20 to 50 cents per bushel. The inability to procure roots near at home, should not hinder the planting. The hop-root is extremely tenacious of vitality, remaining out of the ground, without injury, a sufficient length of time to transport it from the interior of any Eastern State to this coast.

In a new hop growing district, where yards have not had time to deteriorate, it would probably make but little difference from what yard the roots were procured. But when obtained from older districts, care should be taken to get roots from yards in good condition; as different yards in the same neighborhood will sometimes vary considerably in their productiveness, as well as in the quality of the hops.

One cause of the deterioration of some yards is the neglect on the part of the owners to supply the yard with

Male Hops.

And this point should be considered by the party about to set out a hop-yard. The presence of these plants is essential to continue productiveness, though probably no immediate loss would be recognized were the yard entirely deprived of them. These should be planted in separate hills. A good apportionment would be one hill of male hops within a square of about forty hills of bearing hops. Too large a proportion of males is worse than useless. It is a waste; the product of these vines being of no account, a mere feathery blossom. The purchaser has a right to expect a due proportion of male hop roots, properly separated, so that he will know what he is planting.

Straight lines and equal distances being desirable in all cultivated crops, and hops being a somewhat permanent plantation, regularity should be considered in planting; placing the hills about six feet apart. The root-cuttings planted in each hill should be two or three in number, according to the apparent strength of the cuttings. Each one should be planted separately; the whole enclosing a space about a foot in diameter. A person with a garden trowel, or similar tool, can plant the roots very rapidly. The roots, cut to a length of eight or ten inches, should be planted like vine cuttings, and thoroughly covered, bringing them in contact with the mellow earth. It would be well to moisten them before planting.

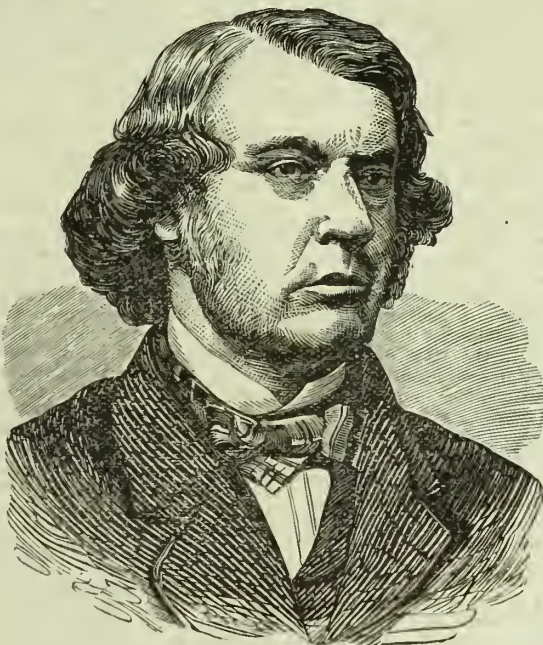
The first issue of the Oakland *Semi-Tropical Press* is received. The paper is a weekly, published by G. W. Barter, at West Oakland. We were especially pleased to notice an explanation of the rather singular name, which, whatever else be its character, is certainly original. The initial number is a creditable one, and the *Press* has our best wishes.

A Short Horn Herd of Monterey.

Mr. Jesse D. Carr, of the Gabilan rancho, has recently received an important addition to his stock of short horns. They reached his place direct from Canada, without passing through this city. The *Monterey Democrat* alludes to this new importation as follows:

To men of judgment, it is obvious that the mode of breeding cattle in this country must accommodate itself to the dedication of our valleys, and rich lands generally, to the uses of agriculture. In other words, small and choice herds will take the place of the bands of inferior stock, which, under a regime that is rapidly passing away, have been allowed to gather their food in an open country. The time is not far off when farmers will find it greatly to their advantage to combine grazing, on a small scale (as to numbers), with the growing of cereals, and when the qualities of the individual animal, in respect to early maturity and fattening properties, will be matters of the utmost importance.

Of the citizens of our county who are taking measures to meet the changed conditions we speak of, Jesse D. Carr, of the Gabilan rancho, is foremost; and, we may add, by his diligence and liberality, the people of our county are



CHARLES SUMNER.

having put within their reach, at comparative small expense to them individually, the means of improving their stock to the highest standard now known. Mr. Carr has just added to his herd of short horns, already noted for its excellence, two bulls and six cows, which came from the herd of the Hon. M. H. Cochrane, Hillhurst, Compton, Canada, and were sold by him at \$9,050, in the aggregate.

These animals make thirty head, or upwards, of pure, thoroughbred short horns, on the Gabilan rancho, owned by Carr & Chapman and by Jesse D. Carr, individually. In appearance, this herd will compare with any corresponding number of cattle in the United States; while in respect to pedigree and purity of strain it is not probable that they have their equals on this coast. This last importation of Mr. Carr's was selected with the view of securing the purest strains of both the Booth and Bates stock, and the whole herd represents \$30,000.

Description and pedigrees of Cochrane purchase:

Bulls.

SIXTH DUKE OF OXFORD—color, red and white; sire, Second Duke of Oneida, 9,926; dam, Third Maid of Oxford, by Grand Duke of Oxford (16,184). Second Duke of Oneida was the best bull sold at the New York Mills sale (Mr. Campbell's) last year—no better bred bull ever lived. Grand Duke of Oxford was imported, having taken prizes in England. In point of pedigree, we have no hesitation in asserting, Sixth Lord Oxford is without a peer on the Pacific coast. He is a beauty and is just thirteen months old.

GOV. BOOTH, LATE CAVALIER—color, red roan; sire, Royal Briton (27,351); dam, White Rose, by Mountain Chief (20,383). His sire and sire are both of the pure Booth stock and were imported from England. The stock is noted for early maturity and fattening qualities. Gov. Booth is just two years old and is remarkably well formed. It is believed that he is the first pure Booth brought to the State, as Sixth Lord Oxford is the first Bates. He is pure Duke on the sire's side and pure Oxford on that of his dam. These are the two strains which brought such high prices at the great New York Mills (Campbell's) sale last year.

LOUAN 44th—color, red; sire, Duke of Airdrie, 2,743; dam, Louan 24th, by Duke of Airdrie, 2,743. Duke of Airdrie was one of the best bulls that ever left England. Louan 44th is seven years old, a good breeder, and a cow that will do credit to any herd.

WILD EYES 26th—color, red and white; sire, Earl of Walton (17,787); dam, Wild Eyes 24th, by Duke of Oxford (11,387). Earl of Walton and Fourth Duke of Oxford were both imported bulls, and of pure Bates stock. Wild Eyes 26th is eight years old, and a noble-looking cow, being said to be an A No. 1 breeder.

FASHION—color, red and white; sire, General Havelock, 16,130; dam, Snip, by Tweedside, 12,246. This cow is 12 years old, has a fine appearance, well-shaped, and said to have raised many fine calves; looks as though she might raise several more.

NICANDRA—color, light roan; sire, Sixth Duke of Geneva, 7,933; dam, Nannie Williams 10th, by Duke of Airdrie, 2,743. The color of this heifer is objectionable, but her shape and form are good, and her pedigree is said to be equal to the best. She is two years old.

WILFUL—color, red and white; sire, Duke of Hillhurst (28,401); dam, Wild Flower 6th, by Imperial Oxford (18,084). This heifer is perfect in color and form, and has a good pedigree. She looks as if she might make a good show animal. She is two years old.

WILFUL 2d—color, red; sire, Sixth Duke of Geneva; dam, Wild Flower 6th, by Imperial Oxford (18,084). She is half-sister to Wilful, and her sire, Sixth Duke of Geneva, was a pure Duke, and of the same families as those sold for the highest prices at the great Campbell sale. If she don't carry off the ribbons when and wherever exhibited in the show ring, we are much mistaken, as we don't think that we have ever seen a more perfect six-months-old calf.

A True Statesman.

The decease of Hon. Charles Sumner, at the age of 63, has been marked by the sincere sorrow of the nation. We have too few, among living politicians, whose conduct is governed by purely honorable motives, not to regret deeply the loss of one whose character has been beyond assault. Whatever mistakes Charles Sumner committed, and in whatever personal collisions he may have been involved, no one dared to impugn his integrity. During his career as a statesman, Mr. Sumner had constantly to face embittered attacks from political opponents on all sides, whom his unflinching determination had stung into enmity.

Close of the Legislature.

The 20th California Legislature closed its session on Monday last. Something like 2,000 bills were introduced during the session, by far the larger portion of which were either killed during their progress, or will be suffered to die in the conveniently capacious pocket of the Governor. The first half of the time was frittered away, as usual, in short sessions, long debates and frequent adjournments. As a consequence, the chief part of the business was forced into the last few weeks, and then hastily put through, and much of it too late to allow the Governor opportunity for consideration within the constitutional limits for affixing his signature. As a further consequence, the work of their preparation, whether good or bad, is lost. The Governor, however, seems determined not to allow hasty legislation to be forced upon him, and will sign such bills only as reach him in time for full and careful examination.

Our system of legislation is very faulty, in assuming much that might properly be left to the action of the several counties, in which they alone are concerned. Probably one-half of the business which comes before the Legislature could better be attended to by the various Boards of county and city Supervisors, and at a mere moiety of the cost now entailed.

If all that was desired has not been accomplished, we have, at least, the satisfaction of knowing that the session has closed without the passage of any especially injurious bills. The few tending in that direction were fortunately passed so near the close of the session that the Governor will be able to quietly kill them by simply withholding his signature. The House, generally, and the newly elected members of the Senate—those which are freshest from the people—have generally stood up manfully for the right, and interposed a successful barrier against all efforts to place unjust burdens upon the State. These same, although they have introduced several important measures of reform, have yet been unable to carry them through by reason of the perverseness of a Senate which has ignored the expressed will of the people, and manifested a determination that as little should be done in the way of reform as possible.

One of the marked features of the session has been the small encouragement given to lobbyists. We trust that the severe measures adopted in one instance will be sufficient to discourage all future efforts in that direction.

The new Apportionment Bill, and the determined efforts everywhere manifested on the part of the people to free themselves from the little knots of the politicians, in the several counties, who have heretofore managed to control nominations, will undoubtedly make a pretty clean sweep of all obnoxious individuals from the next Legislature. Give us Senators and Assemblymen taken from the farm, the workshop, the counting room, with a small and carefully selected few from legal circles, and we shall have a Legislature two years hence through whose action taxes will be largely reduced, and reform measures, wherever needed, assured.

The Apportionment Act; the Fence Law; the submission to the people of the question of a Constitutional Convention; the Local Option Law, and the abolition of the extravagant City Hall Commission of San Francisco, are among the most healthy and important general measures secured during the session. The efforts to remove from the people the unjust and onerous burthens imposed upon them by an exacting railroad monopoly; the attempt to secure some general system of irrigation, and the lack of success in securing a reduction in the salaries of officers—State and local—are the marked failures. These matters, together with the passage of a few good, and some indifferent laws of general interest, and more of a local or private nature, added to the defeat of several great and small "jobs," constitute the record of the Legislature just closed—not a bad one under the circumstances.

Perhaps one of the largest "jobs" put up during this session was the scheme for the purchase of the Spring Valley Waterworks of this city. As introduced it would have robbed the city of several millions of dollars for the benefit of some half a dozen men. We read that the bill has been passed and approved by the Governor—"as amended." We have not seen the "amendment"—and therefore cannot speak with knowledge of its character; but we are fully persuaded the Governor would not have signed any bill for a water franchise purpose which failed to secure the city the fullest power to protect itself against any scheme for plundering the people.

It is estimated that the number of railroad ties in present use in the United States is 150,000,000. A cut of 200 ties to the acre is above rather than under the average, and it therefore has required the product of 750,000 acres of well-timbered land to furnish the supply. Railroad ties last about five years, consequently 30,000,000 ties are used annually for repairs, taking the timber from 150,000 acres. The manufacture of rolling stock disposes of the entire yield of 350,000 acres, and a full supply of 500,000 acres more every year. It appears, then, that our railroads are stripping the country of timber at the rate of one million acres per annum, and their demands are rapidly increasing.

The Gilroy tobacco factory employs one hundred and twenty-five men.

USEFUL INFORMATION.

A New Method of Staining Wood.

The following process of making coarse wood look like polished mahogany, is recommended in *Wiederhold's Trade Circular*: The coarse wood is first coated with a colored size, which is prepared by thoroughly mixing up, in a warm solution, of one part of commercial glue in six parts of water, a sufficient quantity of the commercial mahogany brown, which is, in reality, an iron oxide, and in color, stands between so-called English red and oxide of iron. This is best effected by adding in excess, a sufficient quantity of the dry color with the warm solution of glue, and thoroughly mixing the mass, by means of a brush, until a uniform paste is obtained, in which no more dry red particles are seen.

A trial coat is then laid upon a piece of wood. If it is desired to give a light mahogany color to the object, it is only necessary to add less, and for a darker color more, of the brown body color. When the coat is dry, it may be tested by rubbing with the fingers, whether the color easily separates or not. In the former case, more glue must be added until the dry trial coat no longer perceptibly rubs off with the hands. Having ascertained in this way the right condition of the size color, with respect to tint and strength, it is then warmed slightly, and worked through a hair sieve by means of a brush. After this, it is rubbed upon the wood surface with the brush, which has been carefully washed. It is not necessary to keep the color warm during the painting. Should it become thick by gelatinizing, it may be laid on the wood with the brush, and dries more rapidly than when the color is too thin. If the wood is porous and absorbs much color, a second coat may be laid on the first when dry, which will be sufficient in all cases. On drying, the size color appears dull and unsightly, but the following coat changes immediately the appearance of the surface. This coat is spirit varnish. For its production, three parts of spirits of wine of 90° are added in excess to one part of red acaroid resin in one vessel, and in another 10 parts of shellac, with 40 parts of spirits of wine of 80°. By repeated agitation for three or four days, the spirit dissolves the resin completely. The shellac solution is then poured carefully from the sediment, or, better still, filtered through a fine cloth, when it may be observed that a slight, milky turbidity, is no detriment to its use. The resin solution is best filtered into the shellac solution by pouring through a funnel loosely packed with wadding.

When filtered, the solutions of both resins are mixed by agitating the vessel, and letting the varnish stand a few days. The acaroid resin colors the shellac, and imparts to it at the same time the degree of suppleness usually obtained by the addition of Venetian turpentine, or linseed oil. If the varnish is to be employed as a coat, the upper layers are poured off at once from the vessel. One or two coats suffice, as a rule, to give the object an exceedingly pleasing effect. The coats dry very quickly, and care must be taken not to apply the second coat till the first is completely dry.

SEPARATION OF THE MERCURY IN THERMOMETER TUBES.—When thermometers are overturned or shaken by accident, it frequently happens that a portion of the mercury in the instrument is separated from the main column and hangs in the upper part of the tube. It is generally easy to unite this portion of the mercury with that in the bulb by holding the thermometer vertically two or three inches above a piece of card, and letting it fall vertically upon the card, or, while firmly holding it in the right hand, strike with the arm smartly against the palm of the left hand; or, further, the thermometer may be fastened to a piece of string and swung around, as with a sling, but with caution, and not too rapidly. In many cases the detached particle of mercury is so small that its weight is not sufficient to overcome the adhesion to the side of the glass tube; the following plan of procedure is then recommended: The instrument is inclined at an angle of twenty to forty degrees, so that the bulb stands higher than the tube, and a blow with a flat piece of wood is given in the direction of the thermometer stem. The mercury in the stem is thus jerked forward, and, united with the detached portion, fills the entire tube. If the thermometer be now slowly and cautiously brought into such a position that the mercury begins to flow back toward the bulb, the united column may generally be returned to its proper place. In the place where the separation has occurred a small air bubble is generally found, but by following the above directions this difficulty may be almost always overcome.—*Jour. of Applied Chemistry.*

VARIATED COTTON THREAD.—Cotton thread may be dyed in two or three colors by covering some parts with parchment paper, tightly wound, and thin tin or lead foil, holding the latter in place by binding threads. If tied sufficiently tight when the skeins are introduced into the dye bath, the protected parts remain white; and by protecting the dyed portion, and unwrapping the white portion, another color may be applied.—*Scientific American.*

The Corrosion of Boilers.

Dr. J. S. Kidder, U. S. N., communicates to *Van Nostrand's Engineering Magazine* a paper pointing out the probable cause of the destruction of boiler tubes, and describing experiments which show the deterioration or pitted condition of those portions of the generator which are immersed in the water to be due to the action of oleate of copper. The presence of this substance is accounted for by the decomposition of the oleate oil used in lubricating the piston into oleic acid and glycerine, a sufficient frictional heat being raised to thus act upon the thin film of oil between the surfaces. In the condenser the brass tubes are exposed to the powerful comminuting impact of steam at a high temperature and pressure, and this substance is thus finely divided and placed under the most favorable circumstances for union with the free oleic acid which the steam brings with it. Oleate of copper is then formed in the condenser, and appears in bright green, greasy masses, which are carried from condenser to boiler. A quantity of this substance, settling upon one of the iron boiler tubes and adhering thereto, causes both a deposition of copper and absorption of iron. Being insoluble, its action is confined to the surface of contact, hence the small holes characteristic of this kind of injury. Copper, however, it is found, will adhere only to perfectly smooth iron, and since boiler tubes are never in this condition, each deposit is quickly removed and a fresh iron surface continually exposed. Selden's apparatus, mentioned in the report of the engineer of the navy, as a preventative of this difficulty, consists in a long iron box fitted with a steam-tight cover and placed between condenser and boilers. The box is divided into compartments by diaphragms of felt, pervious to water, and the compartments themselves are filled with coke. In referring to the placing of alkalies in this filter, Dr. Kidder remarks that soda is of questionable advantage, and that lime is theoretically the best, and then when only used in connection with a fresh water boiler. At Hecker's mills, the condensed water, after leaving the filter, is treated with atmospheric air forced through it from below. The resulting water is perfectly free from taste or odor, and quite palatable. It seems possible that the hitherto insuperable difficulties in the way of freeing condensed water on shipboard from a certain unpleasant empyrenematic odor may be overcome by similar treatment.

THE DETECTION OF BLOOD SPOTS.—Sonnenchein states that tungstate of soda, strongly acidulated with acetic or phosphoric acid, throws down albuminoid matters from very dilute solutions. These precipitates, insoluble in a large excess of water, dissolve in alkalies, especially if hot. If defibrinated blood is treated with this salt, a red-brown precipitate is formed, which becomes clotty on boiling. All the coloring matter is precipitated. To detect blood spots by this means on clothing, the suspected portion is cut off; and after having been treated by distilled water, the filtered solution is precipitated with the above re-agent. The precipitate, washed and treated with ammonia, takes a reddish-grey color. If phosphoric acid be present, it must be carefully washed away before treating the precipitate with ammonia.

An apparatus for determining the inflammability of petroleum oils intended for illumination has been contrived by M. Gramer. It consists of a metallic cylindrical vessel closed with a movable cover, in the center of which is a hole. Through this hole projects a wick, which is inserted in a tube soldered to the bottom. Another hole in the cover allows of a thermometer being fitted into the apparatus, which when used in about two-thirds filled with the oil to be tested; the wick is then lighted, and as soon as any inflammable vapor is evolved, a slight puff takes place, which extinguishes the light, when the temperature marked by the thermometer is noted. The results are said to be very accurate, and the tests can be made in a shorter time than in the ordinary way with a water bath.

CLEANING GLASSWARE IN THE LABORATORY.—Dr. Walz thus describes his method of cleaning glassware used for chemical purposes: The vessel to be cleaned is filled, or, if large, rinsed with a moderately dilute solution of potassium permanganate, the contact of the liquid being prolonged till a film of hydrated manganic oxide has been deposited; the solution is then poured away, and the glass vessel rinsed with strong hydrochloric acid. Chlorine is then formed, but not enough to cause inconvenience; and acting in the nascent state on the organic matters, it speedily converts them into substitution products, which are soluble in the slight excess of acid or water.

ADULTERATION OF TEA.—This formed the subject of an extended discussion before the recent meeting of the British Association for the advancement of science. It was commenced by a paper read by Mr. A. H. Allen. He regards the estimation of tannin in the leaves as of the first importance. The amount of tannin in genuine black tea should be about 12.5 per cent.; if it falls much below this, either it has been exhausted and then dried, or it is mixed with foreign leaves. The next point of importance is the amount of woody fiber or rather of insoluble matter; this should not exceed 60 per cent. Green tea contains about 50 per cent. more tannin than black tea. The ash should be about 5 per cent.

THE ANGLO-FRENCH TUNNEL.—At a meeting of the British Society of Civil Engineers, Mr. Joseph Prestwich, a veteran geologist, whose name has been long connected with geognostical research in the London basin, read a paper on the geological conditions affecting this scheme, which has latterly met with much acceptance across the Channel. The contents of the paper may be very briefly epitomized. Mr. Prestwich gave sufficient reasons for supposing that the dense, impermeable stratum, known as the London clay, extends in a continuous trough, from 300 or 400 feet or more in thickness from the coast of Essex to that of Belgium; and from the experience gained in the construction of the Tower of Subway, he saw no difficulty, in a geological point of view, in the construction of a tunnel between these two points, save in the extreme distance between them—eighty miles. Where the coasts approach more closely the London clay was absent, and the tertiary and secondary formations there existing were too permeable for tunnel work. On the other hand, these rocks were underlain by paleozoic strata, through which, in Mr. Prestwich's opinion, it would be quite possible to drive a tunnel, so far as safety from the influx of sea water was concerned. But, like the distance in the former case, here the great depth, more than one thousand feet at Harwich and Calais, was the formidable difficulty. He was, however, satisfied that on geological grounds alone, the work was in one case perfectly practicable, and in one or two others, possibly so; but there remained considerations besides those of a geological nature, and whether or not they admitted of so favorable a solution was questionable.—*Iron.*

THE PATENT SAFETY BLASTING POWDER.—The following description is given by a contemporary of the manner in which a patent safety blasting powder is now manufactured in South Australia. Operations are carried on at Alberton in a weather-board building, roofed with galvanized iron. The length of the whole is but 28 feet with a width of 14, and a height of 10 feet, and it has one small window and a door on the western side. The first operation of a series of experiments tried to test the efficacy and safety of this powder was performed by the worthy manager pounding for a considerable time some of the powder on an axe-handle with an ordinary hammer, without producing the slightest effect. Next, its character as proof against friction, was demonstrated by the same appliances, and with an equally satisfactory result. Its superiority as a non-explosive article was next determined by a number of vessels being filled and ignited, when a considerable time elapsed before the powder was consumed, and the flames died out. A common mustard tin, 6 in. by 3½ in., and containing 2 lbs. of the compound, was first used, the ascertained time before its contents were entirely consumed being about half a minute. Next an iron pipe, 16 in. by 1½ in. with 2½ lbs. of powder, was found to occupy one minute and eight seconds in burning, the orifice being smaller. Another pipe, 6 in. by 1½, and containing half a pound of powder, took twenty-five seconds in exhaustion.

WATER CLOCKS.—Bowls were used to measure time, from which water, drop by drop, was discharged through a small aperture. Such bowls were called water clocks. It was then observed how much water from such a bowl or cask, from sunrise till the shortest shadow, trickled down into another bowl placed beneath; and this time being the half of the solar day, was divided into six hours. Consequently, they took a sixth of the water which had trickled down, poured it into the upper bowl, and this discharged, one hour had expired. But, afterwards, a more convenient arrangement was made. They observed how high the water rose at each hour in the lower bowl, marked these points, and counted them, thus finding out how many hours there were till sunrise. With the Chinese, the water clocks, or clepsydras, are very odd. They used a round vessel, filled with water, with a little hole in the bottom, which was placed upon another vessel. When the water in the upper vessel passed down into the lower one, it subsided by degrees, announcing thereby the part of the time elapsed. When the clock with us strikes seven, the ancients counted six, and so forth. This method of counting the hour was also customary in Palestine, at the time of Christ. The water clocks had the advantage that they could be used in the night; and the Romans used them to divide their night watches, which were relieved four times, both summer and winter. Conformably to these four night watches, time was counted, not only in Rome, but wherever a Roman garrison was stationed; consequently, also in Palestine, after she had become a Roman province.—*Ex.*

MONSTER ENGINE BELTS.—We had the pleasure, a few days since, of examining a monster engine-belt. It was 44 inches wide, 297 feet long, and weighed 2,600 pounds. It is difficult to draw any comparison that will give a person who has never seen one of these belts an adequate idea of their magnitude. This belt was made for the Toledo Elevator company. It took one of our heaviest New York four-wheeled trucks and a stout team of bays to transport it to the place of shipment.—*Coal and Iron Rec.*

Friction Matches.

The history of the introduction of phosphorus corresponds with that of many other most important agents. It remained for more than a century and a half without special attention, and it was not until the introduction of friction matches, that a demand for it sprang up in an industrial way. It is indeed strange, when inventors were for many years active in devising means to obtain fire or combustion, without the use of the flint and steel, that phosphorus was not thought of. For a period of fifty years, the most determined efforts were made to get rid of the old tinder box, and the number of contrivances adopted was very large. Mixtures of sugar and chlorate of potash, which, ignited by a drop of sulphuric acid, suggested the "oxymuriate matches." These were inflamed by thrusting a splint of wood dipped in sulphur, and covered with the mixture, into a bottle containing asbestos, saturated with the acid. When this form of match first came upon the market, they sold as high as two dollars the box, each containing fifty matches. The rapid combustion of chlorate of potash and sulphide of antimony when made into a paste and dried, and subjected to friction, suggested the lucifer match. These forms of matches, together with many others manufactured prior to 1834, were all disagreeable and dangerous, and they were also too expensive for common use. About 1834, the happy idea was suggested by an English chemist, that phosphorus might be safely substituted for the sulphide of antimony in the construction of matches, and soon afterwards it was ascertained that a phosphorus paste, in which the antimony was omitted altogether, afforded the cheapest and best match. It was found that a simple splint of soft wood, first dipped in melted sulphur, and then in a paste made of phosphorus and glue, with a little fine sand and red ochre, supplied the most convenient, cheap, and safe match that could possibly be devised. This is the match which has held its place up to the present time, and is in common domestic use in all parts of the civilized world. To prevent this match from igniting spontaneously, or by handling, a film of gelatin covers the phosphorus paste upon the end, and it is only when this is disrupted by friction, that the phosphorus is reached and ignited.

The Dutch chemist, Brandt, who laboriously drew forth phosphorus in minute quantity, and by a tedious process, from liquid excrement, little thought that his chemical novelty would in after time be manufactured by hundreds of tons, and be not only found in every household, but made the kindling spark of all hearths in every civilized country. One of the largest manufacturers of phosphorus in Europe has stated that the whole stock of the article in the chemical establishment where he was trained, consisted of a little stick two inches long. He has lived to see it pulled by his own machinery, in a cord uncounted miles long, and dispatched by the ton together, for use in both hemispheres. The chemist still lives in London who first produced phosphorus for use by the friction match manufacturers, at \$2,500 per pound. Now demand and competition have reduced the price so low that a single pound can be bought in this city for about one dollar. The article is not made in this country, but we can see no reason why it may not be, as we have the necessary materials, bones and coal in abundance. The production of phosphorus (which is now obtained from bones) requires a large consumption of fuel. At least 100 pounds of coal are required to secure one pound of the element, and the intensity of the heat is such as to rapidly destroy apparatus. The labor, also, is not only disagreeable, but dangerous; as, through inattention, fearful explosions of the retort sometimes occur.

It was at one time feared that the demand for bones, for agricultural purposes, would so enhance the cost and diminish supply, as to raise the price of phosphorus to a high point. But the discovery of the immense deposits of phosphatic rocks, in this country and elsewhere, has set at all rest apprehensions of this nature. We have phosphorus enough quietly resting in the South Carolina rock beds, to meet the demands of the world for thousands of centuries, and no one need be anxious concerning a full supply, at cheap rates, of the indispensable friction matches, during his own lifetime at least.—*Boston Journal of Chemistry.*

SIMILIFER.—We have recently seen some specimens of a new combination of metal christened by the French inventors "Similifer," which is stated to be as malleable as zinc, and not liable to oxidize, while at the same time it is capable of receiving as high a polish as steel, and can be either gilt or bronzed as desired. The specimens exhibited at the Royal Institute of Architects were in the form of round cyphers about 10 inches in diameter, and suitable for the center of a wrought or cast iron balcony. The expansion is about the same as copper and two-thirds that of iron, while, owing to the facility of working, the cost is very moderate.—*Br. Trade Journal.*

FLAX.—A Pennsylvania farmer writes that he raises twenty-four bushels to the acre. In Illinois, the crop is not quite so good as wheat, the yield ranging from seven to sixteen bushels.

Trinity County Notes—Continued.

Weaver Basin and the Hay Fork.

Below McGillivray's ranch there is but little arable land within the limits of Trinity county. There are, however, a good many spots suitable for the plow, in the broad, circular, but irregular valley, known as Weaver Basin. The largest, as well as the most highly improved farm in this locality, is that of Dr. Ware, situated one mile north of this place. Here, besides an immense orchard containing almost every kind of fruit, some of it semi-tropical, are several fields yearly sown to grain, not to mention long rows of bee hives, trellised grape vines, groves of ornamental trees, and a whole village of out-houses for the protection of chickens, cows, horses, and other domestic animals; everything here also being marked by a sort of magnificent expenditure and rude abundance. Nearly every house in Weaverville has a large garden attached to it, the most of them well filled with fruit trees, vegetables, vines, plants, and flowers, while all the principal streets are lined with cottonwood trees, some of them seemingly large enough to have stood where they are for half a century. Along Weaver creek, nearly all the way from this place to its junction with Trinity river, occur, at short intervals, patches of alluvial land, all the sites of pleasant homesteads being inclosed and under cultivation. Over on the Hay Fork, the main branch of the south fork of Trinity, are a number of fine farms, on which a large amount of hay is cut; some of it made from the growing grain, and some from the natural meadows. There are also a great many cattle kept here. The most of this stock is retained in the valley through the winter, being fed on the hay, for which there is no other demand.

Undeveloped Agricultural Resources, Grazing Lands, Etc.

The above mentioned places include about all the land naturally adapted to agricultural purposes in Trinity county. As the soil is generally rich—there is, however, much land besides this that could, by irrigation and careful culture, be made to produce good crops of vegetables, grass and grain—the soil and climate being almost everywhere well suited to the growth of most kinds of fruit, and even the vine and some semi-tropical products thriving, except in more elevated localities. There is no end to the fruit, all of the best quality, that might be raised here were there only a market for it. Already there is more produced than can be sold or even given away, almost every householder growing more than enough for his own use; the distance and freights to San Francisco, the only available market, being too great to admit of any being sent away. Yet I believe the winter apples raised here could be shipped to your city and sold at a profit, for surely no person who had ever tasted of this fruit would ever again consent to buy or even eat the filthy and corrugated trash that is sold there under the name of apples.

The agricultural capacities of Trinity county could be immeasurably increased with irrigation; and when the time shall come, as it soon will, that her innumerable mountain streams shall be applied to that purpose, being diverted for a few weeks every summer from use in the mines, then shall we see her thousand hills yellow with grain fields and green with clover; then will every eminence be planted with orchards and vineyards, and every valley with gardens. Farm houses (and homesteads will be multiplied; sheep and cattle will swarm everywhere; great haystacks being put up and held for their use avoiding the necessity that now exists for driving stock elsewhere for subsistence every winter. This country abounds in the wild grasses which afford sufficient summer pasturage to sustain a large amount of stock. Comparatively little, however, is kept here, owing to the expense and trouble attending their annual removal, the herdsmen being compelled to drive the most of them over the mountains into the Sacramento valley or westward into the coast region on the approach of winter. As yet irrigation has not been extensively practised here, farming operations having been mostly confined to the rich alluvial lands where it has not been greatly needed.

Her Wealth of Woods.

Trinity is a well-timbered county both as regards the quality and the variety of her woods. The hills are covered to their summits, and the mountains far up their lofty sides with magnificent forests consisting of pine, spruce, fir, cedar, oak, and a great variety of other trees. The coast and the Sierra Nevada ranges of mountains, having traversed a space of five hundred miles; and, though separated only by a single broad valley, through climates essentially unlike, come together here; and bringing the trees, plants and shrubs common to each, have commingled them on these hills, producing a beauty and a wealth of woods not often elsewhere met with. Here can be seen the sturdy oak, the scrubby manzanita, and the stately conifer; the ash, the maple, the madrona and the wild nutmeg clustering on the hills, with the sycamore, the cottonwood and the balm of Gilead growing in the valleys; the air being redolent with the perfume of fragrant shrubs, and the face of nature illuminated with countless millions of bright flowers during the spring and early summer. Such a gathering together of vegetable growths renders this an inviting region to the botanists; who, besides this great variety of recognized species, will

find here at least one tree not met with elsewhere in the State; and, quite likely, wholly unknown to science. Of this tree, there is here, so far as I have seen or been able to learn, but a single specimen. It is an evergreen, apparently of the cedar family; of symmetrical, conical form, about 30 feet high and very beautiful. It stands on the summit of Buckeye ridge, close to the trail leading from this place to the Atkins and Lowden mines, situated a little further down the ridge. I have been thus particular in pointing out its exact location that the naturalist may be able to find it without trouble and classify it, if it shall be found to belong to any already known species, and immortalize himself by conferring his name upon it should it turn out to be *sui generis*.

H. D.
Weaverville, Trinity county, Mar. 20, 1874.

Finding The Latitude at Sea.

Commonly the seaman trusts to observation of the sun to give him his latitude. The observation is made at noon, when the sun is highest above the horizon. The actual height is determined by means of the instrument called the sextant. This instrument is so devised that the observer can see two objects at once, one directly and the other after reflection of its light; and the amount by which he has to move a certain bar carrying the reflecting arrangement, in order to bring the two objects into view in the same direction, shows him the real divergence of lines drawn from his eye to the two objects. To take the sun's altitude, then, the observer takes the sun as one object and the horizon directly below the sun as the other; he brings them into view together, and then looking at the sextant to see how much he has had to move the swinging arm which carries the reflecting glasses, he learns how high the sun is. This being done at noon; with proper arrangements to insure that the greatest height then reached by the sun is observed, at once indicates the latitude of the observer. Suppose, for example, he finds the sun to be 40° above the horizon, and the *Nautical Almanac* tells him that, at the time the sun is 10° north of the celestial equator, then he knows that the celestial equator is 30° above the southern horizon. The pole of the heavens is, therefore, 60° above the northern horizon, and the voyager is in 60° north latitude. Of course, in all ordinary cases the number of degrees is not exact, as here for simplicity is supposed, and there are some niceties of observation which would have to be taken into account. But the principle of the method is sufficiently indicated by what has been said.—*Popular Science Monthly*.

APPARATUS FOR MEASURING GAS.—An ingenious apparatus is now employed in London for testing officially the quality of the gas furnished by companies for the public consumption. The apparatus consists, first, of a gas meter which presents two conspicuous index hands, one of which revolves once in a minute, while the other makes a complete revolution during the passage through the meter of one-twelfth of a cubic foot of gas. The first of these movements, being maintained by clock-work, is constant. The second, being dependent on the velocity of flow, or what is the same thing, on the rate of burning, may be varied by varying the discharge. Since one-twelfth of a cubic foot of gas passes with each revolution, if the revolution occupies one minute, there will pass one foot in 12 minutes, or five cubic feet per hour. As the law requires that the gas shall possess an illuminating power, when burned at the rate of five cubic feet per hour, not inferior to that of 14 sperm candles, consuming each 120 grains of the combustible in the same time, this apparatus, when combined with a suitable photometer, is said to make the application of the test very easy. Before entering the meter, the gas passes through a governor, which maintains the burning pressure uniform, however variable may be the pressure in the mains.—*American Manufacturer*.

ENGRAVING IN RELIEF.—This is a substitute for wood engraving by deepening or hollowing out by means of acid the parts usually cut to the full depth required with a graver. The drawing is etched on the plate, and the raised parts obtained by a deposit of metal, then the parts in relief are covered with an acid resisting varnish, and the remaining parts are hollowed out to the required depth by means of acid, this process being repeated as often as necessary for producing the greatest depth required.

ACCORDING to the *Swiss Times* there is a scheme on foot for a railway to the peak of Mount Pilatus, similar in construction to that of the Rigi. It will start from Alpnacht; the medium gradient will be one in eight, and the maximum one in four and a half; two bridges will be required on the route.

FOR SALE.

ONE HOADLEY STEAM ENGINE, 8x12.
One SEPARATOR, 36-inch cylinder; one SAW FRAME, STRAW PACKER, BELTS, WHEELS, WATER BARRELS, Etc., in fair order. Price, \$1,200, if applied for before May 1st. Apply to
A. R. WOODHAMS,
Santa Clara, Cal.
11v7-6t

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.
This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.
In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

**PRESSED MILK-PANS,
PIECE MILK-PANS,
STRAINER PAILS,
CREAM PAILS,
MILK PAILS,
ETC., ETC., ETC.**

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m

SAN FRANCISCO.

WAKELEE'S

Granulated Squirrel Exterminator.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is scented so that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages. Owing to the chemical composition of the Exterminator it can be used without the slightest danger from fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco,

Who may also be addressed.

3v7-3m

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,

36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7

JOSEPH SEYMOUR & SON,

12v7-3m

Syracuse, N. Y.

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.
WILLIAMS & MOORE, Prop'rs.
3v7-3m Stockton, Cal.

LANDS & HOMES FOR SALE

TO RENT.

An Improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,
311 Montgomery street, San Francisco,
Or Pacific Rural Press Office.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,
On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. hptf

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission

St., S. F. C. H. Grunhagen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San

Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of

Bed Springs, including the Ohermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Trademen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Luek & Co., Pacific Fruit Market, San Francisco, Cal.

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.

San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,

Subscribed, \$3,000,000. Paid in, \$1,500,000.

Remainder subject to call.

DIRECTORS IN LONDON.—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Schofield, Isaac Seligman, Julius Sington.

MANAGERS:

R. G. SNEATH and IGNATZ STEINHART,
SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v27-cowbp



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,
2v6-tf President Business College, San Francisco.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to
22v6-1v ELWOOD COOPER,
President Board of Directors.

McLAREN, BRYDGES & CO.,

DEALERS, MANUFACTURERS AND INTRODUCERS OF

NEW INVENTIONS

FOR THE PACIFIC COAST.

Manufacture Espey's Patent Coll Wire Door and Gate

Springs; Gate's Patent Oil Blacking, etc.

—ALSO—

Real Estate and General Business Agency.

NO. 605 CLAY STREET, SAN FRANCISCO, CAL.

ja10-hp-3m

OUR SPECIALTY: "BEYOND THE MISSISSIPPI!"
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required: Nerve and Honest Industry.
THE GREAT WEST.
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFUTT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chromo,
"AMERICAN PROGRESS,"
free to each subscriber.
Two sample Worlds sent for 10 cents. Agents wanted.

GEO. A. CROFUTT, Pub'r,
New York: 200 Broadway,
P. O. Box 8435; S. F. O. Box 2776.

AGRICULTURAL NOTES.

AMADOR.

ENCOURAGING.—*Ledger*, Mar. 28: The weather for the past week has been remarkably fine. The days warm and pleasant, and the nights without frost, all of which has caused vegetation to spring up rapidly, and the young grain to assume a vigor that gives assurance of early maturity. Gardens are being prepared and planted, grounds put in order, shrubbery set out and everybody busy in making ready for spring time. Early fruit trees are in bloom, and wild flowers on sunny hillsides are springing up, the song of birds sound spring-like among the trees, and everything gives assurance that the reign of the storm king is over for the present. The crops in this section of the country are looking remarkably fine and farmers and ranchers are anticipating an unusually large yield of hay and all kinds of grain.

COLUSA.

LOOKING FINE.—*Sun*, Mar. 28: A correspondent informs us that grain at the upper end of this county and across the river in Butte is looking very fine. There was never a better prospect for a crop at this season of the year than we have at present. This county had, perhaps, as much summer-fallowed land as any county in the State, and it has all been put in in good order. Our grain looks better than any along the railroad between Knight's Landing and Vallejo.

EL DORADO.

IMPROVING.—*Republican*, Mar. 26: We have been enjoying most delightful weather ever since a week ago Monday; the roads are improving rapidly in their condition, fruit trees are beginning to bloom, and all nature seems to delight in the present summer-like mildness, as well as us mortals.

LAKE.

PROSPECTS.—*Bee*, Mar. 26: During the fine weather of the past week, work has been going on in earnest on the farms. Teams with plows and harrows may be seen busy in every direction, while the farmers are all gay and happy, well knowing that they will receive large returns for their labor. Present prospects for a good crop in Lake county were never better.

MERCED.

KILLING OFF THE SQUIRRELS.—*Tribune*, Mar. 28: The bounty of five cents on each squirrel scalp is causing the destruction of these pests in large numbers. Over two thousand squirrel scalps have been paid for by the County Auditor within the last three months.

NAPA.

BROOM CORN.—*Reporter*, Mar. 28: Samuel Brannan has commenced the planting of one hundred acres of broom corn on his Calistoga Ranch.

CROPS.—The grain crop throughout the valley is looking fine and the hay crop promises to be large.

NEVADA.

FRUIT.—*Union*, Mar. 28: There is a good prospect for an abundant fruit crop this year. The late cold spring caused the fruit trees to keep their buds and blossoms back until there is little danger of frost destroying the young fruit.

PLACER.

IMPROVING.—*Herald*, Mar. 28: The fine weather we have had recently has caused vegetation to spring up quite rapidly, and it now covers the hills with its verdure.

SAN JOAQUIN.

SHIPPING WHEAT TO LIVERPOOL.—San Joaquin Valley *Argus*, Mar. 28: Thomas Upton, a Bear Creek farmer, whose farm is situated about four miles from this place, is now loading wheat as fast as he can obtain cars, to send below for shipment to Liverpool upon his own account. The wheat is part of his crop of 1872, consisting of one thousand tons, of excellent quality. Mr. Upton is desirous of testing the market himself, and we hope that he will realize the full market value of his grain and save to himself the commissions of the "middlemen." We believe that this is the first experiment of the kind that has ever been tried by a farmer in this locality.

Stockton Independent, Mar. 26: Farmers in the vicinity of Anaheim have set out a large quantity of foreign grape cuttings this season, while new comers generally ignore the Mission grapes. This indicates that the wine of the future will be a superior article to that now produced in that section.

SANTA CRUZ.

MORE RAMIE PLANTING.—*Gilroy Advocate*, March 28: Mr. Frank Oldham, of this city, is planting ramie on his place, close by town. Having some ground suitable for the purpose, he concluded to experiment, and has put in half an acre of plants to propagate from. Next year he proposes to put in all he raises this year. Mr. Van Schaick has also set out his plants, and the adaptability of our soil for this new product will thus be thoroughly tested.

SIERRA.

Cor. Mountain Messenger, March 28: Sierra valley is in a worse condition to-day than ever known before. Suddenly and unexpectedly all find themselves short, if not entirely out of hay, and now there are 3,000 head of cattle practically without feed. The snow lies deep all over the valley, and to-day 16 inches of new snow have fallen, and the soft white flakes are still coming down. The majority of the people laid in as much hay as usual, but it has not fed

as well. The grass was badly frost-bitten and did not spend in feeding as it generally does. It seemed to have no heart, and cattle have not done as well as usual on the same amount of hay, rendering it necessary to feed more. Since the first storm on the 27th of November, up to the present time, the weather has been extremely cold—the severest winter, the oldest settlers say, they have ever experienced. During such stormy weather it is necessary to feed more than in an ordinary season, and the combined result is that for a week or more three-fourths of the people have been buying from the lucky one-quarter.

Mohawk Valley is as badly off as we are. I was informed, a few days ago, that there were only two men out there who had hay enough for the season. But little stock has died in Sierra valley, as yet, but I fear the worst has not come in that respect. Down the valley I hear of some losses, one man losing twenty head in one week. There has been considerable beef fed in the valley this winter, but it is nearly all sold and driven away. What little there is, is held at 10 cents, and will soon be higher. I learn that the Loyalton people are hauling baled hay from Truckee Meadows, thus reversing the usual order of things. During the winter of '59 and '60, which was much like this, hay was hauled all winter in the snow from here to Truckee Meadows. Since writing the above, we have had on the 3d, a storm of great severity accompanied by a heavy wind, drifting the snow badly, blocking up the road in every direction, rendering traveling very difficult, and, in fact, almost impossible.

SONOMA.

FROM FULTON.—Cor. Sonoma Democrat, March 28: Farmers are all very busy plowing and sowing their crops, and if the present fine weather lasts a few days longer, nearly all the small grain will be in. Considerable corn will be put in. There is some talk of fallowing some land, but we that have raised good crops year after year, in succession, it is hard to get our consent to let our land lie idle. The grain sown all looks well. We will have an abundance of hay, although the season has been rather unfavorable. If we have our usual late rains we will have a good average crop. The ground is uncommon loose and mellow this year, and our blacksmiths say the plows do not get dull worth a cent.

SUTTER.

GOOD PROSPECTS.—*Banner*, Mar. 28: The grain crop of this county is in splendid condition. During the week a number of farmers have called our attention to the excellent condition of their crops. The light rainfall of Wednesday and the moist state of the atmosphere for the past few days, have done a vast amount of good to late sown grain. With a few light showers during April our late sown grain will all make a handsome showing, which together with the earlier sown, will give us such a harvest as never before blessed this country.

It is important that our farmers should take more interest in growing mixed crops. We should grow our own potatoes and have some to spare. More squashes and pumpkins, carrots and beets, cabbage and corn, and other useful products should be raised. By taking an interest in growing as many of these articles as possible—of employing the spare time, which is otherwise lost, our farmers can raise better pork, make more butter, and bring into their pockets a considerable revenue. Let it be the motto of every man and woman to buy nothing from abroad which they can produce at home. By taking an interest in growing all these articles, to which our soil and climate are so favorable, we will soon stop the importation of pork, butter, and other articles now coming from the East.

YOLO.

FROM EAST COTTONWOOD.—Cor. Democrat, Mar. 28: Owing to the fine weather we are now having, our crops are growing rapidly. The late sowed grain is also growing as fast as possible, and the prospect is that everything will make grain. Summer-fallowing is going on to some extent, but some of our farmers are without feed for their horses, and many will soon have to turn them out.

Some time ago, out of the twenty thousand sheep in Capay valley, there had not been more than fifty head lost during the winter. Your informant made a mistake, as there are several bands that have lost three or four times that number. I think the total loss would reach 1,600 head in Capay valley alone, as I hear that one man lost 600. The greater loss of sheep in proportion to that of other stock, was owing mainly to the fact that during the time the snow laid on the ground, they ate nothing but acorns.

FINE CROPS.—A gentleman who has traveled over our county quite extensively within the last few days, informs us that the wheat fields everywhere are looking splendidly. Both the early and the late sown is healthy and growing rapidly. His opinion agrees with every other we have heard expressed in the last two weeks, that there never was a better prospect for raising good crops in Yolo county at this season of the year than at the present time.

WASHING MACHINE.—"C. M.," a writer, 66 years old, thinks he can perfect a machine to suit our correspondent, "Soap Suds." We shall see.

LAVRIL.—If our correspondent "Lavrill" will call at this office he can obtain some information in relation to his query.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., Mar. 31, 1874.

FOR WEEK ENDING Mar. 17, 1874.

DOOR SECURER.—Roscoe C. Mowbray, Colorado.

EXTENSION STEPS FOR RAILWAY CARS.—Henry Albert, S. F., Cal.

GARDEN SPRINKLER.—Nathaniel Clark, S. F., Cal.

ORE STAMP FEEDER.—Thos. A. Cochran, S. F., Cal.

CARRIAGE SPRING.—Edmund P. McCarthy, S. F., Cal.

PROCESS AND APPARATUS FOR SUPPLYING CITIES WITH MILK.—Frederick T. Newbery, S. F., Cal.

ALARM-STOP MECHANISM FOR TIME-PIECES.—Hermann J. Wenzell, S. F., Cal.

APPARATUS FOR TRANSMITTING CHRONOMETER MOTION.—Hermann J. Wenzell, S. F., Cal.

MAKING BUTTERINE.—Budd Smith, S. F., Cal.

SUPER-HEATING STEAM.—Geo. W. Coffee, Virginia City, Nevada.

SUPPORTING BAIL FOR THE ADJUSTABLE ELEVATORS IN HEADERS.—Wm. G. Hudspeth, Santa Rosa, Cal.

REGULATORS FOR GOVERNORS TO STEAM ENGINES.—Wm. L. B. Collins and Joshua Donaldson, Vacaville, Cal.

RE-ISSUE.

LUBRICATOR.—John E. Longren, Sacramento, Cal.

TRADE-MARK.

STOMACH BITTERS.—Emil C. Jurgensen, Portland, Oregon.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

WEDNESDAY night the last forms of PACIFIC RURAL PRESS are closed. The first forms are printed earlier. Communications should be sent as early as possible.

THE END-SHAKE THRESHER.—The following letter is from Wm. P. Harkey, Esq., Sheriff of Sutter county, referring to the value of the Lanfenberg End-Shake Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.

MESSRS. TREADWELL & CO., San Francisco.—Gentlemen: In regard to the Lanfenberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I used it throughout the season on a Russell Separator, which I had run previously with a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thrasher.

13v7-3m

WM. P. HARKEY.

COURTLAND, Sacramento Co., Aug. 11th, 1873.

MESSRS. TREADWELL & CO.—Gents: The Etna Mower I purchased of you exceeds my most sanguine expectations, working satisfactorily in the most difficult of my Alfalfa, and it will cut it against the lay of the clover, something I have seen no other machine do with the same results; it doing the work in the best possible manner, and without clogging or choking. I can cheerfully recommend the Etna before any other mower for Alfalfa cutting.

Yours Respectfully,

O. NELSON.

We, the undersigned, having seen the Etna work, concur in the foregoing statement.

J. F. PARKER,

J. T. RUNDLELL,

WM. MCCAIN.

FARMERS, if you want any Harvesting Machines or Implements, come to San Francisco and inspect the large variety of machines, etc., at Treadwell & Co.'s Warehouse. The amount you will save in buying will pay the expenses of the trip three times over. If you cannot come in person, then send a letter to us, and state what you will want, and we will send you by next mail full description, prices, terms, etc., and you can then easily order what you want, and it will be promptly sent to you just as safely and securely as if you went along with it. Address, Treadwell & Co., San Francisco, Cal.

MESSRS. TREADWELL & CO.—You want to know what I think of the Etna Mower. I worked it on very rough ground, where it gave very good satisfaction. I could cut in the morning, when other machines could not till the grass got dry. It will cut any kind of grass, and the draft is very light. Its construction is very simple, and its strength and durability unequalled.

Truly yours,

JOHN BEACH.

The names of victories may be erased from our battle flags; but SILVER TIPPED Shoes will never become obsolete. They are a national institution.

ap4

Dr. E. J. FRASER, Homoeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No. 305 Kearny street, northwest corner of Bush.

6v7-3m

STOCK AND GRAIN FARM FOR SALE.

IN SUISUN VALLEY, SOLANO COUNTY, within one mile of a railroad station and one mile and a half of a landing for vessels, comprising 140 acres good grain land; 100 acres now sowed to wheat and looking well, and 40 acres of barley, also very promising. Also, 300 acres of good tule land, excellent pasture and hay land. Has a good house, barn, corrals and fences, and full assortment of agricultural implements, etc. Price moderate. Terms easy. Apply to BERRY & CAFF, 418 Montgomery st.,

14v7-1m

Real Estate Agents and House Brokers

GRANGERS, TAKE NOTICE.

WE ARE SELLING

FRENCH CHINA.

GLASSWARE,

PLATED WARE, ETC.,

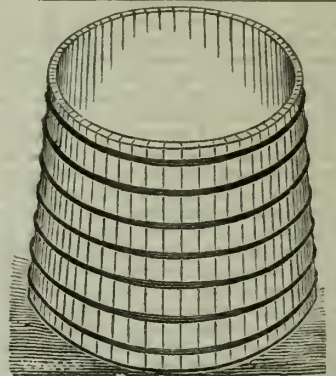
CHEAPER THAN ANY OTHER HOUSE

ON THE PACIFIC COAST.

O. LAWTON & CO.,

MARKET STREET,

Under the Grand Hotel, SAN FRANCISCO.
14v7-9ow-3m



WATER TANKS of any capacity, made entirely by machinery. Material the best in use; construction not excelled. Attention, dispatch, satisfaction. Cost less than elsewhere.

WELLS, RUSSELL & CO.,
Mechanics' Mills, Cor. Mission & Fremont Streets,
3v23-3m-sa

RANCHOS
FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 85,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,

642 MARKET STREET,

ap4-3t N. E. Cor. Montgomery.

H. C. SHAW,

STOCKTON, CAL.

Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros." General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Gated Headers.

The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW, 14v7-3m Box 95, Stockton, Cal.

IMPROVED POULTRY.

Brahmas, Cochins, Leghorns, Hamburgs and Houdans. Bronze Turkeys, Aylesbury and Rouen Ducks.

Fowls and Eggs for Sale. I have without doubt the largest and finest birds of their respective kinds to be found on the coast. For price list and circular send to

C. W. WILSON,

San Francisco, Cal.

14v7-1m

FOR SALE.

100 Acres of Good Land,

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-4t

P. H. SUMNER.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

14v7-3m

PIERCE & CO., 621 Sacramento St., bet. Montgomery and Kearny Sts., S. F.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

[By our own Report.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, April 1, 1874.

The changes for the week in the Produce Market have been, almost without exception, downward. The Cereals and Dairy Produce have suffered especially, while Poultry, Potatoes and fresh Produce generally have sympathized. There is no cessation in the complaints made of the weather. The tardy spring and late rains have of course put everything back, and given in many cases good ground for grumbling. There is no doubt but that the season has been a severe one, but our latest communications have put a better face upon farming prospects, and reports from the whole State augur a very bountiful harvest, in spite of gloomy predictions. In the drier parts of the State there has been no fault found whatever—and that is saying a good deal.

Beans.

Prices show no signs of declining, and from the limited stocks available the probabilities are that the course of the market will be similar to that of Potatoes, and that rates will hold until the new crop comes in. The fresh vegetables have a competitive influence, but the demand is about as strong as ever. From the East the report is: Medium are quiet and unchanged; supply ample for all requirements. Marrow are in good export demand and firm; there is a fair consumptive inquiry for them as well. Pea Beans are in liberal supply and dull. White Kidney are not much called for, but are held at about late prices. Red Kidney are firm, but we bear of few transactions in them. Canadian Peas are unchanged.

Broom Corn.

There is no news, and little or no business. Rates are almost nominal, but no concession from holders is anticipated, for reasons which we have previously given. Broom Corn is quiet throughout the Eastern States, and is quoted at from 7c@11c.

Dairy Produce.

Butter has again declined. 32½¢ lb is the extreme price which can be obtained for the best samples. Prices even fall below the 20c given in our table, for Inferior, when the quality authorizes it. There is no Pickled Roll in market. Cheese has also fallen ½c, both for California and Eastern. We have State Cheese in this market which competes successfully with the best Eastern factory made which is shipped here.

Eggs.

There has been a slight buoyancy in eggs, and dealers expect a rise unless receipts for the next few days are much larger than are now coming in.

Feed.

Hay is still very high. Other kinds are quiet.

Flour.

Receipts from Oregon have been liberal during the month, and stocks in this city are now quite as large as is wished. Flour is very dull; if anything, there is rather more activity in Superfine for shipment than for Extra. There is some uncertainty to-day about the price of Extra; holders are asking \$6 12½, and it is possible that a rumor of private sales having been made at that figure is true. The quotation given, however, is probably as high as is safe.

Hops.

We take the following from Davis & Sutton's Circular, dated New York, March 21: There is no change in the market to report; brewers are, apparently, doing very little and have small wants. We learn that California is considered by some as the Paradise of Hop growers, there having not, so far, been developed any vermin or disease in that State to injure the vine. The quality of the California Hops is not above criticism; they have a fine and delicate flavor, with very little coloring matter, which makes them very suitable for choice pale ales, but they lack strength. We hear that it requires 1½ pounds per barrel of beer more of them than of prime State of Maine Hops. It is said that the California Hop should never be boiled but always steeped. The first of these Hops that appeared found much favor in England, but latterly they are far less eagerly sought for in that country.

This complaint is not new, but we think the best test is the commanding price obtained by California Hops in eastern markets, against home-grown articles. There is nothing new to report.

Potatoes.

Potatoes are a little lower than at the time of our last report, though prices are still very fair indeed. Humboldt will bring \$1.90 and other kinds in proportion. There are not enough Sweet Potatoes in market to establish quotations.

Poultry.

Turkeys have declined 2c lb. Hens and Roosters have fallen \$1.00 per dozen; Ducks, \$1.00, and Geese have advanced 25c per pair. Game, such as is in season, is scarce and dear.

Seeds.

A fair business is being done in Seeds. There are no changes in prices, which are strong. A large lot of Eucalyptus Seed is expected next week, to be sold probably at \$30 per lb. Sales for the week in New York, as telegraphed, include 3,000 lbs California Yellow Mustard from store at 5c, and 3,000 lbs and 420 bags do. Brown at 5½¢. Mail advices are to the effect that Clover is in good jobbing demand and has favored the seller; Timothy sells only in small lots. Rough Flaxseed is steady.

Wheat.

The Wheat holders are feeling more hopeful, on receipt of news of a slight reaction in Liverpool. For very choice Milling \$1.95 can be obtained. The market is still very far from satisfactory, but the movement in Liverpool and the unexpected spurt in New York may have a favorable effect upon prices, and if a change once begun we may expect Wheat to recover considera-

bly. No very conclusive reason has been given for the long continued dullness in foreign markets.

Wool.

A dispatch of the 29th, from New York says: The Wool market is quiet; sales at about the same price as last week. For some Wools there would seem to be indications of a slight falling off. The stock on hand is growing smaller, and with an activity in the dry goods trade the business would revive in the fall. The California stock is now reduced to 12,000 or 15,000 bales of Wool, and the quality of that small supply is chiefly composed of burly lots, there being at the present but one or two small invoices unsold. The transactions were 411 bales—82,600 pounds—at 32c for Spring, 40c for Lambs' 21¢25½c for Fall, and 68½¢75c for Scoured. At Boston the market has been moderately active; California continued dull and depressed. Sales of 23,900 pounds at 23¢24c for Spring.

DOMESTIC PRODUCE.

WEDNESDAY M., April 1, 1874.

BEANS.
Beans, small wh. 5 @ 54
do, butter, 6 @ 54
do, large, do, 7 @ 54
do, pink, 2 1/2 @ 54
do, pea, 5 1/2 @ 54
do, Lima, 8 @ 54

BROOM CORN.
Per ton, \$10 25
Butter, Cal. choice, 28 @ 32 1/2
do, good, 25 @ 32 1/2
do, inferior, 20 @ 31
do, firkin, 27 1/2 @ 31
do, picked, 13 @ 17 1/2
Obese, Cal. new, 14 @ 17 1/2
do, Eastern, 13 @ 17 1/2

EGGS.
Eggs, Cal. fresh, 24 @ 25
do, Oregon, 22 @ 24
do, Ducks, 21 @ 24

FEED.
Bran, per ton, 18 @ 20
Middlings, 27 @ 30
Hay, 9 @ 10
do, hale, 1 @ 1 25
Oil cake meal, 32 @ 35
Corn Meal, 35 @ 36

FLOUR.
Alyssa Mills, 5 @ 6 00
California, 5 @ 6 00
City Mills, 5 @ 6 00
Comme'l Mills, 5 @ 6 00
Golden Gate, 5 @ 6 00
Golden State, 5 @ 6 00
National Mills, 5 @ 6 00
Santa Clara Mills, 5 @ 6 00
Genesee Mills, 5 @ 6 00
Oregon, 5 @ 6 00
Valley, 5 @ 6 00
Wheat, 5 @ 6 00
Stockton City, 5 @ 6 00
Lambard, 5 @ 6 00

FRESH MEAT.
Beef, fr quality, 10 @ 12 1/2
do, second, 8 @ 10
do, third, 5 @ 8
Veal, 8 1/2 @ 10
Mutton, 7 1/2 @ 8
Lamb, 7 @ 8
Pork, un-dressed, 8 @ 10
do, dressed, 8 1/2 @ 10

GRAIN, ETC.
Wb't Cal, c'st'd, 1 @ 90
do, shipping, 1 @ 92 1/2
do, milling, 1 @ 95
Barley, Feed, 1 @ 55
do, brewing, 1 @ 60
Oats, good to 1 @ 1 70
do, common, 1 @ 1 45
Corn, White, 1 @ 60
do, Yellow, 1 @ 60
Buckwheat, 1 @ 65
Rye, 1 @ 75
California, 1873, 1 @ 37 1/2
Eastern, 1873, 1 @ 35
do New York, 1 @ 35
do Strained, 1 @ 15
Pulu, 1 @ 8 1/2
Onions, 2 1/2 @ 3
Cal. Walnuts, 1 @ 14
Peanuts per lb., 7 @ 8

MISCELLANEOUS.
Reeswar, per lb., 25 @ 32 1/2
Honey choice, 17 @ 25
do, ex. c'ice Mt, 30 @ 30
do Los Ang, 20 @ 24 1/2
do choice N.Y., 16 @ 20
do Dark, 8 @ 12 1/2
do Strained, 8 @ 15
Pulu, 8 @ 8 1/2
Onions, 2 1/2 @ 3
Cal. Walnuts, 1 @ 14
Peanuts per lb., 7 @ 8

WOOL, ETC.
Spring, short, 15 @ 18
do, long, 15 @ 18
Medium grades, 14 @ 18
Good to Choice, 16 @ 19
Hides, dry, 10 @ 14
do, wet salted, 8 @ 12
Tallow, crude, 2 @ 9 1/2
do Refined, 9 @ 9 1/2

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover Red, 20 @ 25
do White, 60 @ 75
Alsike, 1 @ 100
Esparto Grass, 1 @ 100
Packets, 1 @ 100

FRUITS AND VEGETABLES.
Alfalfa, 18 @ 20
Canary, 5 @ 6
Flaxseed, 5 @ 6
Kil. Blue Grass, 40 @ 50
Millet, 10 @ 12
Oats, 1 @ 1 70
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial, 30 @ 35
Timothy, 15 @ 16
Sweet V. Grass, 30 @ 35
Clover, 12 @ 15
Red Top, 30 @ 40
Hungarian, 12 @ 15
Lawn, 5 @ 10
Clover

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado County,
California.

11v6-cow

U. S. LIVE STOCK EXCHANGE,

S. E. COR. FIFTH AND BRYANT STS., S. F.

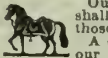


CATTLE SOLD ON COMMISSION,



Bought on Farm for Cash.

Our accommodations for Cattle, Sheep and Horses are most convenient and complete, our terms most reasonable and moderate. Our proximity to the Fourth and Kearny street cars, Long Bridge and Freight Depots of Southern Pacific and Trans-Continental Railroads, affords our friends and patrons a combination of conveniences and freedom from expense never before secured for them in S.F.



Our best and confidential counsel shall always be at the disposal of those soliciting its advantages. A cordial invitation is extended to our friends in the country to call and see us when they visit the city.

Wanted—Milk Cows, Bees, Sheep, Hogs and Work Horses. Address:

DAWSON & BANCROFT,
449 Fifth street, S. F.

Special Rates to Members of the Grange. 13v7tf

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull,
"DANDY JIM,"

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured. 4v7-3m

CYRUS JONES, GEN. GILES A. SMITH, L. H. HICKS.

CYRUS JONES & CO.,

BREEDERS AND DEALERS IN

THOROUGHbred SHORT-HORN CATTLE

Of the most desirable families; representing the Duchesses, Rose of Sharon, Booths, Miss Wileys, Mazurkas and others. Having purchased the Avenue Ranch (formerly Shaw Ranch) five miles east of San Jose, on Santa Clara av. nue, and placed upon it three car loads of fine cattle, recently imported from the most noted herds of the States, we invite all in want of fine stock to call and see us, as we have a few choice Heifers for sale. Send for Catalogue. Address:

CYRUS JONES & CO.,
San Jose, Cal.

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,238. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

THE PEOPLE'S PUMP.

THE ONLY RELIABLE PUMP FOR

Farmers, Stockmen and
Stable Keepers,

BEING A

NON-FREEZING FORCE PUMP,

Working in Wells from

6 to 100 feet deep.

Suitable for either Hand or Power use.

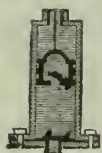
RATE IN PRICE, FROM \$12 UP.

Send for Circular.

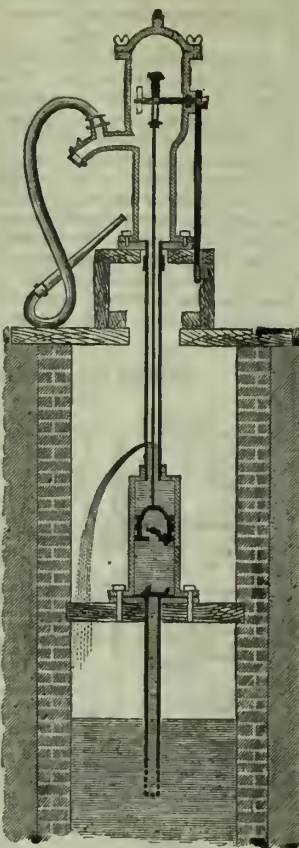
Depot for Pacific Coast,

CONROY, O'CONNOR & CO.,

SAN FRANCISCO.



13v4-2amly



The attention of Wool Growers is continually invited to the

Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the



THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

10v7-cow

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE
SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, imported last year, and bought of Hammond.

J. H. DODGE.

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal. ja24-tf

Angora Goats at Auction.

ON WEDNESDAY, MAY 6TH, AT 2 O'CLOCK P. M., I will sell to the highest bidder Seventy Head of Thoroughbred Angora Goats, imported by their owner, Mr. A. Euytchedes, from Asia Minor. Sale Positive. Terms cash, in U. S. Gold Coin. ROBT. BECK.

I have also the best imported Alderney, Jersey and Ayrshire Cattle; Spanish and Silician Merino Sheep at private sale. R. B. 11v7-6t

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO.

Manufacturers of

Linseed and Castor Oils,

OIL Cakes and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.

Office, 3 and 5 Front street.

Works, King street, bet. Second and Third. fe15-cow

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO. 21v2-1y



PRICE, \$50.

The New Wilson SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market

G. A. NORTON, Gen. Ag't for the Pacific Coast.

337 Kearny St., S. F. 2v7-cow-bp-ly

CALVERT'S



CARBOLIC

SHEEP WASH.

Sole Agency on the Pacific Coast at

T. W. JACKSON'S,

416 Sacramento Street, San Francisco. fe14

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street, Agents for the Pacific Coast. 11v7-3m

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with Dropper.

World Reapers, and Mowers with Dropper and Hand Rakes—side delivery. Clipper Mowers and Reapers, with Dropper.

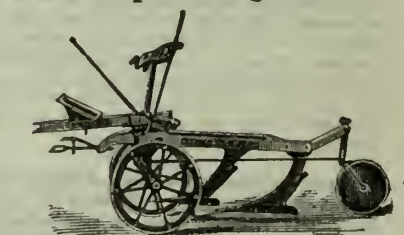
Cayuga Chief Mowers and Reapers. Sulky Rakes—Furst & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

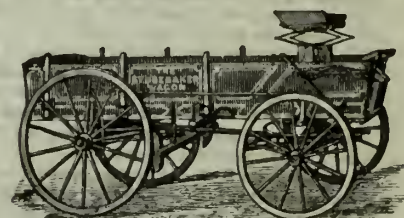
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps; Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators, Mortise Head Hay Rake, Scythes and Snaths,

Soule, Ketsinger & Co.'s First-Class

Farming Tools,

Gold Medal Forks, Hoes and Rakes,

Batchelor's Forks,

Friedman Harrow, Scotch Harrows, Whistle-

trees, Ox Yokes and Bows,

Road Scrapers,

Canal and Garden Barrows,

Hay Cutters—Burdick's

National, Belcher & Taylor's

Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and

Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Headley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & CO., San Francisco.

MATTESON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m MATTESON & WILLIAMSON, Stockton, Cal.

O. OREGO. S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

-OF-

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship. We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers: Charles S. Coffey, Camden, New Jersey; Helfield & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers: C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcigles, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, 24v6-3m San Francisco.

WM. ZARTMAN & CO., CARRIAGE AND WAGON MAKERS,

COR. ENGLISH & HOWARD STS., PETALUMA. Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate. SPECIAL RATES TO GRANGERS. 12v7-3m

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

DAVID CROCKETT.....BURGESS, Master

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street, San Francisco.

NURSERY NOTICES.

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.

Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

Address THOMAS MEHERIN,

616 Battery Street,

SAN FRANCISCO.

P. O. Box 722. 24v6-3m

METROPOLITAN NURSERY.

MILLER & SIEVERS, Propr's.

We can now offer for sale a fine assortment of

NEW AND RARE

FLOWERING & ORNAMENTAL PLANTS,

SHRUBS AND TREES,

IN GOOD AND HEALTHY CONDITION. ALSO A CHOICE COLLECTION OF

FLOWERING BULBS AND SEEDS,

(Native and foreign.)

Our catalogue is now ready, and is the most extensive ever published on this Coast; we will forward it free to all applicants.

Nurseries on Lombard and Chestnut streets, near Larkin street, at the terminus of the new Clay street railroad. Floral and seed depot, No. 27 Post street, San Francisco.

Letters by Mail or express will reach us.

ja10 MILLER & SIEVERS.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

SUPERIOR

FRUIT TREES,

TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSERYMAN.

T. CORLEY.

4v7-3m No. 315 Washington st., S. F.

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental Trees, Shrubs, Roses, GREEN HOUSE PLANTS, ETC.

We are constantly adding to our varied stock the NEW-EST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call.

LANDSCAPE GARDENING attended to. ja24tf

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER,

21v6-1y Petaluma, Sonoma Co., Cal.

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Tintley Peach, Georgia Freestone Seedling, the first offered in the State. Its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

BRYAN & DOMINGOS,

P. O. Box 157, Sacramento, Cal.



BAY NURSERY,

OAKLAND, CAL. (Established in 1852.)

JAMES HUTCHISON, Prop'r.,

HAS FOR SALE, WHOLESAL AND RETAIL, an immense stock of Evergreen Trees, Ornamental Shrubs and Flowering Plants, suitable for the conservatory, parlor window, flower garden, lawn, vases, rockeries, hanging baskets, ferneries, etc. Comprising in part, Camellias, Magnolias, Daphnes, Araucarias, Yuccas, Variegated Agaves, Roses, Fuchsias, Carnations, Eucalyptus, Acacias, Peppers, Cypress, Pines, Junipers, Cedar of Lebanon, etc. New and rare plants a specialty. Dealers and nurserymen supplied at low rates. Hyacinths, Tube Roses, Tulips and other Bulbs. Choice Flower Seed, Garden and Lawn Seed, fresh and genuine. 2v7-3m

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN Trees, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good reference must accompany all orders. Lombardy Poplars, 1 1/2 to 2 inch trees, 25 cts. each.

E. PARSONS & CO.,

Nurserymen and Florists,

K street, between 8th and 9th, SACRAMENTO, CAL.

4v7-3m

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

C. J. CLAYTON,

Clayton, Contra Costa Co., Cal.

10v7-6m

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses. Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrus Decadare, or Deodare Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubb's Hotel.

Send for Catalogue. ja10

THE FINEST COLLECTION OF PINES,

Cypress, Australian Eucalyptus,

EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices.

Send for priced Catalogue to

8v7-3m A. D. PRYAL, Oakland, Cal.

LARGE ORANGE TREES.

ORANGE, LEMON, LIME AND ENGLISH WALNUT TREES for sale, from three to five years old. The five-year old Orange Trees are the largest ever offered for sale in this county. For Price, address,

MILTON THOMAS,

P. O. Box 304, Los Angeles, Cal.

TO PLANTERS.

A large collection of

Evergreen Trees and Shrubs

FOR SALE AT BELLE VIEW NURSERY, OAKLAND.

S. NOLAN, Proprietor. 2v7-3m

THE ALDEN

Fruit Preserving Company

OF CALIFORNIA.

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.

W. M. WHEATLEY, Vice President.

FRANK PYLE, Sec'y and Sup't.

BANK OF CALIFORNIA, Treasurer.

11v7-6m

H. E. CUMMINGS. 1858.

H. H. RALSTON. 1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1y

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-8m 304 California Street.

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California. My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnier & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,

Red Clover, White Clover,

Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,

Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the Interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk. My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100,000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 21v6-1f

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.

19v6-1f

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, at \$5.00 per dozen; White Leghorns, Game Bantams, Creve Coeurs, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, (first premium at Buffalo, 1873), Silver Spangled Barded Poland, Golden Barded Poland, Black Poland, White Crests, Brown Leghorns, White Sultans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland, At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 44 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C. O. D. 6v7-1f

THE BEST

SEWING MACHINE!

THE NEW IMPROVED

FLORENCE.

BACK FEED AND SIDE FEED.

The lightest running, most simple, and most easily operated Sewing Machine in the market.

Always in order and ready for work. In the past ten years ELEVEN THOUSAND Florence Machines have been sold by me on this Coast, and no purchaser has paid me anything for repairs. If there is a Florence Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner.

SAMUEL HILL, Agent,

NO. 19 NEW MONTGOMERY STREET,

25v6-4m Grand Hotel Building, S. F.

BEST SHADE IN USE.
—THE—
RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture is FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE. Wherever it has been introduced and its merits tested. IT IS MADE OF WOOD, IS

Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the Bottom,

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are simple, work to perfection, and never get out of order.

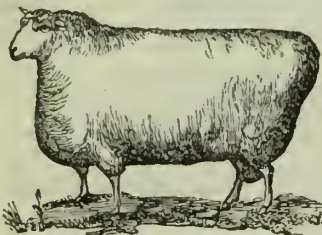
Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by
GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.
67-16p-3m

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal



OWENS & MOORE,
COMMISSION MERCHANTS,
DEALERS IN
WOOL, HIDES, PELTS AND GRAIN.
Office—405 Front street, S. F. 14v7-3m

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GEES,

58 pounds to the pair, at maturity.

Address: **M. EYRE,**
Napa, Cal.

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List. The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Eggs for Hatching, packed to travel safely by rail or stage. 3v7-3m-16p-sp

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; eggs of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls: Light and Dark Brahmas, Buff. Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS. 7v6-tf-16p2

W. M. BRANDON. JACOB W. ROGERS

BRANDON & ROGERS,
California Land Agency,
535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges. 20v6-ly-16p



EGGS FOR HATCHING,

—FROM—
First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz; Buff Cochins, \$3 per doz; White Faced Black Spanish, \$4 per doz; White Leghorn, \$5 per doz. Buff Cochins and Light Brahms Fowls for sale. Address: **G. A. DEAN,** Pacific Straw Works, 333 Bush St., San Francisco. 12v7-3m-16p

DR. ABORN, Oculist, Aurist, Catarrh, Throat and Lung Physician.

The Most Difficult Cases are invited to call. Offices and Laboratory, 213 Geary street. Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M. 13v7-1m-16p

For the very best Photographs go to **BRADLEY & RULOFSON'S GALLERY**, with an "Elevator" 429 Montgomery street, San Francisco. 2v7-6m

PURCHASERS please say advertised in Rural Press.



BONNEY'S PATENT EXTENSION TOOTHED HAY RAKE.

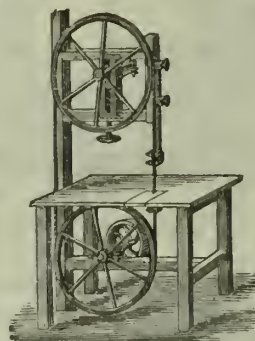
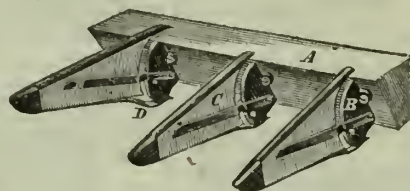
The only rake that gathers all the hay upon rough as well as smooth ground, free from dirt and dust, and does not roll or wad it together. The teeth can be used any length, and replaced without delay when worn out.

PATENT IMPROVED BAND SAWING MACHINE.

EQUAL TO THE BEST EASTERN, FOR LESS THAN HALF THE COST.

PATENT ADJUSTABLE GRAIN LIFTER.

This best in use, light, strong and durable. Can be run at any inclination to the ground, as seen at D in cut. Parties can save additional the cost of a set in one day's run of Header.



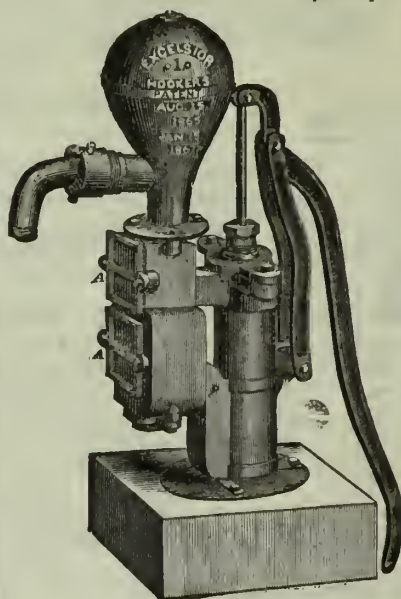
O. HEADER APRONS, GRAIN BELTS and FARMING IMPLEMENTS Generally.

O. BONNEY, Jr., Manufacturer,

No. 221 Mission Street, - - - - - SAN FRANCISCO. 14v7-1am-3m

THE "EXCELSIOR" FARMERS' PUMP.

After Seven Years use proving itself the Best Pump on this Coast, and consequently the CHEAPEST.



BASE.

We can advise all parties to buy the Pump to be worked by hand, wind-mill or horse power. All sizes for sale.

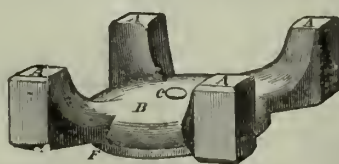
REMEMBER,

Every Pump is tested to 125 lbs. hydraulic pressure per square inch.

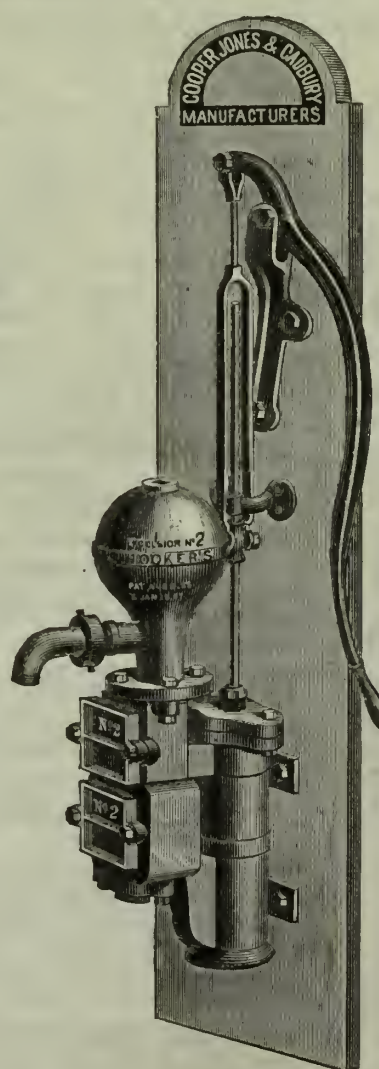
Will pump water 250 feet high.

So simple every Farmer can keep it in order.

EVERY PUMP WARRANTED.



VALVE.



MOUNTED.

BRITTAN, HOLBROOK & CO.,

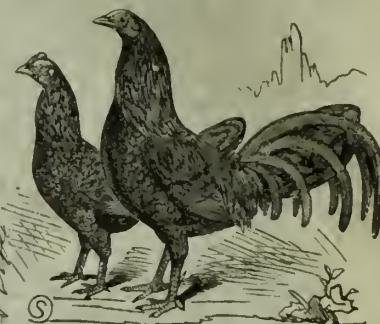
111 and 113 California street, San Francisco, (and also Sacramento,) General Agents. 6v7-cow-3m

THE PACIFIC RURAL PRESS has a larger Circulation than any other Pacific Coast Weekly, independent of a daily issue.

IMPROVE YOUR POULTRY,

It Costs No More to Keep Good Fowls than Poor Ones!

OAKLAND POULTRY YARDS,
COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.



GAME FOWLS!

Warranted to Stand Steel.

Prize winning strains of the following varieties, just received from the East: Earl Derby Games, Red Pills Games, Blus Pile Games, Heathwood Games, White Georgian Games, Black Breasted Red Games and Silver Duckwing Games. Eggs, \$12 per doz; guaranteed to reach the purchaser safely.

For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed 3v7-tf

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street, - - - - - San Francisco, WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetables and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER SEED, etc.

Agent for GARY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE.

BULB CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th. **R. J. TRUMBULL,** 15v6-6m-16p 427 Sansome St., San Francisco.

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable, Agricultural, and Flower Seeds, Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS, ENGLISH RYE GRASS, RED TOP, ORCHARD GRASS, TIMOTHY, MESQUIT, RED CLOVER, WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,
No. 317 Washington Street, 6v2-ly16p SAN FRANCISCO.

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. **P. J. PHILLIPS,** 11v7-1m 608 Clay street, S. F.

More than double the number of Farmers and their families read the PACIFIC RURAL PRESS than any other journal on this Coast.



Volume VII.]

SAN FRANCISCO, SATURDAY, APRIL 11, 1874.

[Number 15.]

Improved Threshing Machine.

We illustrate this week a threshing machine constructed in accordance with patents issued to James T. Watkins, of Santa Clara, December 17th, 1872, and Mr. Watkins and Jasper E. Scott, also of Santa Clara, January 20, 1874. The improvements covered by the former patent are, briefly, as follows: The employment of a series of parallel slats, *b*, shown separately in the foreground of the wood-cut, arranged in the form of a comb in the rear of the threshing concave, which receives the straw from the cylinder and passes it to the apron, while the grain is allowed to fall through the slats upon the grain belt below. Just below this comb a shaft, *c*, passes across the frame, carrying a number of long teeth, which alternate with the teeth or slats of the comb. By means of a

ing ones alternating. The gearing by which they are revolved is shown upon the outside. The resultant motion is undulatory, somewhat like a process of kneading. The inventors claim that agitators constructed of this form are superior to any other kind, because they do not beat the straw, but simply agitate it sufficiently to free the grain. The movement of the screen is effected by a link and crank, giving the desired shaking and jarring motion. The screw-conveyor extends across the lower end of the elevator, thus avoiding clogging and clogging, and keeping the grain in motion so as to be distributed to the buckets of the elevator. We regard the automatic feeding apparatus as the most ingenious part of the machine. The improvement in feeding devices is the subject of the second patent, dated this year. The inventors, after spending considerable time and effort in the attempt to produce a really effective automatic arrangement, devised and adopted the apparatus figured above the front

fork to describe an oval track, and thus rake the straw down the incline to the cylinders. The forks, of course, act alternately.

This form of feeder also acts as a regulator, for the forks are always carried back at a certain height from the bottom of the throat, and if any masses of straw should be brought to them, they would force back the overplus, and only take a certain quantity forward. Their motion may be regulated by shifting the point of attachment of the arms, *F*, *F*, and rods, *H*, *H*, up or down along the fork-handles, causing them to describe a greater or smaller oval, and thus adapt themselves to the requirements of the machine, because the larger the oval described, the more straw will be fed.

The machine is made throughout as automatic as possible, and the labor of attending to it is very slight. One of the inventors, Mr. Scott, who has lost the use of one leg, successfully managed one of these threshers entirely by himself, last summer, for an entire day,

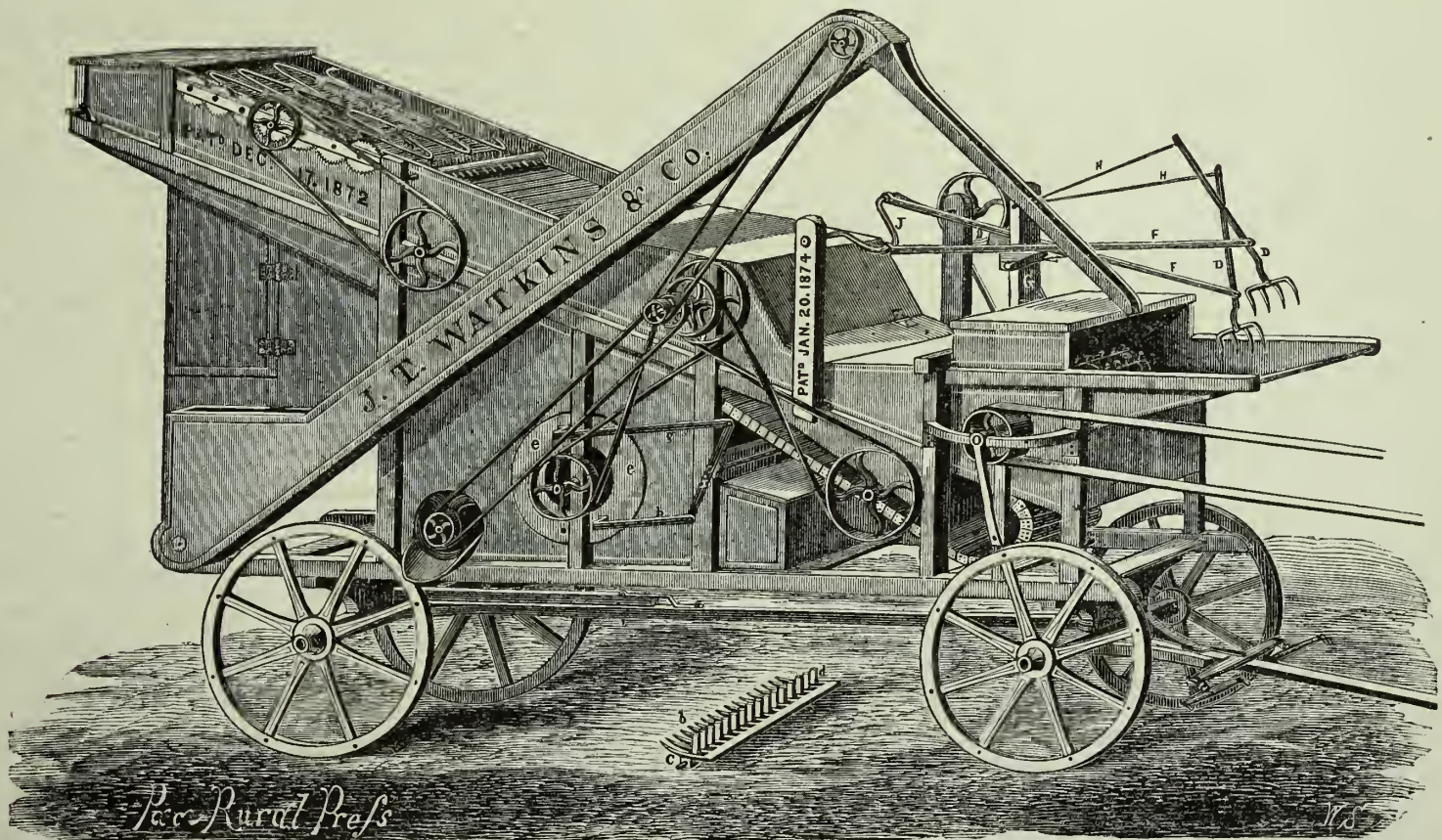
Immigration.

We receive so many inquiries like the following, from Nemaha county, Nebraska, that it would seem feasible to keep an answer standing in type:

EDITORS PRESS:—There are a number of persons in this place wishing for information about land claims and employment in California, with a view to immigration. We are told to address you for the required information. Will you please send us a copy of your paper bearing on our inquiries? J. R.

Brownville, Nemaha Co., Nebraska, March 31, 1874.

The response need never be a long one. Unimproved lands may be had at \$2.50 per acre, if one goes far enough, and even less on old Mexican grant claims, taken up at some distance from settlements. Good grazing land is



AN IMPROVED THRESHING MACHINE.

crank outside, the shaft can be turned so as to bring the teeth to a vertical position between the teeth of the comb, where they serve as a supplementary row of concave teeth, or it may be turned so as to disengage the teeth. A third improvement consists in a very ingenious device for regulating the blast of the fan. Two semi-circular plates, *e*, *e*, are pivoted, one above and the other below, so that by moving their opposite free ends toward each other or apart the opening can be made larger or smaller, as desired. Motion is communicated to these plates by rods, *g*, *h*, which connect the free ends of the plates with the ends of a lever, *i*; thus each part is actuated simultaneously. Another improvement is the adjustable tail-board (not shown), which is composed of several strips or boards, united together by straps or binges, allowing it to be raised or lowered to any height desired by turning up or down one or more of the strips.

Instead of beaters, above the straw-carrier, one or more series of long teeth or fingers are employed, which, without beating the straw, gently pick it up and loosen it with a shaking motion, so as to release the grains and allow them to pass through the carrier. Over the upper straw-carrier are agitators, *m*, of peculiar shape, each being a metal rod, bent in a zigzag manner back and forth, and each two adjoin-

ing of the threshing machine. They employ one or more forks, which are so connected with supporting and operating arms that they will, by suitable machinery, be alternately reciprocated back and forth in front of the throat of the machine, and feed the straw by a raking motion. The unthreshed straw is ordinarily fed into the throat, from which it is taken by the cylinder, by hand; this is a very laborious as well as irregular method, sometimes clogging and partially stopping the machine, and sometimes leaving it with too little straw, so that it will run too fast. The new feeder consists of the forks, *D*, *D*, each of which is operated by an arm, *F*, from a crank-shaft, *J*, which is driven by belt connection with the machine. *G* is a short upright post, secured on the top of the threshing machine. One end of each of the arms, *F*, *F*, is secured to a crank on the shaft, while its middle is provided with a curved slot, through which a pin passes into the post, *G*. A friction-roller may be placed upon the pin, if desired, to relieve the friction. The forward end of the arm is pivoted to the middle of the fork-handle, while one end of a connecting rod, *H*, is secured to the upper end of the handle, its opposite end being fixed to the upright post, *G*. As the crank shaft is rotated, the arms, *F*, *F*, will be moved back and forth, while the curved slot lifts and lowers the forward end, causing the

and attends to the engine, which drove the thresher at the same time. He found time to bring the straw to the machine, remove the grain and chaff, and regulate all the working parts, without difficulty.

JUTE SEED.—A correspondent, I. B. R., writes: I have been looking over all the advertisements and catalogues to find where jute seed may be had, but without success. A friend informed me that there had been an offer made by a company, through the RURAL, to furnish jute seed free. I not only wish to see how the plant will grow here, at Plano, Tulare county, but also on Kern Island. Would like to try whether a belt of it will protect crops from grasshoppers. Can you give me a list of the different persons who are cultivating ramie?

[The company offering jute seed has withdrawn the offer, because it was found inexpedient to put up the new machinery which would be required in treating the fiber. The amount ordered has been forwarded by a seedsmen. We are unable to answer your second question about ramie cultivators, but would like to have further information from our correspondents who have gone into the culture of that plant.—Eds. PRESS.]

TEXAS received 120,000 emigrants last year.

plenty, and wages high for first-class work-men.

Capable farmers and thorough-going artisans are always in demand in new countries. The trouble with most of our immigrants is that they come without bringing with them any useful qualities, without definite intentions, without capital, and it is only natural that such should be disappointed and anxious to go East again as soon as possible. This market is already overstocked with men of the Micawber stamp, who are willing to remain in a perpetual attitude of waiting for something to turn up. We have full confidence in the ultimate success of any one who comes with a determination to put the shoulder to the wheel; and if that shoulder is applied with a view to the greatest mechanical effect, and perseveringly, we are sure the wheel will move.

Our present correspondent seems to belong to the class of men who have made California what it is, and who have not suffered themselves. There is as wide a field for the exercise of the sturdy qualities of the typical pioneer to-day as in '49, and no danger of finding one's elbows too crowded, one's associates too effeminate, or one's land exhausted by over-tillage. If J. R. and his friends decide to come to this State, and are of the right sort, as appears to be the case, they will be warmly welcomed.

CORRESPONDENCE.

The Origin of Man.

EDITORS PRESS:—In your paper of March 7th is an article entitled "Man—His Past and Future, etc.," in which the writer attempts to prove that all mankind had their origin in a single pair, Adam and Eve, which should not pass without notice. He says, "that the answer to this by anyone who had not reflected on the subject, and who had nothing but his own limited experience, would be invariably no!" "That if he had not learned from the bible that God made all men that dwell on the earth of one blood, etc." Now I confess that I have failed to learn anything of the kind from the bible, or from any other source, notwithstanding the statement in the "Acts of the Apostles," 17:26. If "Erigena" will look a little further, he will find a similar statement by St. Paul in 1st Cor. 15:39, which renders it impossible that the text can be taken literally. "All flesh is not the same flesh, but there is one kind of flesh of man, another, flesh of beasts, another, flesh of fishes, and another of birds." Now, does "Erigena" believe that this proves that all beasts, all birds, and all fishes, came from a single pair? Does any sane person believe that the elephant and the rabbit, the mastodon and the mouse, the rhinoceros and the cat, came from a single pair?

And, further, is there anything classified as human, from two years old, and upwards, that can believe that the whale and the minnow, the devil fish and the trout, came from a single pair? or that climate had anything to do with changing a peacock into a turkey buzzard, or a condor into a hummingbird? The idea is shocking to our senses; and why believe that the different races of man—the black, the copper-colored, and the white—had the same origins. The authority is the same, and the absurdity the same. A celebrated naturalist has said, that if the difference between the various races and classes of the animal and vegetable kingdom was caused by climate, then the correct name for God would be Climate. But it is not true that the different races of men have the same blood. Scientific men tell us that there are more than two hundred and fifty specific differences in the anatomy and physiology of the different species of man (Burr, Hunt, Van Evre.) Many of the fathers of the church denied that Adam and Eve, and their children, were the only people on the globe. They affirmed that the text in Genesis very plainly states that there were other inhabitants besides Adam's family. They allege that chapter 4, verse 14 of Genesis more than implies that the earth was already widely populated.

For when God declared that Cain should be driven out from his family and made a vagabond in the earth, Cain deprecated the sentence and plead that "everyone that findeth me shall slay me." It was plainly not his father or mother that he feared, for he desired not to be driven forth from them; it was the people he should meet when a wanderer in the earth. Who then were those people whom Cain feared to meet when he should have gone forth into the earth? It has been reasoned by scholars that the most rational method of soothing his fears, would have been to tell him, there are no other people on the earth except your father and mother. Instead of that the Lord is represented as falling in with Cain's impression respecting the population of the world, and that "He set a mark upon Cain lest any finding him should kill him;" Gen. 4:15. Still further it is said that Cain, separating himself from his family, "went to the land of Nod, east of Eden." And Cain knew his wife and she conceived and bare Enoch. And he built a city, and called the name of the city after his son Enoch." Where could the people come from that lived in this city? That would be an extraordinary state of things which should have enabled Cain to fill up a city, however small, with his own children. The next seven verses give an account of the generations of Cain, and then say, "and Adam knew his wife again, and she bare a son and called his name Seth," "for God," said she, "hath appointed me another seed instead of Abel, whom Cain slew." Does this look as though Cain had taken a sister to wife, or that he had a sister at all? In the next chapter it says Adam was an hundred and thirty years old when Seth was born, and after that he lived eight hundred years, and he begat sons and daughters.

The early records give such a meager account of the flood, that but little can be known positively. Scientific men tell us that it could not have affected the opposite side of the globe and was only local, and in proof of which, say that when the Spaniards first landed in this country they did not find a single bird or quadruped here, known in either Asia, Africa, or Europe, and the type of man found here was just as distinct. In regard to the colored Jews in Cochín, India, which "Erigena" speaks of, I have read their history somewhat differently. A party of Jewish traders located in the above mentioned country, and bought black women for slaves, and not having any females of their own nation with them, raised children by their slaves. It is plain to see that their white color would die out in time. But "Erigena" proves the error of his own doctrine, when he states

that "in form and features they are like all other Jews; the national character is plainly stamped on their physiognomy." If ten centuries could not make negroes of them, when their first issue must have been mulatto, white people anywhere need not have any fears of becoming negroes by settling in the torrid zone. The "Robillas," of Hindoostan, have white skins and fair hair; whilst men with dark eyes and dark hair form a majority of Wales and Scottish Highlands. The Gipsies, who came from India, and spread over Europe since the twelfth century, have in the cold countries, even to the Cheviot Hills, preserved the tawny complexion and black hair and eyes of the Hindoos. The German colony in Paraguay, founded in the fifteenth century by the soldiers of Charles the Fifth, whose blood is still unmixed, have preserved their fair complexion, even under the tropical capricorn. In Yucatan the Spanish people have remained unmixed with the natives, and are perfectly fair and purely Gothic, (Van Evre, Burr). Of course everybody knows that the tropical sun will change the complexion, when exposed to its burning rays; but the difference between the various races of men are fundamental—differences in intellectual capacity, as well as in physical conformation. So different are the physical systems, that their diseases are in many cases different, and require different treatment. Many diseases which affect and kill the white race are never known among some of the other races.

"Erigena" must be mistaken in supposing that the offspring of white people who have become tanned, are born with the same olive tint of their parents. It is unusual for anything more than the face and hands of white people to become tawny; and I believe it is equally unusual for children to be born with their face and hands of a color different from other parts of their person. Many people, in tropical countries, that have mixed blood in their veins, claim to be white—as, in fact, all do, in every country where there is any chance for success; but I very much doubt "Erigena's" ability to prove a single instance of a negro becoming a Caucasian in form and color by changing his home, or vice versa.

"Erigena's" proposition to place a pair of white people, male and female, in Brazil, or tropical Africa, without clothes to shelter their bodies from the rays of the burning sun, etc., will not hold good, as a Caucasian pair would not be so situated; if nothing better offered, they would make shelter and garments of fig-leaves, as their first parents did!

As far back as tradition extends, there was the same strongly marked races of men. The Nero, the Indian, the Esquimaux, the Malay, the Mongolian, and the Caucasian, all different in form, habits, color and intellect. So much so, that a child can distinguish them; and if these races have existed four thousand years, without the slightest change, or modification, which in all kinds of climate, and under every condition of circumstances preserved its integrity, and transmits in the regular and normal order to each succeeding generation, the exact and complete type of itself, must have been thus at the beginning, when the existing order was first called into being by the Almighty Creator.

Doubtless God could have changed our race into that of another, but we have no evidence that He has ever done so. We are told that the translation from the Latin Vulgate reads: "God hath made of one *genus* all races of men, and appointed the bounds of their habitations," which, if true, deprives the unity advocates of their best evidence. I have read an account of a sermon in favor of the unity of the races by a Unitarian clergyman, from the text, "One event happeneth to them all," Eccl. 2:14, which was probably no more intended as an opinion in favor of the unity of the races than it was in favor of the Babcock fire extinguisher. It shows upon what a slender thread they hang their faith, and upon what slight evidence they form an opinion.

A leading Eastern paper has the following from the pen of Professor C. H. Brigham, which seems to be to the point:

The Adamite.

Within the memory of many persons not yet old, Prof. Agassiz was denounced as an infidel, because he ventured to say that science indicated the creation of man in several places, and that no one Adam was the father of all the human races. Now the tables are turned, and the theory of Agassiz is taught as not only wise and rational, but conservative and orthodox, in harmony with the Jewish scripture, and salutary as saving from the dismal necessity of creation by evolution. Sound divines, like Dr. McCausland, vindicate the inspiration of the written work, by affirming that the Hebrew Genesis was not intended to be the story of all human origin and the primitive man, but only of one race later in time than other races and superior in quality. "The Adamite," the biblical man, is to be distinguished from the Australian and the Chinese, Negro and Indian. The happy suggestion has been caught up, and made the basis of conjecture and investigation; and now, we have learned societies discussing the limit and the home of the Adamite, as if it were a settled fact that the biblical pair were not the only human pair. Mr. C. H. Wake, the learned Director of the British Anthropological Institute, essays, in an elaborate paper, to show how far Adamites went, what countries they settled, what colonies they sent out, and what were their relations to other races.

A professor, in his lectures to the students of the Michigan University, accepts the theory and commends it as safe and sound, explaining

what otherwise would be the puzzle of the Genesis document. And it may before long become heresy for theological professors in orthodox seminaries to hold or teach any other view. Certainly those denizens of the land of Nod, with whom Cain found refuge, and who gave him a wife, are not to be taken as the children of Cain's father. Theology will accept the verdict of ethnology and philology, and thereby remove the stumbling block from the path of those who earnestly desire to believe the Scriptures, and the fruitful source of infidelity.

ADAMITE.

Stockton, March 18th, 1874.

The Foothills.

EDITORS PRESS:—I do not write this in any spirit of criticism. The only correction I see necessary in your comments on my letter of February 14th, is in the location of Mr. Bugbee's vineyard. You stated it was only five or six miles above Lincoln; whereas, to the best of my knowledge, it is at least twenty miles south of Lincoln, and in Colorado county. You probably had in your mind Mr. J. R. Nickerson's vineyard, which is about four miles from Lincoln. It has been some time since my last, and I have taken pains to make inquiries and observations, as to the capabilities of the country, and the financial and social conditions of the people. The first is seen in the scant growth of vegetation, both cultivated and natural. The second is seen in the dilapidated condition of the buildings and fences; and what remains of them that is in anything like good condition, is an outgrowth or relic of the mines. Stop the mines and Placer county would be almost depopulated. The social aspect is seen almost any Sunday, where, on going to, or coming from church, your family is compelled to witness a horse-race or a fist-fight.

I have said enough about the foothills, and will now say something of the western or farming portion of the county. It is composed, as you say, almost entirely of coarse gravel drift, and there is hardly a fruit tree or vine to be seen, from the fact that they will not grow. Of course, I do not include a few isolated spots along the creeks and ravines that I spoke of before. They summer-fallow almost altogether on these plains, and I am informed that the greatest yield they ever expect is twelve bushels per acre, and they just as often get only five; compare that to a yield of the valley land, and see if there is not quite a difference in their value. Another significant comparison is the number of sheep the land is able to keep. Respectively, it takes five acres here to keep one sheep the year round; whereas, I have known a flock of fourteen hundred, with an increase of eight hundred lambs, to be pastured on three hundred acres for one year. I expect you are getting tired of foothill correspondence, but this is my last on that subject. I will only say to "Young Farmer," that if he wants a place very cheap, he can get it in this neck of the woods.

F. G. Lincoln, Placer county, March 28th, 1874.

Cotton and Cotton Seed.

EDITORS PRESS:—I saw in the last issue of your paper that has reached me, an extract from a letter written by me to Mr. Daniel Inman, of Alameda county, and you express a wish to hear from me in regard to the cotton experiment I was thus proposing to make. Mr. Inman procured and forwarded for me 75 pounds of cotton seed, which arrived within eight miles of me, and then, at the crossing of Salt river, was lost in the river by the upsetting of the stage which had it aboard.

Is there any cotton seed in your city to be had? If there is, and you would procure and forward to me fifteen, twenty or thirty pounds, I will on receipt of bill forward the money for it. I have raised a few stalks of cotton every year, for three years, and all who have examined it have always pronounced it good cotton, and I am anxious to plant enough to demonstrate whether or no a crop can be raised that will pay.

We (the farmers of this section) will be compelled to find some other crops to raise than barley and wheat, or quit farming, as the supply at present exceeds the demand for them. I am pretty well satisfied from experiments already tried, that cotton, tobacco and sugar cane can all be successfully raised here; and if a portion of our farmers will switch off from the beaten track of small grain, we shall all do better; and although the two last years farming has weakened me somewhat financially, I am still able and willing to try the experiment.

Should I succeed in getting seed to plant cotton, I will, in the fall, send you a faithful account of the result. Respectfully yours,

J. T. Alsop.

Phoenix, Arizona, March 23d, 1874.

[Seed ordered. See letter of advice by mail. —Eds. Press.]

CO-OPERATIVE STORES. — EDITORS PRESS:—Can you inform me of some work that treats on co-operative stores, etc., and where one may be got? Truly yours,

San Jose, March 28th, 1874.

[We have heard of no such treatise. Probably common sense will be the best guide. —Eds. Press.]

Letter from Vacaville.

EDITORS PRESS:—I read in your most valuable paper, weekly, some glowing description of the correspondent's favorite location. Each are landing his above all others. Among all these I have never yet seen a line about this immediate section, nor will I attempt to do justice, but merely give some of the prominent and endearing features. Vaca valley is, beyond a doubt, one of the most fertile, healthy and pleasant valleys of California. We are blessed with a climate unsurpassed by any; of the fertility of the soils our varied and very abundant harvests are sufficient proofs. Anything in the vegetable kingdom that can be grown in the State, will do well in some portion of the valley. The first fruits and vegetables of the season are sent to market, from Vaca and Pleasant valleys, and during the summer, I think I may safely say, an average of twenty-five tons of fruit and vegetables pass, daily, from Vacaville to San Francisco; and yet a very small proportion of the valley lands are planted to these, the hillside being considered earlier and better adapted.

The valley land is sown in grain principally, yet there are many orchards, vineyards and gardens on the bottom land which have proven it well adapted, though not quite so early as the slopes. For over twenty years I have been a resident of this valley, and during that time have visited almost every section of the State, and I must say that I have not seen one place that I consider its equal in any of the natural advantages; but until recently land has been held in large tracts by a few, who did not propose to divide it up.

The Messrs. Long, who own that portion of the valley lying on the northern portion of the grant, have inaugurated a new era in the history of the valley by cutting up their lands to suit purchasers, and scarcely a week passes but a real estate transaction takes place; and yet there is room for many more, who are content to own, improve and grow rich on, from 50 to 100 acres. The price per acre ranges from \$30 to \$75, according to location and improvements.

Dr. Dobbins owns a ranch of 1,500 acres lying south of Long's and north of Vacaville. It is an excellent farm, there being 800 acres of valley and 700 of hill land, and well may the doctor be proud of it. But since the doctor has become a prominent Granger, I think he has concluded to sell in tracts to suit purchasers; and though the doctor can boss a farm about as well as any one, we would like to see his place divided among at least 25 active, industrious, actual settlers.

Messrs. Peña, Butcher, Wilson and Broughton all own large tracts of land around Vacaville; and if these were cut up into from 50 to 100 acres apiece, to suit purchasers, but a few years would suffice to make Vaca valley the Eden of California. Nor do I think that day is far distant. California college, located at this place, if properly conducted, will in a few years greatly enhance the value of property in this vicinity. The President, Dr. Worrell, and Mr. G. W. Brown, late of Mendocino county, have a large and commodious boarding house nearly completed. It is intended to accommodate 70 boarders, and, when furnished, will cost not less than \$7,000.

The extreme wet winter put farming back, and for a while greatly disheartened the farmers. I believe about as much has been sown as usual, however; and the invigorating showers we have had of late make the grain look healthy, and the farmers may well figure on a good yield.

It might be a source of wonder to the readers of the Press to learn that there are some inventive minds in Vacaville. Messrs. Collins and Donaldson have invented, applied for and obtained a patent on an apparatus to regulate the power on steam engines by governing the governor; and Alexander Dunn has invented and applied for a patent on an improvement on headers, whereby the draper-bed and sickle are kept on a level, thereby making a great saving both of grain and wear and tear of the draper when cutting low grain.

Every alternate Saturday the Grangers collect in Vacaville like bees in an old sugar barrel, and seem to feel very confident of being able to do much good this season.

Much excitement has prevailed in this section over the question of dividing the county; but since the Governor has vetoed the bill, the usual quiet prevails.

If any of the readers of the Press want good homes, let them come to Vaca valley before buying, and they will certainly be pleased. More anon.

SANDY. March 30th, 1874.

CULTIVATING THE WILD COFFEE. — EDITORS PRESS:—I planted out a few slips, believing that they will grow as easily as a grape-vine cutting—merely for an experiment. I measured some bushes near my place to-day, and found the length to be fifteen feet four inches; one butt measured sixteen inches in circumference, and a little over five and one-quarter inches in diameter. In looking around for quantity of bushes, I am surprised to find so many. They do not seem to be confined to water courses. I found many bushes high and dry, remaining green, and in leaf the year round. I consider the abandoned placer mining ground as being the best adapted to its speedy growth. Rocks and sand stimulate growth; the loose nature of the soil allows the roots room to spread and grow strong.

JOHN TAYLOR. Mount Pleasant, March 23d, 1874.

From Arizona.

EDITORS PRESS:—Seeing in your last issue a wish for something from Arizona, I send you the enclosed, hoping it may be of service to you. In the fall of '73 I made two trips from Fort Mohave to Prescott—was in that neighborhood from May until November.

I should have added that in the section of country about Fort Whipple it rains in the spring and summer months, and in the above year there was frost in June; and the storms of rain, thunder and lightning were grand and terrific. In the vicinity of Fort Mohave there are some excellent bottom lands, in width from one-half to three miles; on the Arizona side of the Colorado river they are liable to overflow. In the vicinity of Fort Mohave, on the Arizona side of the river, there are thousands of acres of excellent land subject to overflow, to a limited extent. The Indians raised corn, wheat, melons and squashes, and I have thought the soil well adapted to cotton. In summer the heat is excessive. Traveling east from Hardy's Landing you cross Beal's mountain, in which are found well defined ledges of gold and silver, one of which was the once noted Moss and Skinner lode. For forty miles the country has a most barren and desolate appearance; then the character of the soil changes and vegetation is more abundant. Bunch grass of different kinds is found; also cedar or juniper bushes, six to twenty feet in height. On some of the highest mountains pine timber can be seen. Here game can be found, and the climate is milder in both winter and summer. Forty miles more brings the traveler into still better grazing country, with more wood, water and game; but good farming land is very limited. Eighteen miles further, a stunted black walnut is found and the soil seems to improve. Thirty miles more takes you to still better pasture lands, more game, and a greater variety of wood—such as willow, cedar, black jack, oak, pine, walnut, and a sprinkle of ash; all, however, having a very stunted growth, the pine and cedar being most thrifty.

In this part of the Territory in the winter of 1873-74 I saw snow two to three feet deep on the level, though it lay but a few days. As you advance towards Prescott the soil improves. Some few small brooks are crossed; a greater variety of game is found, such as bear, deer, wild turkeys, hare, antelope, some small birds and Indians. The pine improves in size and appearance, and evidences of a once populous country meet the eye in the shape of demolished stone buildings which contained from four to eight rooms, also patches of ground covered with broken pottery. Many of the hills seem to have been fortified with stone walls. Evidently at one time the country was well watered by streams—which can not be said of it now. Prescott, once the capital of Arizona, is about one hundred and forty miles east of the Colorado; has an altitude of about six thousand feet; is pleasantly located on a gentle slope, the soil of which, at a depth of five to one hundred feet, contains good water and a sprinkle of gold. Eight or ten miles from the town are the once famous Walker or Lynx creek surface gold mines. Close at hand are forests of pine and numerous rich ledges of gold-bearing quartz. The general character of the soil is broken granite, though in spots rich black loam is found; also a red, gravelly clay. Streams of running water are very few and far between. The grasses are almost wholly a variety of what is commonly called bunch grass, each bunch or strip being separate and distinct from the other from one inch to twelve. In low and moist places a sod is found, but such places are not plenty in the neighborhood of Fort Whipple, which post is a mile or two from Prescott. There is no doubt in my mind that Arizona will prove to be in time one of the richest mineral sections in the United States, and also noted for its herds of cattle and sheep. For several years it will be an excellent place for all persons interested in raising cattle and hunting Indians to emigrate to. A. R. W.

Santa Clara, March 19th, 1874.

Hunting Ducks with Success.

EDITORS PRESS:—As your traveling agents and correspondents cannot at all times travel on the by-ways as well as the high-ways, there are many little things and occurrences to be found in these out-of-the-way places that are not only in themselves amusing but also instructive.

We saddled our old gray mare, the other day, equipped with gun, game-bag and ammunition, and, followed by our faithful dog, set out for a pond in the neighborhood of Dry creek, with the avowed purpose of slaughtering the ducks to be found there at this season of the year. But, alas! for all human expectations: the ducks would not yield to our persuasions or efforts, although we were around with a double-barreled gun from one of the best London makers, William Moore. Notwithstanding, we kept on banging away at them until we became tired; but the ducks only cried quack, quack, and persisted in flying off, apparently unhurt. We began to think we were only a quack at that sort of business; and, as the sun was near the meridian, we concluded to give it up and visit an acquaintance of ours, Mr. Rinehart, whom we knew to be an admirer of the RURAL.

We found this gentleman out in the field, and he immediately invited us to the house and to dine, which invitation we gladly accepted. On the way he told us he had between 200 and 300 acres sown to wheat, and that it all looked well; and, if what we traveled over was a specimen of the whole, it truly did look first-rate. He was not able to get in any more, on account of the ground being too wet. Chatting of the weather, crops, etc., we came to the garden-gate and entered; and there we saw a picture of rural life that no artist could help admiring: Two young ladies amidst the beautiful trailing vines and blushing roses, with garden-rake and hoe, and that ever-present companion of the ladies, as well as some editors, the scissors, with which they were deftly clipping off little tendrils, and training the vines in the way they should go. Watching their movements some little time, the words of Sam Lover arose to my lips, although I did not utter them:

"No flower was there that could compare
To the charming girl I sing," etc.

Girls, I should say. But just then all my poetry got a rude shock, by some one, in a loud tone, announcing dinner. And shortly after we took our seats at the dinner table, and did ample justice to the good things set before us by the kind hosts and the good young ladies; and I—well, I own that I did wish I was about twenty-five years younger; and if I was, I really believe I should fall heels over head in love with one of them, although I don't know which; but if I were a Mormon, perhaps both. Sitting and listening to their merry chat and ringing laughter, I forgot for a time my frosty pow, but chanced to look over at the mirror, and there the reflection said plainly: "You old Gander!" This put a damper on my feelings for a time, and I tried to look grave. But it would not do, and in a very short time thereafter I felt more like a school boy, and wanted to romp with the girls about that garden. As the memories of my boyish days were crowding upon my mind, the voice of my kind hostess, inquiring of me something about young turkeys, suddenly brought me down to my proper level again. Mrs. Rinehart gave me an account of her manner of treating young turkeys, which I may lay before the readers of the RURAL at some future day. By the way, it is only justice to say, in concluding this letter, that Mr. Rinehart is in possession of one of the most beautiful sites in this beautiful part of Stanislaus county, and will improve it as fast as he finds possible.

After some further conversation on different topics we took our leave; and, with a light heart as well as a light game bag, we got astride our gray mare and cantered to our own home.

W. T. EVANS.

March 16th, 1874.

Cotton in Arizona.

EDITORS PRESS:—In RURAL PRESS of March 14, article about Arizona, you ask for information and a sample of cotton here grown. This sample I send you enclosed. I had last year a little patch for experiment; the cotton was seven feet high. I am sorry that I cut it in winter, because I did read afterwards in a paper, that the cotton here grown is different from the cotton in the South; the latter has a stem with pith, while the former has a solid stem; should be perennial and producing for six or seven years. For experiment I sowed again a little patch and will see if it is perennial.

Information about Arizona I cannot give much, because I have been here only two years and have not seen more than a few miles around Yuma. In Salt river and Gila valleys are some settlements, but from what I hear they are not very prosperous. When the Indians are no more troublesome and the Texas Pacific has opened the Territory, so that the farmer can grow and ship the crops, then Arizona may become to some extent of agricultural value; but so far, there is no show here for farming on a small scale. The farmer depending entirely on irrigation has therefore an expensive cultivation, cannot dispose of his crop, and is too heavily taxed in his expenses for clothing, provisions, agricultural implements, etc., because he receives his goods via Yuma; and here we have the old story about monopolies. The Colorado Steam Navigation Company charges from San Francisco to Yuma, \$50 per ton, and then the freight from Yuma up country—so that the Arizona farmer has to pay freight ten times as much as if he were living in Japan or China. Yours truly, J. E. ARNOLD.

Yuma, Arizona, March 24th, 1874.

[The cotton sent is of very superior quality. If a staple of such fineness could be raised and shipped at prices which would be on a par with those paid by planters in the Gulf States, the cotton prospects of Arizona would be indeed flattering. In time, however, this may be brought about.—EDS. PRESS.]

OREGON CORRESPONDENCE.—A correspondent, writing from Salem, Oregon, under date of March 24th, says of affairs in that locality: Weather is fine. Grass is starting nicely. Crops look well throughout the State. Will be twice the amount of grain raised this season there was last. Farmers are very busy putting in grain and garden. Stock is rather poor, owing to the hard winter. A great many sheep died during severe weather. Everything bids fair for a prosperous season to farmers and mechanics.

CHEESE.—EDITORS PRESS:—Careful inquiry among the English cheese mongers developed the wants of their customers, and the size of the cheese most in demand in that market. The weight of a cheese to suit that country should be as nearly eight pounds as possible; uniform in weight and color. Now it strikes me that the size would suit this market also, as few families care to buy more than that amount at once, and most housekeepers would always buy a whole cheese if the flavor suited, provided the cheese was not too large.

T. M. SHAW.

San Francisco, April 6th, 1874.

CROPS IN SANTA CRUZ.—A correspondent writes from Watsonville: Our crops are coming forward in the most lively and productive manner desirable. The only apprehension is that in some places there will be too rank a growth.

Stock.

A Bad Practice.

If you enter a shoe-shore to make a purchase, and the dealer, instead of telling you that he has not what you are looking after, which is the fact, keeps you busy looking and trying on, while he sends a clerk out "on the sly" and procures the desired article from a neighboring dealer, then sells it to you as his own stock, the deception is of a harmless character, and there is "nobody hurt." But when a would-be purchaser of choice stock sends to a breeder who solicits orders for the same, advertising his stock as being full and ample, but when the order arrives, turns it over to a third party, to be filled by him, it becomes a downright imposition.

This is what we have designated a "bad practice." And we are sorry to say it is prevailing to such an extent among stock-breeders as to weaken the confidence of purchasers. If the dealer in farm stock has not the article ordered, the order should be returned with an acknowledgment of his inability to fill it; but instead of this, he, in too many cases, makes it up from the stock of a third party. He may conscientiously believe this stock to be "just as good" as was his own, and may have supplied this third party with its progenitors; but having once passed out of his hands, he can no longer vouch for its purity. The cupidity, the carelessness, or the injudicious management of the parties to whom it has been intrusted, may have allowed mixing and contamination extremely damaging to the breeds wanted.

The high prices obtained for fine stock, of undoubted pedigree, has very naturally tempted dealers to sell what they have not got. All departments of stock are suspected of having been injuriously affected by it, but poultry fanciers complain that this bad practice is particularly prevalent among the dealers in choice fowls.

When a man has procured a trio of fowls of a pedigree which will bear the closest examination, the demand for eggs is soon greater than the supply. It is only the favored few who can obtain them. Others must wait until the offspring of this trio can do something towards supplying this demand. As the merits of the fowls become known the demand increases, and the owner finds that even the second and third generation of hens cannot furnish all the eggs wanted. But some former customer who had obtained eggs from his original stock, has an increase of supply in this article exceeding the demand. To him our friend, the professional breeder, goes and procures eggs at a price perhaps three quarters less than he is asking. With these he fills the order from the distant purchaser. He quiets his conscience with the assurance that they are really from his own stock. And so they are; but this third party in raising the fowls of the second and third remove from the original stock, has not kept the different breeds properly separated, though the contamination may have been brought about by carelessness, and he may be unconscious of it; or even if he were to blame for the impurity, he has no reputation as a dealer to look after, and the eggs are disposed of at remunerative prices.

The results of this trick in the farm stock trade are too well known. The consequences have been more serious than they would have been had the public been aware of the trick; for the disappointed purchasers have been too apt to attribute the fault to the inherent defects in the stock and have consequently kept shy of it. Thus the reputation of blooded stock has suffered unjustly.

The possessor of pure blooded stock is to be envied; but it is by no means an enviable task to procure it; nor is it less difficult to keep it pure. The dealer should be as severely critical in selling as in buying, and be particularly careful how he sells what he has not got.

THE NEW HORSE DISEASE.—The New York Post gives a description of this disease as follows: A curious contagion has broken out among the horses of the stage and street car lines, to which very little attention has been attracted outside of the stables affected, yet which is of so peculiar and general a nature as to be of considerable importance. The disease made its appearance about three months ago, as nearly as can be ascertained. For some

time before it actually broke out the horses in many of the stables afterwards affected showed unfavorable symptoms, such as loss of appetite, languor and general debility.

The symptoms of the disease are similar in all the stables. The animals at first refuse to eat. They soon become swollen about the eyes, which weep and discharge a yellowish matter copiously, the eyes in some instances becoming entirely closed and inflamed to an alarming size. These indications are accompanied by swelling of the fore or hind legs. Soon after being seized with this complaint the animal exhibits signs of stupor, carrying the head aloft and betraying great weakness. After medical treatment for a day or two the appetite may return, when the horse rapidly recovers.

It was only a few years ago that swine feeders were vying with each other for the greatest weight of carcass; but this is now changed. Hogs that will weigh 500 pounds are sold at a less price per pound than those of 250 to 300 pounds. The market in England has long favored light weights. London is chiefly supplied with pigs of less than 200 pounds weight. And this tendency of the market to pigs, well fattened, but of small weight, is just what the farmer should encourage, for it is exactly in the line of his interest. It costs more to make the second hundred pounds on a pig than the first, and still more to make the third hundred pounds than the second, and so every pound added becomes more expensive.

POULTRY YARD.

Caponizing Fowls.

EDITORS PRESS:—Your answer to my former communication works well. In No. 13, 28th inst., "Trouble in the Poultry Yard" can all be remedied by the following mode of feeding: Give corn or wheat in the morning, and about noon ground barley scalded, and twice every week cut onions and mix with barley. Never feed after 12 m. Give them a chance to eat charcoal and grass. This month we have had 165 eggs from ten hens in one setting.

In times past we have lost many hens; as many as six in a day would drop dead without any apparent disease. If you would give the description or manner for making capous in your PRESS you would much oblige many friends. Yours truly, GEORGE A. FISCHER.

Quartz Mountain, March 31, 1874.

[Early summer is the best time for performing the operation. The fowl should not be less than two months, nor more than one year old. Four months is a good age. He should be kept without food or drink for about twenty-four hours, the crop and intestines thus becoming less distended and less in the way of the operator; the liability to inflammation being also reduced. The only instruments needed are a keen-edged knife, with a point lancet-shaped, and a needle with silk thread.

Place the fowl between the knees of the operator, its back downwards, the head hanging lower than the rear parts, in order to throw the intestines forward and out of the way. Secure the wings by folding backwards. The parts to be removed are attached to the back-bone in the lumbar region. The place for the incision is between the edge of the back-bone and the extremity of the ribs, the flank. To expose this part, place the left leg of the fowl forward; for the position is such that the left side is most readily reached. Pluck the feathers from the place to be operated upon, laying bare a space of about one and a half inches in circumference. Make an incision about an inch in length, being particularly careful to only cut through the thick outer skin. This exposes the filmy covering of the intestines, which must also be opened; but it would be well to lift this slightly with the point of the needle before cutting, thus removing it from its contact with the intestines. When the incision is fairly opened, insert the first and second fingers, and while gently pressing the intestines to the opposite side of the abdomen, search with the points of the fingers for the parts to be removed. These may be easily detached by careful movements of the finger ends, taking out one at a time. They should be removed entire and without breaking. After the removal of the parts close the lips of the wound with about three stitches, being extremely careful not to pierce the intestines with the needle. Some place a feather upon the wound when the fowl is discharged; others apply to it a little fresh butter; while others still apply nothing.

Keep him a few days secluded from other fowls, upon a moderate diet, and in a coop without a perch, as he is little inclined to go to roost; and if he were so inclined, the perching position would tend to strain the closed incision.

This operation should not be undertaken until the operator has become familiar with the anatomy of the parts. This knowledge may be readily acquired by the examination of dead fowls; and expertness may be attained by practicing on fowls intended for the table. Slender fingers and delicate touch are desirable, and it would be well to grease the fingers before inserting.—EDS. PRESS.]

A LEDGE of chrome ore was lately discovered near Latrobe, El Dorado county.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

ORDERS FOR GRANGE MATERIAL.—We are constantly receiving orders from newly organized Granges for regalia, blank books, implements and other articles for Granges, mostly accompanied by remittances per P. O. order. In our issue of January 3d, we announced that Bro. W. H. Baxter would furnish such supplies from that date. The prices of the goods are payable in coin, and all orders should be addressed to W. H. Baxter, Secretary of State Grange, P. of H., No. 320 California street, San Francisco, Cal.

We have been requested by Bro. Baxter, to state that prices affixed for all Grange supplies, furnished through his office, are upon a gold basis; and that gold instead of currency must in all cases be forwarded in payment.

Our Growth and Objects.

There are now, we believe, 174 Granges in this State, with an average membership of not much if any short of 100, making a total of 17,400 members, all working together in the fullest accord for the elevation and improvement of the farmer and his calling. The number will soon be doubled, and will be made up of the bone and sinew of the State—the conservative element of society. The influence of such a body of people, so selected and so bound together for good, must be far in excess of that accorded to the same number not so associated and not so selected. Every Grange is a nucleus around which the agricultural mind will crystallize, and give force and embodiment to the thought of the entire community of which it is the center. Let every Patron feel that he has an individual work to perform in the great cause of reform in which we, as an Order, are engaged. Let us ever bear in mind the great objects of our Order, which were so truly and so tersely set forth at the late meeting of the National Grange: To develop a better and higher manhood and womanhood among ourselves. To enhance the comforts and attractions of our homes, and strengthen our attachments to our pursuits. To foster mutual understanding and co-operation. To maintain inviolate our laws, and to emulate each other in labor. To reduce our expenses, both individual and corporate. To buy less and produce more, in order to make our farms self-sustaining. To diversify our crops, and crop no more than we can cultivate. To systematize our work, and calculate intelligently on probabilities. To discountenance the credit system, the mortgage system, the fashion system, and every other system tending to prodigality and bankruptcy.

GRANGE DECISIONS.—We frequently receive letters from Patrons asking our opinion on various matters connected with Grange management. The proper and only person in this State duly authorized to give such decisions is Brother Hamilton, Master of the State Grange. Bro. H. will soon return from the East, and will be happy to answer all enquiries of this nature which may be submitted to him. We have, sometimes, in the past, answered such queries (of course unofficially) but in the future we shall refer them direct to the Worthy Master. We make this reference at this time in reply to a correspondent who asks, "If an application for initiation into the Grange has been rejected by three or more black balls, can that vote be reconsidered? If so, how and when?" Again, "If it is not allowable to reconsider when the cause for rejection was fully understood; is it allowable when the rejection was made under a misapprehension at the time of balloting?" We shall be happy to give Bro. Hamilton's decision, for the benefit of the Order generally, whenever it may be rendered. Our Sebastopol correspondent will learn from the above why we have also neglected to answer his queries.

ANNIVERSARY PICNIC AT MODESTO.—The Stanislaus Grange, at Modesto, will celebrate the first anniversary of its organization by a general picnic on the 15th of the present month, (Wednesday next). The main features of the programme will be—1st, a public procession in regalia, from the hall to the picnic ground; 2nd, lecture; 3d, a basket dinner; 4th, social greetings, etc. All Patrons and their families are invited to be present; also, all friends of the Order. The letter of the Secretary, Vital E. Bangs, did not reach us as soon as intended, or we should have given the same earlier attention. We trust that there will be a general turn out of the Patrons, and a good time generally. Stanislaus is one of the oldest Granges in the State, being No. 4 on the list. Organized April 15th, 1873.

LOS BANGOS GRANGE, MERCED COUNTY.—Mrs. John McGlashan, Ceres of this Grange, writes: "Our Grange was organized by Bro. Wright, with 30 charter members. Since that time we have worked diligently. Last Friday, March 27th, we conferred the fourth degree on six sisters and one brother; after which we celebrated our second harvest feast. Our Grange is prospering finely. We have upwards of 60 members and constant applications. Crops are looking finely here, and we are all looking confidently for a bounteous harvest."

CASTORIA GRANGE, SAN JOAQUIN COUNTY, is reported to be in a prosperous condition. A class of nine has just been initiated to the fourth degree.

From the Granges.

COTTONWOOD GRANGE, STANISLAUS COUNTY.—EDITORS PRESS:—Having been blessed with an abundance of rain, of course we have fair prospects of a bountiful harvest; and, growing a hountiful harvest, necessitates the propriety of a harvest feast. Last Saturday we had our third harvest feast, and I think it would have done you good to have been with us on that occasion. There were present quite a number from the Orestimba, Badger Flat, and Los Baños Granges. About 150 in all surrounded the hountiful table, spread with all that heart could wish or appetite could crave. After eating our fill we were favored with some vocal music by brother Miller and sister Fairchilds of the Orestimba Grange, and brother C. Talbot and others of the Badger Flat and Los Baños Granges, which did honor to the occasion. And now, notwithstanding we were the last Grange organized on the west side of the San Joaquin, and the connecting link too, we would ask our brothers on every side if they can produce a better record than we of the Cottonwood Grange. Organized on the 10th of November, we now have 61 members, who have taken all the degrees; and a class of 46, and perhaps 50, that will take the first degree next Saturday.

Our Council met last Saturday, and have concluded to have a grand celebration on May day, when this little class just mentioned will take the fourth degree. There will be represented on that day the Orestimba, Cottonwood, Badger Flat, and Los Baños Granges, and as many more as think they can put up with our fare, yourselves not excepted.

Our endeavors may not seem anything unusual to some, but when they take into consideration our sparsely settled country, which will not average an occupant to the mile square, they can then begin to realize the disadvantages we are laboring under. Some of our readers that are oratorically inclined, will make it a point to happen around on the 1st of May, and proclaim a little Grange gospel to us. He will be amply rewarded, and welcomed by many brothers and sisters, and Yours fraternally, J. J. DOYLE.

PESCADERO GRANGE, SAN MATEO COUNTY.—A brother writes from this Grange as follows: "Our Grange is progressing finely. We meet on every Saturday at 1 o'clock P. M. At our last meeting six persons were admitted to the Order—one lady and five gentlemen. On next Saturday the second degree will be given, and so on in rotation till the class are working members of the fourth degree. There being a large attendance at the Grange yesterday, business went off more lively than at previous meetings. In reference to the threshing machine question, which was referred to by a brother in the PRESS of February 21st, I would say, a plan has been accepted by the Grange, and the prospects are that next harvest a No. 1 steam-thresher will be separating the grain from the chaff at a lively rate, working under the order of the Grange. A sharp discussion on the Chinese question was had, in reference to reducing the high wages that we have paid them in this section for the last four years. A committee of three was appointed to investigate and report at an early date. We hope that all Patrons will consider this an important question, and take action on it.

With us the prospects of a hountiful harvest never looked brighter. The grass is good, and the stock is in fine order; and we feel thankful to the Giver of all good gifts for these blessings. The last, but not the least, in the social point of view, is the Grangers' May-day picnic. The invitation is to all, and especially to the editors of the PRESS. Come, and visit our beautiful town by the sea, and we will make you welcome.

LOS NIETOS GRANGE, LOS ANGELES CO.—Will the editors of the RURAL PRESS please note the following changes among the officers of Los Nietos Grange, No. 44.—J. F. Marquis, Sec'y, elected Master, vice E. B. Grandin, resigned; W. S. Reavis, Chaplain, elected Sec'y, vice Marquis; Newton Frame, elected Chaplain, vice Reavis; and Bro. E. Stockton elected Treasurer, vice J. W. Cate, resigned. The newly elected officers were installed by the retiring Master, E. B. Grandin, who resigned to go East upon a visit to his friends. Resolutions were adopted by the Grange, expressing regrets and wishing him a safe and speedy return.

This Grange is working in complete harmony, and, although wide awake to all our interests, financially, we do not propose to lose sight of the "weightier matters of the law" in our anxiety to make or save the almighty dollar. We propose to fight our part of the battle under the banners of "Vital Brotherhood," "Higher Manhood and Womanhood," and "Education for All," and welcome the RURAL PRESS as our most powerful ally. J. F. MARQUIS.

PETALUMA GRANGE, SONOMA CO.—Our Grange has a membership of something over 100, with a class of 21 advancing. I think, during the summer, we shall increase rapidly, as we certainly have the material in Petaluma Township and vicinity for one of the finest Granges on the Pacific coast. We are trying to be governed by the advice of Worthy Master Adams, viz: "Receive none but actual farmers." We can't be too particular upon this point. The weather for the past two weeks has been very favorable for grass growing, consequently cattle and outside stock are improving rapidly. Yours fraternally, W. W. CHAPMAN.

LODI GRANGE, SAN JOAQUIN COUNTY.—Bro. J. A. Walker writes to the Granger as follows, with regard to this Grange: This Grange is destined to be very large and wealthy; situated in the center of a very large and populous settlement, and surrounded on all sides for miles by fields of wheat, time only can enumerate its membership and wealth. It now numbers 100 members, and at the next meeting will confer the fourth degree on a very large class. * * This Grange has also passed a resolution condemning the members of the Legislature who voted against the repeal of the law taxing crops, and promising to retain their names for future reference. This resolution I was very happy to see passed, as I recognize among the members who voted "no" on the repeal, the name of a member of the Grange, who, we presume, through the instigation of those who have for years been trying to saddle the entire weight of taxation on the farmer, became recreant to his pledge as a Granger, and his duty as a citizen. All Grangers, in fact, all true citizens, whether farmer or otherwise, can only look at the law in one light, viz: It is a law instigated by capitalists to lighten the tax on their own property by placing it on a shadow which has no real value, that the farmer may have it to carry.

VISALIA AND TULE RIVER GRANGES.—The same correspondent as above, writes as follows: I also visited the Visalia and Tule River Granges, and found them both prospering, each Grange having a large class climbing up to full membership. The Patrons of Tulare are not sensationists; they do not propose to "pull the world up at one great heave," but they are working with a determination for right that no monopoly or combination of monopolies can revert.

WOODBIDGE GRANGE, SAN JOAQUIN COUNTY.—As items from the different Granges are given a place in your columns, a word from Woodbridge Grange may not be amiss. Our Grange is progressing very well. We have about eighty members, and at our next meeting—7th of April—we expect to confer the fourth degree on a class of twenty, and enjoy a harvest feast. We should like very much to have some of our elder brothers pay us a fraternal visit at the time, and give us a good, social lecture on the workings, objects, social features, or anything else that might be selected, for the good of the order. We have had so much degree work to do, and as applications are still coming in, we have but little time for social intercourse or giving proper attention to the most interesting features of the order. Hence a little social food, contributed as above suggested, would have a wholesome effect, inspire confidence and add greatly to the feast. We have not been honored with the presence of a Deputy since our organization. If Bro. Stiles should pay us a visit he will certainly meet with a warm welcome. Grain is looking splendidly in this vicinity, and the prospects for a large yield were never more flattering. A. S. THOMAS, Sec'y.

DANVILLE GRANGE, CONTRA COSTA COUNTY.—J. B. Snyder, Secretary, writes: "Yesterday was our regular meeting. We raised a class of eight to the fourth degree in good order. Our officers are beginning to understand their business and are working accordingly. We had our usual harvest feast, gotten up in splendid style by the ladies of our Grange. It was enjoyed hugely by all. Next Saturday we will have a class of 18 for the first degree, with the expectation of many others soon. We should be pleased to see you whenever you can make it convenient to meet with us. Most of us take the RURAL PRESS and consider it an excellent paper. I would not do without it on any account. Without any invidious distinction, I may be allowed to say that our Worthy Master occupies his position with dignity and ability, and our Worthy Overseer also fills the Overseer's chair remarkably well."

WATSONVILLE GRANGE, SANTA CRUZ COUNTY.—Our Grange has just conferred the fourth degree on a class, and another large class will start April 11th. Our Worthy Master, Joseph McCallam, left on the 28th ult. to visit his old home in Pennsylvania. The Grange tendered a formal vote of thanks to both him and Sister McCallam, for their valuable services in behalf of the Grange. Our Worthy Master has spared neither time nor pains in perfecting our work, and we all wish him and his family a pleasant visit to their friends at the East, and a speedy return to their Californiahome. The RURAL PRESS is received regularly; but I am unable to send any additional subscribers, for the reason that almost every farmer in this neighborhood already takes it. Yours fraternally, A. F. RICHARDSON, Sec'y.

SANTA ROSA GRANGE, SONOMA CO.—In accordance with our by-laws, I report to you what can be said of our proceedings during the past month: A large class has been advanced to the fourth degree. Only two applications for membership are now in. A very important circular of the State Grange was communicated to us, last Saturday, by our Worthy Brother, E. W. Davis, now employed at the State Grange-office. By unanimous vote the Grange approved the subject of said circular. Next Saturday we elect two delegates to the Convention in San Francisco. We have adopted the following resolution, which I am instructed to have published in the RURAL PRESS:

Resolved, That the Santa Rosa Grange will not patronize any of the sewing machine agents who have gone back on their arrangements with the Grangers; but all its members are recommended to buy sewing machines only through the State Grange Agency.

J. A. O'GREEN, Sec'y S. R. G.
Santa Rosa, March 30th, 1874.

WALNUT CREEK GRANGE, CONTRA COSTA CO. Secretary W. K. Daly, writes that this Grange is getting along nicely—now numbers 42 members. Have just graduated a class and have another started. A committee was appointed to consider and report upon the sewing machine matter. Bro. D. sends us the report in full; but we have only space to say that this Committee, after saying in their report that the Order of P. of H. was not called into being for the purpose of oppressing or waging war upon the legitimate pursuits of any class of the community, especially the manufacturing interest, with which farmers are most closely allied, still hold that union of interest and effort is essential to the prosperity of the farmer, and that it is no infringement upon the right of any one to simply withhold their patronage from such sewing machine companies as have seen fit to go back upon their agreement with the P. of H., and to extend it to those companies which are still willing to do as they have once formerly agreed.

ANTELOPE GRANGE, YOLO CO.—W. J. Clarke, Master of this Grange, writes that his Grange has recently experienced an old-fashioned revival. On the 21st of March they initiated 17 males and 16 females—in all, 33. That Grange now numbers 77, with more waiting their turn for initiation. Brother C. appears to be quite enthusiastic in the work. "Agriculture," he writes, "is the only true foundation of individual as well as national prosperity. Compared with other industrial pursuits it generally yields a slower, but always a surer, more substantial and satisfactory employment. Many men of good qualifications, certain of final success in agricultural pursuits, have followed the phantom, speculation, with an earnestness and energy damaging to both vital and mental energy, and with a result which has left them further from success than when they first set out."

LOCKEFORD GRANGE, SAN JOAQUIN COUNTY.—A correspondent writes: "Among the many notices of newly organized Granges, published in the PRESS, I have not seen that of the Lockeford Grange, which was organized a few weeks ago. The following are its officers: G. C. Holman, M.; G. R. Ralph, O.; E. T. Negerle, L.; A. J. Williams, S.; A. T. Negerle, A. S.; John Trethenay, C.; B. Thomas, T.; S. S. Stewart, Sec.; Mrs. C. M. Holman, Ceres; Mrs. Williams, Pomona; Mrs. Clemens, Flora; Mrs. E. Ralph, L. A. S.

Temescal Grange Harvest Feast.

EDITORS PRESS:—I take pleasure in forwarding you some items concerning the Harvest Feast of the Temescal Grange which took place on Saturday last. The Grange met to confer the 4th degree on members elect, and the meeting was one of the most interesting and pleasant ever held. Our members were out in full force, and on looking about the room I believe Bro. Dewey was the only one I did not see. [Bro. D. is rusticated in the neighborhood of Colfax. Eds. PRESS.] Having conferred the 4th degree, we left our hall to meet our many invited guests who had assembled in an adjoining room, from whence they were conducted to the dining hall, there to partake with us of all the good things which had been so generously provided by our lady members. The Worthy Master having extended a formal invitation to the guests to partake, informed them that, although not Grangers, they "with the Grangers stand," and hoped they might enjoy the Grangers' Feast and become more favorably impressed with the Grangers' movement.

Such was the genial warmth of conversation, and relish and enjoyment of the feast, that guest and Granger seemed one. There was an abundance of all things and to spare; and all, in the satisfying of their appetites, manifested their gratitude and thanks to the generous and considerate ladies who had supplied it.

In due time the Worthy Master announced that speaking was in order, and the wit, humor and warmth of the speeches attested to a previous enjoyment. Our guests were called upon, and responded with a promptness that was quite gratifying. A. C. Henry, President of Oakland Savings Bank, and one of our best citizens, spoke of his early farming operations in the East in a very amusing manner, and closed in terms exceedingly flattering to the Patrons. Mr. Howard in his remarks stated that since the ladies had a helping hand in this movement it must go on to success. He strongly believed in the movement and in the impetus and push which the ladies would give it; for it is said that one lady is worth six men and a span of horses. Bro. C. H. Dwinelle told of the discouragements and adversities which he had met with in the farming business; but that he was determined to persevere, and hoped to be a successful farmer yet. Bro. J. V. Webster, Chaplain, made some very interesting and instructive remarks which left a favorable impression upon all. Bro. John Kelsey also spoke and made some happy allusions to the business and prosperity of Oakland. Several others made remarks, all tending to give encouragement and support to the Grangers, and to unite them in common sympathy and interest. When we all adjourned from the feast it was with an earnest hope that we might enjoy another equally pleasant ere long.

Yours fraternally, J. S. COLLINS, Sec'y.

New Granges.

EDITORS PRESS:—I yesterday organized Plainsburg Grange, with a full Charter list, and the following were duly installed as officers: P. Y. Welch, M.; L. Peck, O.; F. W. Fish, L.; R. M. Burchell, C.; R. Earl, S.; J. A. Barker, A. S.; T. J. E. Wilcox, Sec'y; H. Dewey, T.; Ezra Mason, G. K.; Miss Jeanette Spangleberg, Ceres; Mrs. C. Mason, Pomona; Mrs. Applegarth, Flora, and Mrs. Dewey, L. A. S. I was highly pleased with the interest manifested during the organization, and especially by the sisters; and we may expect to hear of many good things from the social, as well as the business, department of the Plainsburg Grange. Many of the older Granges will have to look well to their work, or they may expect to be eclipsed by this new one. It is located in one of the finest wheat-growing localities of the San Joaquin valley, and is composed of practical and well-to-do farmers, and men who have an eye to business and will prove a valuable acquisition to the Granges of the State.

In relation to our own Grange, Merced, we are continually increasing in number, and of late are evincing a lively interest in the way of preparing to handle the incoming crops; and, from the present appearance of our county, we can expect a liberal harvest.

Yours frat-ernally, W. B. JOLLEY.
Merced, April 4th, 1874.

GILROY GRANGE, SANTA CLARA COUNTY, was organized by Deputy G. W. Henning, on Thursday, Mar. 26th. Brother H. says, in the *Granger*: "We met a number of farmers at 1 o'clock, and after explaining to them the features and objects of the Patrons of Husbandry, secured 18 names and proceeded to organize. Following are the list of officers: W. Z. Angney, M.; Ledyard Fine, O.; E. Leavely, L.; O. P. Reeve, S.; J. T. Freeman, A. S.; D. B. Lillard, C.; H. Coffin, S.; Hugh S. Jones, T.; Miss Corinne Jones, L. A. S.; F. M. Dunning, G. K.; The election of the remaining lady officers was deferred until a subsequent meeting. We are well pleased with our work, and entertain high hopes of this Grange. Its growth may be slow at first, but the names on its charter list ensure its ultimate success."

Sacking Grain—Taxing Crops.

EDITORS PRESS:—At a regular meeting of Hungry Hollow Grange, No. 97, held March 28th, 1874, the following preamble and resolutions were unanimously adopted:

WHEREAS, Regarding the present system of haggling or sacking grain for market, as practiced on the Pacific Coast, as an enormous tax upon the labors of the producers, compelling an outlay upon which they receive no return, thereby affecting seriously the individual as well as the entire agricultural interests of the State; be it

Resolved, That we will use our united efforts and solicit the cooperation of our brother Patrons and farmers in bringing about a speedy and radical change.

Resolved, That, in our opinion, the readiest means for accomplishing the desired reform will be for grain-growers throughout the State to act in unison and refuse to provide sacks for grain, no exception to be made in selling for home-consumption or export.

Resolved, That, as in the continuance of the present custom we see no prospective benefits, but, on the contrary, all that is objectionable and injurious, we will give our support to the system of aggregation, storing and handling grain which has proved itself to be the most economical, safe and expeditious, and by the early adoption of which the farmers of the great grain-producing States of the Northwest, though far removed from the sea-board and markets, are wealthy and prosperous, while the reverse is the condition of the grain-growers of the Pacific Coast.

Resolved, That we deprecate the burning and willful destruction of straw from the grain fields, as commonly practiced by the people throughout this State, believing that in so doing a vast amount of valuable food for earth and kind is wholly and entirely lost.

WHEREAS, Under the proceedings of the Legislature, as reported March 2d, it has refused to pass the bill exempting growing crops from taxation; therefore be it

Resolved, That it is the sense of this Grange that we regard such action with distrust—as an unwise and unjust measure, a serious drawback to the interest of agriculture, a clog upon our energies and industries; and that its tendency is to militate against our interests in every sense; and be it further

Resolved, That the record of the vote in the Assembly on that question be preserved by this Grange for future reference.

Resolved, That copies of these resolutions be transmitted to the PACIFIC RURAL PRESS, the *California Granger* and the local papers, for publication.

J. M. D., Lecturer H. H. Grange.
Oat Valley, Yolo Co., March 28th.

Fares and Freights.

P. M. Savage, Secretary of the Capay Valley Grange, Yolo county, sends us the following with the request of the Grange that it be published in the *RURAL PRESS*:

WHEREAS, The regulation of fares and freights was one of the issues upon which the present Legislature was elected, therefore be it

Resolved, That a failure upon the part of that body to discharge that part of their trust will not meet the reasonable expectations of their constituents.

This Grange has also passed resolutions fully endorsing the action of the Dixon Grange with regard to the Sewing Machine question.

LOOKING AFTER THE CANDIDATES.—The Patrons of Illinois and Wisconsin have adopted the rule of addressing letters to all candidates for elective offices, demanding from them a definite statement of their views on leading questions of politics.

ANOTHER.—West Grafton Grange, Yolo county, has added its pledge to others, by resolution, to sustain the Dixon Grange on the Sewing Machine question. So we learn by a note from G. W. Parks, its Secretary.

The Woolen Mills of the Pacific Coast and what they did in 1873.

The Capital Invested—Quantity of Wool Used—Value of Buildings and Machinery—Number of Hands Employed—Amount Spent in Wages—Value of Products, Etc.

There is a great future in store for California as a manufacturing country—as great as for any country in the world. We might say, not only for California, but for all the Pacific coast; and one of the greatest branches of that industry, will consist in the manufacture of woolen goods, and of goods compounded of wool, cotton, silk and other textile materials. There are at least two hundred millions of acres that are peculiarly suited to the raising of sheep and the growth of wool, found in the foot-hills of the Sierras, and in the coast valleys of the coast range, extending for hundreds of miles from southeast to northwest, parallel to the great ocean and to the river courses. There is as much country favorable for wool growing on the Pacific slope, as in all the rest of the United States, and the day will come, and that in the near future, when every one of these hills and valleys will be white with millions of sheep. Their wool will not be always exported; it will be manufactured at home amongst us. We have abundance of water power, in the thousands of streams that descend from the mighty Sierras, the Cascades, and the other giant mountains of the Coast, and where water power is not available we have localities adjacent to some of the most productive coal mines in the world, where as busy scenes of industry will be witnessed as are now in the streets of the great manufacturing cities of both New and Old England. In fact, we have nothing in predicting that the woolen industry will of itself alone, task the labors of hundreds of thousands of workmen. But we have many things to learn; our farmers have to learn how to produce a fine quality of wool, and how to improve their flocks, and our manufacturers how to produce as fine cloths as are turned out by the looms of France. It does not detract in the least from their enterprise, and from the real merits of the work they have done, to say this; for, considering everything, they have made gigantic progress, and are fast approaching a high state of excellence in the quality of the goods manufactured, equalling, and in many cases excelling, some of the finest productions of the Eastern looms. It is less than a score of years since wool growing first assumed any dimensions in California. Then not more than half a million pounds was produced; but ever since the quantity has been steadily increasing, last year amounting to over thirty million pounds; the Oregon clip amounting to a few million more. Of this there was about ten per cent. used on the Coast. The Oregon wool is generally accounted the finest, although some claim the first place for northern Californian—but Southern California is not so good. Australian, which is used to some extent in our mills, is accounted by many of the millmen better than either. Of all the mills of the Coast,

The Mission and Pacific Mill

Belongs, unquestionably, to the first rank. It was started in 1860, with only two sets of cards, and did not give much promise of the future, which was afterward in store for it. The founder was Donald McLennan, Esq., the present manager, who carried it on successfully in the face of obstacles that would have appalled any ordinary man. The mill is now a twenty-set one, with seven thousand spindles and 87 broad looms. These twenty sets are equal to thirty-six sets, from the manner in which the mill is run. The value of goods manufactured in 1873, was \$1,100,000; this year it will be \$1,300,000, showing an advance of over eight per cent. in one year. There was used altogether 1,800,000 pounds of wool; this year there will be used 2,200,000 pounds. Of the wool used last year, there were 1,400,000 pounds Californian, 300,000 pounds Australian, and 100,000 pounds Oregon. We may say here that Mr. McLennan himself visited Australia a couple of years since in order to select the kind of wool he required for the mill. Besides the wool, there was also 150,000 pounds of cotton used, or about fifteen per cent. of the whole. The department for the manufacture of hosiery, turns out about \$200,000 worth a year, the rest of the manufacture being made up of cassimeres, tweeds, shawls, flannels, blankets, and every variety of woolen goods. Some of the goods appear to be equal in make and finish to any thing imported or foreign, and many of the cassimeres and tweeds are of remarkable beauty. There are here constantly employed 387 white people, and 456 Chinese. Of the white people, 80 are men with families, 85 to 100 boys, and the balance women and girls. The average pay roll is from \$18,000 to \$21,000 per month. Besides the regular employees there is hardly a poor family in the Mission that does not get work that is done at home. Besides this they keep the girls at the Magdalen employed nearly all the time. Including the families of those who get work, there can not be less than from two to three thousand people who are benefitted directly or indirectly by the mill. The white men employed earn, on an average, \$2 50 per day; the women from \$30 to \$40 per month, and the boys from \$4 to \$7 per

week, averaging, perhaps, \$5. This company claim to utilize the labor of boys more extensively than any other establishment in the city, save, perhaps, those employed in the boot and shoe trade, and the management is disposed to work them in from time to time as fast as opportunity offers. The Chinese employed, earn from ninety cents to one dollar per day. The buildings of the factory on Fifteenth and Folsom streets, are 793 feet long by an average of 50 feet wide, and are two stories in height. The hosiery department by itself is 200 feet long, and two stories in height. Besides these there are a dye house and work-shops and a large stone store-house, 130 feet long by fifty feet wide, two stories high, and capable of receiving two million pounds of wool. On arriving at the factory the wool is first assorted and scoured. Then it is colored, picked, carded, spun, and afterward wove into cloth, blankets, etc. We know of nothing more interesting than witnessing the various processes carried on, and the intricacy and variety of the machinery used. Of the processes just mentioned, the first story is devoted to picking, carding, spinning, and finishing the cloth, and in the second to spinning and weaving. There are about 220,000 yards of cassimeres, tweeds, etc., made annually, which are worth from ninety-five cents to \$1 60 per yard. Every week there is sent from this factory, east over the railroad, a car load of goods, worth from \$25,000 to \$30,000. They work largely for the Government. Their goods go everywhere over the coast, to Japan, China, and British Columbia. The capital of the company, which is a close corporation, is \$650,000. The mill occupies three blocks of land, which were bought at a nominal price, but which are now worth from \$600,000 to \$700,000. The buildings and machinery are worth, at least, \$400,000. The institution is a monument to its founder and a credit to the Coast.

The Pioneer Woolen Mill

Was, as the name imports, the first erected on this coast, and is the great rival of the Mission and Pacific. Located near Black Point, the buildings are altogether four hundred feet long, and are four stories in height. The mill started as a six-set mill; but there are now used in it 19 sets with 7,800 spindles and 67 broad looms. The building and machinery cost \$400,000, and the capital of the company is \$450,000. Last year they used 1,500,000 pounds of wool, worth \$300,000. They made 500,000 yards of cassimeres and 250,000 yards of blankets, etc. The total value of the manufacture was \$750,000. The amount spent in labor was \$30,000, which gave employment to 350 hands, including 100 white men, 25 women, 25 boys, and 200 Chinese. The wool used was principally Californian, with a small amount of cotton mixed. The goods made by this mill are all first class; and they have long had a good trade with New York, it being near three years since they sent the first goods thither. The Pioneer Mills is an industrial establishment that would do credit to any city in the United States.

The San Jose Woolen Mill

Is owned by a corporation organized in 1869, through the labors of Judge R. S. Peckham. The mill was built and put in working order under his supervision, and he is yet President and managing agent of the company. The other officers are James T. Lewis, secretary; A. McLeouard, mill superintendent; and John R. Mason, who acts as agent in this city. The company was organized with a capital of \$100,000 all paid up, but the business enlarging, it has since been increased by subscription to a nominal capital of \$400,000; of which, \$200,000 is paid up. The company has now including money invested in stocks, etc., about \$260,000. The mill, land and machinery cost \$93,000; and is said by all competent judges to be one of the best mills in America. The main building is 52x110 feet and three storeys high, with engine-room attached. They have also a separate building for picking machinery, another for their finishing machinery, besides a store-house, lyehouse and several other outbuildings. The mill has six sets of cards, 2,140 spindles, and 24 broad looms. It turns out about 60,000 yards of cassimere, 108,000 yards of flannel, 45,000 yards of tweed, 3,600 pair of white, 3,600 brown and 10,500 pair of grey blankets, per annum. In the manufacture of these goods they use about 350,000 lbs. of the best wool, in the market worth about \$70,000 per annum. The company manufacture about half their cassimeres and flannels into clothing. They give employment to ninety-six persons—77 at the mill and 19 in San Francisco. They expend for labor and commissions on sale of these goods about \$60,000 yearly. Their pay roll at the mill is about \$3,200 per month. Of their employees 25 are white, and 71 Chinese. This company find a ready sale for all their goods in San Francisco. Their blankets are unexcelled; many of their cassimeres are claimed to be equal to those of European importations.

The Marysville Woolen Mill

Was erected in 1868, and will, ere many years have elapsed, make of that city a most important manufacturing center. Its exhibit for the year 1873 was as follows: There were used 330,000 lbs. of wool, worth \$57,000, which were manufactured into cassimeres, flannels and blankets, worth \$187,000. The capital invested is \$127,000, and the cost of buildings and machinery has been \$72,300. There were employed in the mill 47 hands, who are paid \$26,400 a year, or an average of \$56.80 each, per month. The mill, which is built of brick,

and one story high, is 160 feet square. The wool used is all Californian.

The Stockton Woolen Mill

Is situated on the south bank of the Mormon Slough, near the city of Stockton; is 50x100 feet, one and a half stories in height, and built of wood. Besides, the proprietors have a store-room and packing-house 60 feet long by 20 feet broad. The mill is the property of Messrs. Lambert, Doughty and Tatterson, and was started in 1870. Last year there was used of wool 300,000 lbs., worth \$75,000, which was manufactured into \$125,000 worth of blankets, flannels, etc. The capital invested is \$50,000, and the mill and machinery are worth \$35,000. The hands number 30, of whom five are white men, three white women, and 22 Chinese. The white men average \$3 per day, the white women, \$1.25, and the Chinese earn \$25 per month. The mill is a two-set one, with 800 spindles and seven broad looms. The wool used is principally Californian, with some Oregon. The proprietors aver that the Oregon wool is of a better quality and has a longer staple. They are able to sell all they can manufacture.

The Capital Woolen Mill

At Sacramento, was incorporated in 1868, with a capital of \$100,000. The mill is located on the corner of C and Sixteenth streets. It is built of brick, and is three stories in height. The main building is 40x80 feet, with an L 60x80. It is a six-set mill, and employs 53 hands. They have a sample-room at 217 J street, which is 160x20 feet.

The Oregon City Woolen Mill

Is, without doubt, the most important manufacturing enterprise in the State of Oregon. It was established in 1865, nine years ago, and ever since has been constantly increasing its production. The factory is a splendid four-story building, with stone basement. The mill started as a three-set one, but is now a seven-set, with 2,300 spindles and 24 broad looms. Last year it used up 500,000 lbs. of wool, which, when manufactured, was represented by 130,000 yards of cassimeres and 120,000 yards of flannels and of blankets. The value of all these is about \$300,000. There are 100 hands employed, of which 70 are boys and girls, and the balance 30 men. The wages paid these in 1873 was fully \$60,000. The buildings and machinery have cost \$100,000. The wool used is principally Oregon. A small quantity of cotton is also used.

The Willamette Woolen Mill,

Is said to be the oldest on the Pacific coast, being established in 1857. It uses 400,000 lbs. of wool yearly, and pays \$8,000 monthly for labor. Of

The Other Woolen Mills,

We can say but little, inasmuch as our circulars to the managers have not as yet been answered. In California, besides those already noticed, there are the Los Gatos and Los Angeles mills, which are both one-set mills. In Oregon there is also a one-set mill at Brownsville.

Synopsis.

The whole number of woolen mills on the Pacific coast is nine, of which six are in California and three in Oregon. They have 20,840 spindles and 232 broad looms. Their aggregate capital is \$2,000,000; the value of buildings and machinery is \$1,525,000; the number of pounds of wool used last year was 5,380,000, of a value of \$1,200,000, and the value of the manufacture was \$3,000,000. Of the wool used, 3,680,000 lbs. was Californian, 1,200,000 lbs. was Oregon and 500,000 lbs. Australian. About 250,000 lbs. of cotton was also used. Of Cassimeres 11,000,000 yards were made, and of blankets, flannels, etc., 1,600,000 yards. The total number of employees was 1,356, of whom 851 were Chinese, 230 white men, 137 white boys, and 138 white women and girls. The wages paid aggregated \$556,400. The value of goods sent East was about \$350,000, and the total exports at least \$400,000. Such an exhibit is highly creditable to the coast, and gives the highest promise of a glorious future for this industry.

STOP THE LEAKS.—By the stopping of leaks we mean not only all unnecessary expenditure, but the taking care of what you have. Many farmers are very negligent in caring for their implements after having finished the season's work—leaving them exposed to winter's rain and summer's sun—which often injures them more than the work to which they were subjected. We seldom go into the country without seeing some implement laying out in the field, about the yard, laying on the roof, or hung in a tree. Even the harness is sometimes thrown upon the ground, or laid exposed to the weather for weeks at a time. In all this, there is a great leakage, which, with a little care, could be avoided. One farmer will mend or repair a broken or disordered article, making it almost as good as new, where another will throw it away. One keeps his cattle and horses in good flesh, while another has about him poor and scrawny stock. We have heard some of these people remark that they were unlucky, and do not see how it is his neighbor makes money at everything he puts his hands to. The secret is, they look out for all the little leaks, and take care of what they have, while our unlucky friends overlook the many small leaks, by studying how to close in a large one.—*Sutter Banner*.

The lumber trade in the United States gives employment to 163,397 operatives.

Fiber for paper-making is now made in quantity from reeds.



[Written for the Press by THAYNE WORTH.]

April.

The meadows thrill with varied life
Where freshly springs the clover;
The woods with ceaseless songs are rife,
And misty March is over.

The foggy damps of other days
Have lifted surely, slowly,
And only left a golden haze,
To veil the valleys lowly.

The growing air is full of scents,
From fragrant flowers the promise
That we shall have fair recompense,
Tho' April too slips from us.

The mountain streamlet chants a hymn
Amid its frothy dashes,
In shadow deep and pure, but dim,
In sunshine smiling dashes.

All Nature glows from point to peak
With joyful, new reflection,
And myriad tongues around us speak
This vernal resurrection!

Oh soul of mine, thy flowers attune
To praise this prelibation
Of life removed, where endless bloom
Attests thy full salvation!

Jerry Donovan's Midnight Mass.

Lough Iney is situated in one of the wildest valleys in the west of Ireland. The Law Life Assurance Company have erected a lodge by the edge of the lake, for the convenience of the disciples of old Izaak; but for some reason best known to that distinguished guild, the internal arrangements have never been completed, and it stands virtually a bleak house, resembling that stereotyped Dead Sea fruit, the rottenness of the core of which is so often made capital of by simile-loving litterateurs.

I was fishing at Lough Iney—the month was August, the year one thousand eight hundred and seventy-three. It was a melting day, with murky clouds overhead, and just a chance of a breeze later on. My rod lay bobbing at its own reflection from out the end of the boat, and I was smoking the calumet of peace, and engaged—Micawber-wise—waiting for something to turn up. At the bow sat Jerry Donovan, my guide, philosopher, and friend, in the act of "reddyin" his dhudeen, or little black pipe. Jerry's eye was as bright as a glass bead, and twinkled like a dissipated star. He was Myles na Coppalleen, except that he was a trifle more ragged—the complicated patchwork upon his small-clothes would have puzzled the Davenport Brothers. Jerry and I were upon terms of the easiest familiarity, which I cautiously cemented by occasional "golligues," as he invariably called them, from out a leathern flask which hung suspended to my waist, and the giving of which generally evoked from the recipient a thoroughly Irish sentiment, or a fragment of song.

Jerry had lighted his pipe, and I had refilled, when he suddenly asked—
"Did ye ever hear tell o' Martin Hannegan's ass, sir?"

I responded in the negative.
"He was a quare sort of a baste. He dhrank whin he was dhry."

"That's a broad hint, Jerry."

"Begorra, I'm as dhry as a cnckoo."

Having ponred him out a "golligue" he held the vessel in his hand whilst he delivered himself of this flourishing sentiment:—

"May yer days be as bright as the bades on this sperrits, an may yer heart be always as strong."

"There's no chance of a fish, Jerry?"

"Divil a wan, yer anner."

"Any chance of a story, Jerry?"

"Troth thin there is, bekase ye've thrated me dhant, and I'll tell ye what happened me av sarvin' mass, in the little Chapel of Ballynacushkeen, over the hill beyant," pointing, as he spoke, in the direction of a mountain known as Honnamondhoull, towering right over us. Having ponred three or four vigorous pulls at his pipe, he removed it from his mouth, and commenced as follows:—

"Well, sir, I was a lump av a gossoon about, thoht it's a long time ago, sure enough—and divil resave the buke I'd read, or sum I'd do, but it's after the rabbits I was, and ketchin' fish, an divartin' meself intirely, whin wan mornin' nigh Christmas, up comes Father Myles Macmanus—may he be sayin' the rosary in beatification this blessed minit, amin." And Jerry reverently removed his hat. "Up he kem to where my poor mother was sittin' foreninst the fire, and says he 'Missis Kinshella' says he, 'why the blazes!' here Jerry coughed violently, 'thin's not his riverence's exact words, sir, but, ye see, he was riz. 'Missis Kinshella,' says he, 'have ye no regard at all, for to be in glory whin ye shovel off this mortal coil?' says he.

"'Oh yer riverence,' says she, 'why wud ye utter thin hard words agin me?' beginnin' for to cry.

"'Bekase mam,' says he, a little softened, 'ye're not doin' yer dhuty.'

"'Oh Father Myles, what is it I done wrong?' says she, roarin' till ye'd think her heart wud splitt.

"'Why don't ye sind that gossoon,' pointing his finger at me, 'to attind me mass?' says he. 'I was bet up entirely a Sunday for some wan to attind last mass, and I was wudout me brequest till it was time for to go to me dinner,' says he, 'an' I'm not over strong,' says he, 'be raisin' av my heart that's wrong.

"'He'd only spile yer mass, yer riverence,' says me poor mother, thyrin' for to get me off. "'Sind him to me on Christmas Eve,' says Father Mac, 'an, I'll larn him how for to do it—for he must attind the midnight mass,' says he.

"So, for to make a long story short, yer anner, he got the soft side o' me poor mother, an' I was sint wud a sore heart over the hills to that little chapel, foreninst ye, on Christmas Eve, for to larn to sarve the midnight mass.

"Well, sir, Father Myles was the broth av a priest. He never thought av nothin' but the souls av the faithful departed, an' av the sinful meanderins av some av his flock; an' in regard o' dhrink he was cruel hard. Av he got the taste av a smell o' sperrits off av a boy, he was at him like a cock to a blackberry. He'd pick an' pick an' pick at him, until he wouldn't leave a fithter on him, an' ye'd do all sorts to get out av his claws.

"I went up to the chapel, and he fairly bothered me wud et sum sperrit-tew tew oh, till I kem away wud an ass's load av Latin in my head, but all rowled up like a plato av strabouth, so that whin I had a 'Dominny' all right, av I was to be sint to Botany for it, I couldn't bowl out the vobiscum.

"Blur an' ages (says I), what'll I do at all at all? I must only thry an' bother him wud the bell.

Jerry paused, threw a sheep's eye at my flask, which I pretended not to perceive, and taking a prolonged pull at his dhudeen, continued—

"Divil sich a night ever kem out of the sky, for snow. It bet all ye ever heard tell av. The flakes was as big as hin's eggs, and there was a wind blowin' that wud tie the strings av yer brogues.

"'Ye not going for to sind the gossoon out sich a hard night?' says me poor father.

"'There's no help for it,' says me mother.

"'He'll be smothered wud the cowld. Be sed be me, and let him stay where he is.'

"'He must sarve midnight mass,' says me mother.

"'There'll be no wan to hear it,' says me father, a little rough.

"'But Father Macmanus must say it,' says me mother. She got the better av him, av course, an' I was sint out to crass that very hill, for we wor livin' below there in the bog.

"That must have been a damp spot, Jerry," I interposed.

"Damp, avic! It's better nor half the year under wather, an' the very snipes has the newralgy. It's only fit for a say gull, or a dispinsary docthor."

A more dreary looking region I never beheld. Even in the bright snmmer sunlight it looked a dismal swamp.

"I had four good mile to put under me," Jerry resumed, "four good mile, as bad as tin, for it was all up hill, an' I, only I knew the short cuts on me road as well as a crow, be me soul an' it's in the bottom av the lake here among the salmin—bad cess to them, why won't they take the illigant flies that yer anner is timpting them wud—I'd be, as shure as there's a bill on a crow.

"It was tough work, yer anner, strugglin' agin wind an' snow, an' I goin, entirely agin me likin, an' not a word av what Father Myles had dhiscoursed to me in the mornin' but was clane bet o' me head. More nor twice I was goin' for to turn back, but somethin' tould me to go on. There was a wake at Phil Dimpy's, an' a dance at a shebeen beyant Gleudalough, but somethin' sed, go on Jerry, yer wanted, an' on I went, wud snow-balls as hard as marvels stickin' to me brogues."

"By Jove, Jerry, if I had been in your place, I'd have left Father Macmanus in the lurch," said I.

"So ye wud, and that's jest yer ignorance," retorted Jerry, in an offended tone. "Av ye hear me out, ye'll see that I was in the right in pursuin' the path, but folly yer own way. Av ye don't like the story, ye can lave it, sir."

A golligue restored mutual confidence, and he resumed—

"Whin I got up to the chapel, there wasn't a stim av light, an' I crept round to the vestry doore, and knocked respectful like, but no answer. I knocked agin; no answer. I riz the latch, and pushed the doore; the last sod was burnin' out, an' there wasn't a handfull o' fire.

"'He hasn't come yet,' says I to myself, 'so I'll humor the fire, and I went for to stir it, whin I felt me heart drop into me brogues, and me hair fly up to the ceilin,' for foreninst me stud Father Myles Macmanus, as white as if he was bein' waked, and lookin' quare an' mournful. He was in his vestmints reddly for his mass.

"I cudn't spake. Me tongue was that dhry in me throat, that ye cud have grated a lump av sugar on it. I commenced for to shake like a dog that's too long in the wather, an' I was that afear that me stomik was say-sick.

"He never sed a word, but kept lookin' at me, quare and mournful.

"I straggled wud a pattrer and avry; it gev me courage, for, sez I, after a little, 'It's a terrible night yer riverence.'

"'Are ye reddly to sarve me mass?' says he, in a voice that mad me shiver, for it was as if it kem out av a nailed coffin.

"'I'm reddly, yer riverence,' says I, 'but there's not a crayture stirrin.' I kem up the booreen, an' there wasn't a thrack."

"'Are ye reddly to sarve me mass?' says he agin, in the same awful voice.

"'Will I light the althar, yer riverence?' says I. He sed nothin' to this, but waved me wud his hand for to go before him. Me knees was rattlin' together, like pays in a mug, but I lurchd before him, out into the dark chapel, and it was as dark as the velvet on yer anner's collar, barrin' one little light, in th' althar, that med the place look like the bottom av the lake. An' now kem the fear on me that I cudn't ansur right, an' that I was av no more use nor that ould ram that's nibblin' over in th' island there; but it's truth I'm tellin' ye, from the minit he commenced, the whole av the risponsis kem to me as if they wor wrote in letters av light on the wall, and I sarved his mass as well as if I'd been in Maynooth Collidge for a quarter.

"Yer not a Catholie, Mither Bowles, and mobbe ye never heard a mass, or was in a chapel nather?"

This was put interogatively.

"I am not a Catholie, Jerry, but I have been in a Catholie church, and have heard mass more than once," I replied.

"I'm glad of it, for ye'll undherstand what I'm goin' to tell ye, sir. At the ind av the mass, when all is over, the priest comes down the step av th' althar, and comminces wud the *Day Profundis* or prayer for the dead. Well, sir, I was reddly wud me risponsis, wbin he turns to me, an' he sez—oh murder, how I shake whin I ponder on thin words—sez he, 'Pray', sez he, 'pray for the soul av a dead man. Pray!' sez he, 'pray as ye hope to be saved. Let yer prayer be as white as the snow that's fallin' from heaven this blessed night.'

"I threw myself on the steps av th' althar, and prayed my best. I was found there the next mornin' by Tim O'Shaughnessy, who kem up to reddly the chapel for first mass.

"What the mischief are ye doin' there, ye young imp?" says he.

"I tould him how I sarved Father Macmanus's midnight mass.

"'Sarved what?' says he.

"'Father Myles Macmanus's midnight mass,' an' I up an' tould him all about it.

"He looked very frightened, and quare an' sez he—

"'Ye hadn't a sap in'?"

"'Sorra a wan, sez I, 'and I wudn't tell a lie in this holy place for the goold av Arabia.'

"'Well,' says he, 'it's awful to think of, for Father Myles Macmanus died yesterday, at four o'clock.'

Jerry Donovan, when he concluded, wiped the perspiration from his brow, and seemed as t ough engaged in prayer, then suddenly resuming his wonted nonchalance, he exclaimed—

"Here's the breeze, yer anner. Take the rod in the heel av yer fist, an' ye'll be into a ten pounder afore long."—Every Saturday.

A DOG DIES OF GRIEF.—The Richmond (Va.) *Whig* adds the following to the numerous dog stories: "A Mrs. Broadus, of this city, left here for Oregon three weeks ago, and she left behind her with her friends a pet dog of most diminutive proportions, that was much attached to her. The dog missed his mistress soon after her departure, and fell into melancholy and decline, refusing to eat, and frequently manifesting his grief at the separation from his mistress by genuine tears that overflowed his eyes and rolled in piteous procession adown his nose. At the mention of the name of his mistress, he would brighten up and wag his tail, only to relapse into his melancholy at her continued absence. On Friday evening last the faithful little creature died, notwithstanding everything that kindness and medical skill could do for him—evidently dying of grief at the separation from his mistress."

Not long since a very nervous lady took passage at the Tip-Top House, White Mountains, to descend by the almost perpendicular railroad. Her fears were apparent to every one, and the following unique dialogue took place between her and the conductor: Lady.—Mr. Conductor, how do you hold these cars when you want to make a stop? Conductor.—Madam, we apply the brake, which you see there. Lady.—Suppose, Mr. Conductor, that brake should give way, what do you do then? Conductor.—Madam, we then apply the double-acting brake, which you see the other end of the cars. Lady.—But, Mr. Conductor, suppose that brake should not be sufficient to check the cars, where will we go then? Conductor.—Madam, I can't decide. That depends entirely upon how you have lived in this world!

It is a grand mistake to accustom young people to sing exclusively "by ear," and to lead them to habits of guessing at intervals in deciphering vocal music. Children very readily imbibe key-relationship and rhythm; in youth is the golden opportunity of learning to read by correct principles. Don't place your singers under the necessity of breaking bad habits as well as of acquiring right ones.—*Root's Song Messenger.*

"I think it is the most beautiful and humane thing in the world," says Pliny, "so to mingle gravity with pleasure that the one may not sink into melancholy and the other rise up in wantonness."

THE BUSBY BUNION.—It is now asserted that the cholera which appeared in the southwest last season was of an entirely new type, and that it has never been seen in any country but this. We are the most inventive people on earth. When we do have a disease we get up a new variety of our own and keep it to ourselves. There is Busby, for instance. He has invented a new bunion which is warranted to foretell rain in any climate and to hurt worse than four bunions of the ordinary kind. Busby has taken out a patent for the invention, and none are good unless they have his trademark stamped on them. In introducing this article to the public we may with confidence assert that no man who wants a bunion which will ache in good solid earnest, which will ache straight ahead for months at a time, can afford to neglect Busby. He makes them of all sizes from that of a door knob up to that of a candle box. The Busby bunion is certain to take the prize at the Centennial Exposition. One bunion placed on the foot of Old Probabilities in Washington would enable him to tell with certainty when it is going to rain Peru.—*Max Adler.*

THE WILL MUST BE TRAINED, NOT BROKEN.—Men often speak of breaking the will of a child; but it seems to me they had better break the neck. The will needs regulation not destruction. I should as soon think of breaking the legs of a horse in training him as a child's will. I would discipline and develop it into harmonious proportions. I never yet heard of a will in itself too strong, more than of an arm too mighty, or a mind to comprehensive in its grasp, too powerful in its hold. The instruction of children should be such as to animate, inspire, strain, but not to hew, cut and carve; for I would always treat a child as a live tree, which was to be helped to grow, never as dry, dead timber to be cut into this or that shape, and to have certain mouldings grooved upon it. A live tree, and not dead timber, is every child.—*Theodore Parker.*

AMERICAN GOODS FOR LADIES.—The *Providence Journal* declares that a printed calico is a handsomer article than an India shawl, and if prints were two dollars a yard no woman would rest until she had a dress of them. It adds that it would be easy to name a hundred woman of social position and fashionable leadership, who by resolving to dress for a year in American fabrics might give an impulse to industry and production that would be felt all over the country. If the pay of Congressmen and President were at the rate of twenty-five years ago, there would be several hundred woman willing to do without India shawls and to wear handsomer and cheaper American goods. The aging of European fashions is the consequence of aging European salaries.

THE Yankee propensity to highly color villainy as well as virtue, ugliness of features as well as awkwardness of manners, was finely illustrated by Wendell Phillips, several years ago, in one of his lectures. A certain "Down-easter," wishing to describe the wickedness of a whole community of his brother down-easters, said they were so thievish that they did not dare to leave their stone walls out o' nights. Another good specimen of the Yankee habit of exaggeration is given by James Russell Lowell. He was riding up a steep hill in Colorado, and on asking the coachman if the hills were as steep on the other side, he was told that they were so awful steep "that chain lightning would not go down them without the breechin' on."

THERE IS NO DEATH.—If it be true that nature abhors a vacuum, it is equally true that the Great Creator abhors death and glories in life. There is really no such thing as death—the term is a misnomer, used to designate the changes which occur in life. Life, eternal life, is created by the laws of Almighty will-power, which are as immutable in their application as is the existence of the Creator Himself. When God made life, He made everything necessary to sustain it, but left it for man's progressive intelligence to discover, convert and utilize.

IN Mendon, Vt., a deeply enamored youth recently received permission to "speak to my father." He did speak. He stated to the old gentleman that as to this world's goods he was incapable of making much of a show. But with a truly commendable presence of mind, he immediately added that he was "chock full of day's work." A young man with sense enough to make such a statement, and to make it in that way, commended himself to the fatherly heart. He succeeded in getting the girl.

THERE are several famous cows in history. The cow of Mrs. O'Leary, for instance; Abby Smith's cow; the cow of Jack in the Beanstalk, and the cow that jumped over the moon. The latest historical cow is an Indiana "crummie," who died from the effects of chewing tobacco. She chewed, not the cud, but "Century," and expired because she didn't find the ten cent piece so prominently advertised by the company.—*Inter-Ocean.*

WHAT a world of gossip would be prevented if it were only remembered that a person who tells you of the faults of others, intends to tell others of your faults.

A voter, praising a favorite candidate at a late Irish election, said: "He is as fine a fellow as ever lifted a hat to a lady or a boot to a blackguard."

[Written for the Pacific Rural Press.]

Something Wrong About Hats.

The race of drunkards is not extinct, notwithstanding the success of the modern crusade. Bacchus still has his votaries among us, and one of these passed our office recently, on his return from a pilgrimage to the shrine of his jolly God. In his efforts to convince the passers-by that he was not in the least intoxicated, he lost his hat; and our San Francisco wind being no respecter of hats, the owner was soon compelled to commence a chase for which he was hardly qualified at the time. He was surprised at the conduct of his hat, and disgusted with the condition of the gutters of this city; and while chasing the runaway from point to point, he was heard to remark that this practice of making hats round was a great mistake, as it gave them a decided tendency to roll; and threw out the suggestion that they ought to be made square. Hereupon an unsympathizing youth told the owner that it was just because he had something "square" in his hat that he had lost it. He halted in his profitless course, and, with the dignity that only a foolish drunk-en man can assume, he asked the irreverent youth what he meant by the remark that he had something "square" in his hat?

"Yer had a brick in it," said the candid young man.

STRENGTH OF CHARACTER consists of two things—power of will, and power of self-restraint. It requires two things, therefore, for its existence—strong feeling and strong command over them. Now we very often mistake strong feeling for character. A man who bears all before him, before whose frown domestics tremble, and whose bursts of fury make the children of the household quake, because he has his own way in all things, we call him a strong man. The truth is, he is a weak man; it is his passions that are strong; he that is mastered by them is weak. You must measure the strength of the man by the power of those that subdue him. And hence composure is often the highest result of strength. Did you ever see a man receive a flagrant injury and then reply calmly? This is a man spiritually strong. Or did you ever see a man in anguish stand, as if carved in rock, mastering himself? Or one bearing a hopeless, daily trial, remain silent and never tell the world what cankered his home peace? That is strength. He who, with strong passions, remains chaste; he who keenly sensitive, with manly power of indignation in him, can be provoked and yet sustain himself and forgive, these are the strong men, the spiritual heroes.

THE DIFFICULTIES OF PROSPECTIVE MATRIMONY.—It is said that Sir Walter Campbell, who was lately in a mercantile firm in New York, wished to marry an American young lady, of good position, in the Empire State. Upon his applying to the young lady's father, the parent stated that he always referred all those questions to his wife. The mother, in her turn, stated that she must refer it to the Duke of Argyll. The Duke pleaded that, considering his connection with royalty, he must consult his eldest son. The Marquis could do nothing without the Queen's consent. Her Majesty felt that the issue must be referred to the Duke of Saxe-Cobourg-Gotha, as head of the family. The Duke rejoined that, since the recent changes in Germany, he looked upon the Emperor William as his sovereign, and must bow to his advice. The Emperor said he could do nothing without Prince Bismarck's opinion; and Prince Bismarck declared he had no opinion at all, one way or the other; and so the question—to marry or not to marry—was brought to a dead lock.

AMERICA'S LUCKY DAY.—Somebody has found out that Friday is the lucky day of America, long as it has been regarded as being the one of ill omen. It is said that on that day Christopher Columbus sailed on his voyage of discovery; ten weeks after he discovered America; Henry VII of England gave John Cabot a commission that led to the discovery of North America; St. Augustine, the oldest town in the United States, was settled; the Mayflower, with the Pilgrims, arrived at Princeton; they signed the august compact, the forerunner of the present Constitution; George Washington was born; Bunker Hill was seized and fortified; the surrender of Cornwallis at Yorktown took place; the motion was made in Congress that the United States were, and of right ought to be, free and independent.

A WEALTHY London firm of four brass founders has just dissolved partnership. Three of them could not sign their names, and had always to put their cross on the firm's documents. "If they could have used their pens well," remarks the *Court Journal*, "they might have become government clerks at fifteen shillings a week."

MOHAMMED once said: "When a man dies, men inquire what he has left behind him; angels inquire what he has sent before him."

If a man has a great idea of himself, it is certain to be the only great idea he will ever have.

Young Folks' Column.

Grizzly From His Cage.

Boys and girls: You whose measure-mark on the door-casing does not reach higher than the back of your house-dog, and you who are so tall that your mother had to stand on tip-toe when she placed the rule on top of your head; and to children of all the intermediate sizes this proclamation comes greeting:

The publishers of your favorite paper, the "RURAL PRESS," who were themselves children a great many years ago, are determined to do all in their power for your entertainment and welfare; and with this view have engaged, or rather engaged, me, a talking Grizzly Bear.

I shall expect, of course, that the girls will poke their parasols at me, to see if I am a real, or only a "bug bear." And the boys will be poking fun at me; and fun is a great deal worse than parasols to poke at a fellow. They will be likely to ask me if I am any relation to the "Bears" who are kept in the Stock Board rooms on California street, when they know well enough that I am not; for the only stock that I or any of my relations have ever handled is the live stock of the new countries.

I am not the only Bear that boys have cracked their jokes upon. The other day a man stood looking at the Bear on the cover of the *Overland Monthly*, which was attractively exhibited in a book-seller's window. Some boys were standing by, and one of them told the man that the picture at which he was gazing was a correct likeness of the editor of that magazine. Now this I am authorized to say is false; for probably three-quarters of the population of San Francisco, men, women and school-teachers, call regularly once a month upon the editor of the *Overland Monthly*, with contributions for that publication; and although nearly all of them are disappointed in regard to reception which their contributions receive, they all declare that there is no personal resemblance whatever between that gentleman and the animal on the cover of the magazine. I don't know how true it is, but it is said that this snarling figure is placed upon the cover of the *Overland* to frighten eastern and foreign critics, who otherwise might take undue liberties with its contents and compare them with the literary productions of their own localities.

It is expected that I will give to the youthful readers of the "PRESS" some account of my past history, with the opinions of myself and friends on the prominent topics of the day; but before doing so I would like to expose some of the "Bug Bears" that are at present going about, seeking whom they may scare. So I guess that the next time you visit my cage I will tell something about these noisy but harmless animals.

Different Kinds of Eyes.

No branch of science has been more thoroughly mastered than optics. The principle of vision must be essentially the same in all eyes, but they differ remarkably, according to the habits of the animal. Birds of lofty flight, as the condor, eagles, vultures and carrion-seeking prowlers of the feathered race, have telescopic visions, and thus they are enabled to look down and discover their unsuspecting victims. As they approach noiselessly from above, the axis of vision changes—shortening, so that they can see distinctly within one foot of the ground as when at an elevation of one mile in the air.

This fact explains the balancing of a fish-hawk on its pinions, a mile above a still pond, watching for fish. When one is selected, down the savage hunter plunges, the focal axis varying always to the square view of his intended prey. As they ascend, the axis is elongated by a curious muscular arrangement, so as to see far off again.

Snails have their keen eyes at the extremities of flexible horns, which they can protrude or draw in at pleasure. By winding the instrument around the edge of a leaf or stalk, they can see how matters stand on the opposite side.

The hammer-headed shark has its wicked looking eyes nearly two feet apart. By an effort they can bend the thin edge of the head, on which the organs are located, so as to examine the two sides of an object the size of a full-sized codfish.

Flies have immovable eyes. They stand out from the head like half of an apple, exceedingly prominent. Instead of smooth hemispheres, they have an immense number of facets, resembling old-fashioned glass watch seals, each one directing the light directly to the optic retina. That explains why they cannot be approached in any direction without seeing what is coming.

Two neighbors had a long and venomous litigation about a small spring, which they both claimed. The judge, wearied out with the case, at last said, "What is the use of making so much fuss about a little water?" "Your honor will see the use of it," replied one of the lawyers, "when I inform you that the parties are both milkmen." The roar of laughter which followed proved that the entire audience saw the point.

THE riches which are most apt to take to themselves wings and fly away are cstriches.

Good Health.

Meat-Tea.

Bogoslowsky has re-examined the theories of Kemmerich in regard to the action of meat-tea, which was supposed by him to depend wholly on the potash salts contained therein. Bogoslowsky says that Kemmerich used too large doses, and the fact that a rabbit can be killed not only by a large amount of beef tea, but by the salts extracted from a similar amount, proves nothing, except that both are (in enormous doses) poisonous. With small doses the difference is a marked one. While, for example, a rabbit was killed by the injection of extract of seven hundred grammes (1 pound and 10½ ounces) of meat reduced to thirty cubic centimetres (about one ounce), the ashes of the same quantity dissolved in thirty cubic centimetres of water produced, in another rabbit only a transient acceleration of the pulse, and the animal completely recovered. Nine days after, it died in an hour and a half after the injection of the corresponding quantity of meat-tea. It was shown that injections of warm water caused an increased rapidity of the pulse, but of meat tea, a much greater and more lasting acceleration. The salts hardly differ from warm water; or in larger doses, the acceleration may last somewhat longer. The author was able to produce these phenomena to a slight degree in his own person, but in another individual did not succeed. After large doses (ten, twenty, thirty grammes), in the latter case the pulse fell, while the thermometer was unchanged. After forty grammes gastric symptoms appeared, and the pulse rose. He concludes, as a practical result, that extract of meat is not so innocent a dietetic substance as is generally supposed, but always calls for care in its administration. (If Leibig's or any similar extract is here referred to, it would seem that the danger is not great unless the quantity used considerably exceeds that mentioned in the directions accompanying the packages.) In endeavoring to determine to what ingredient meat-tea owed the excess of its action over that obtained from the salts, Bogoslowsky found that creatinin, which exists in extract of beef in considerable quantities, when injected either into the jugular vein under the skin or into the stomach, produced a slight acceleration of the heart's beat, but he could not get any fatal effect.

From all which it appears that the stimulant action of ordinary doses of beef-tea is due partly to the warm water, the salts, and the creatinin. It would seem, however, from the observations last quoted, that the presence of creatinin is not sufficient to account for the difference between the action in beef-tea and the salts obtained therefrom. It is only in exceedingly large doses that the salts alone are sufficient to account for a fatal effect by their depressing action upon the heart. Leube has made use of the following method of preparing a solution of meat, to replace the complicated and costly process of Meissner with natural pepsin, which is, besides, objectionable on account of the disagreeable taste and smell of the product. One thousand grammes of lean beef is placed in a porcelain pot, with one thousand cubic centimetres of water and twenty cubic centimetres of pure hydrochloric acid. The mixture is heated in a Papin's digester for ten or fifteen hours, and occasionally stirred. The mass is then rubbed down in a mortar to the consistency of an emulsion, and boiled fifteen or twenty hours more without the cover of the digester being lifted. It is then neutralized with carbonate of soda, evaporated to the consistency of a pap, divided into four portions, and dispensed in pots. The muscular fibres are broken up to a fine detritus, and the greater part of the albumenoid constituents is dissolved. The preparation is well borne and willingly taken, but it is better to use some other easily digestible food therewith, in order not to disgust by too constant use. The taste may be improved by the addition of Liebig's extract. The solutio carnis has been used in acute gastric ulcer and in chronic dyspepsia. It is supposed to give rest to the stomach by sparing it the labor of digestion, the albumenoids being already converted into peptones.—*Boston Medical and Surgical Journal*.

Real and Apparent Waste.

All is not waste that seems such. The time spent in the pastimes of childhood and youth is funded in health and strength, and a whole exchequer of delightful memories, on which the man or woman can draw at will. The time spent in school and for cultivation, is a splendid investment for all after years. The time taken out of business for needful rest and recreation is not wasted, but saved. The danger is not that we shall rust out, but that we shall wear out and break down before our time. The men who live on the jump, in a perpetual rush and whirl, as though an instant were an eternity and their fate depended on its use, are more wasteful of time than those who move to a slower measure and in more leisurely ways. The man who bolts his dinner as though he had a set of mill-stones in his stomach to grind the food he does not stop to chew, may save five minutes in a day; but he may lose hours of sleep and months in debility, and carry a shattered constitution to a premature grave. A distinguished physician has said it would be a wise economy for every business man to spend one year in ten in travel, or comparative leisure;

for what he would lose in that way would be more than added, with interest, to the length of life. Every literary man knows that the half days wasted on the beach or in the woods, in lounging about the shops, or out in the golden sunlight that covers the hills, often prove the most profitable periods of his life. The bankrupt millionaire touched a great truth when he said "what he had was swept away, and what he saved was lost; but what he had given away was saved." The days wisely wasted in recreation and beautiful fellowship and helpful charities, are most grandly kept.—*Herald of Health*.

Health Maxims from the Apocrypha.

The chief thing for life is water, and bread, and clothing, and a house to cover shame.

Better is the poor, being sound and strong of constitution, than a rich man that is afflicted in his body.

Health and good estate of body are above all gold, and a strong body above infinite wealth.

There is no riches above a sound body, and no joy above the joy of the heart.

Death is better than a bitter life or continual sickness.

Give not over thy mind to heaviness, and afflict not thyself in thine own counsel.

The gladness of the heart is the life of man, and the joyfulness of man prolongeth his days.

Envy and wrath shorten the life, and carefulness bringeth age before the time.

A cheerful and good heart will have a care of his meat and diet.

Watching for riches consumeth the flesh, and the care thereof driveth away sleep.

Watching care will not let a man slumber, as a sore disease breaketh sleep.

If thou sit at a bountiful table, be not greedy upon it, and say not, there is much meat on it.

Eat as it becometh a man those things which are set before thee; and devour not, lest thou be hated.

Better is he that laboreth, and aboundeth in all things, than he that boasteth himself, and wanteth bread.

Sound sleep cometh of moderate eating; he riseth early, and his wits are with him; but the pain of watching, and choler, and pangs of the belly are with an unsatiable man.

Whoso is liberal of his meat, men shall speak well of him; and the report of his good house-keeping shall be believed.

Show not thy valiantness in wine; for wine hath destroyed many.

Learn where is wisdom, where is strength, where is understanding; that thou mayest know also where is length of days, and life, where is the light of the eye and peace.

Whosoever is brought upon thee take cheerfully, and be patient when ye are changed to a low estate.

Be not insatiable in any dainty thing, nor too greedy upon meats.

Rise up betimes, and be not the last; but get thee home without delay.

Salt for the Throat.

In these days, says the *Religious Herald*, when diseases of the throat are so universally prevalent, and in so many cases fatal, we feel it our duty to say a word in behalf of a simple, and what has been with us a most effectual, if not a positive, cure of sore throat.

For many years past, indeed we may say during the whole of a life of more than forty years, we have been subject to sore throat, and more particularly to a dry hacking cough, which is not only distressing to ourselves, but to our friends, and those with whom we are brought into business contact.

Last fall we were induced to try what virtue there was in common salt. We commenced by using it three times a day, morning, noon, and night. We dissolved a large tablespoonful of pure table salt in about a half a small tumbler full of cold water. With this we gargled the throat most thoroughly just before meal time. The result has been, that during the entire winter we were not only free from coughs and colds, but the dry hacking cough has entirely disappeared.

We attribute these satisfactory results solely to the use of the salt gargle, and most cordially recommend a trial of it to those who are subject to diseases of the throat.

Many persons who have never tried the salt gargle, have the impression that it is unpleasant. Such is not the case. On the contrary, it is pleasant, and after a few days' use, no person who loves a nice clean mouth and a first-rate sharpener of the appetite, will abandon it.

MEDICAL VALUE OF ASPARAGUS.—A medical correspondent of an English journal says, that the advantages of asparagus are not sufficiently estimated by those who suffer with rheumatism and gout. Slight cases of rheumatism are cured in a few days by feeding on this delicious esculent, and more chronic cases are much relieved, especially if the patient avoids all acids, whether in food or beverage. The Jerusalem artichoke has also a similar effect in relieving rheumatism. The heads may be eaten in the usual way, but tea made from the leaves of the stalk, and drank three or four times a day, is a certain remedy, though not equally agreeable.

GLYCERINE PLASTER.—A stiff plaster can be made with 150 grains starch boiled in one ounce of glycerine. A sedative plaster is made with three grains sulphate of atropia, two grains coratira, eight grains sulphate of morphia, one drop otto of roses, one ounce hard glycerine ointment.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

SATURDAY, APRIL 11, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Improved Threshing Machine; Immigration, 225. Flax; Washing Fruit-Trees and Shrubs; Silk Statistics; Scientific Agricultural Education, 232. Requisites in Farming; Chinese Kites; Ryder's Fruit-Drier; Curran's Harvester Sharpener; Ocean Transport, 233. Patents and Inventions, 236.

ILLUSTRATIONS.—An Improved Threshing Machine, 225. Young Chinese Flying Kites; Fruit Drier; Harvester Sharpener, 233.

CORRESPONDENCE.—The Origin of Man; The Foothills; Cotton and Cotton Seed; Co-operative Stores; Letter from Vacaville; Cultivating the Wild Coffee, 226. From Arizona; Hunting Ducks with Success; Cotton in Arizona, 227. Notes of Travel—Tuolumne County, 232.

STOCK.—A Bad Practice; The New Horse Disease, 227.

POULTRY YARD.—Caponizing Fowls, 227.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Grauges; Meetings; Etc., 228-9.

HOME CIRCLE.—April (Poetry); Jerry Donovan's Midnight Mass; A Dog Dies of Grief; The Busby Bunion; The Will must be Trained, Not Broken; American Goods for Ladies; There is no Death, 230. Something Wrong about Hats; The Difficulties of Prospective Matrimony; America's Lucky Day, 231.

YOUNG FOLKS' COLUMN.—Gizzily from his Cage; Different Kinds of Eyes, 231.

GOOD HEALTH.—Ment-Tea; Real and Apparent Waste; Health Maxims from the Apocrypha; Salt for the Throat; Medical Value of Asparagus; Glycerine Plaster, 231.

USEFUL INFORMATION.—Horse-Hair; Burning Bricks with Non-Explosive Oil; An Iron Filter; Adulterated Pepper; Salt as a Preservative for Wood; Restoration of Oil Paintings; Electrical Art; Wind and Currents; Odors; Sulphuric Acid; The Oxyhydrogen Light, 234. The Highest Mountains; Strange Phenomenon at Gold Hill; Agricultural Machinery; Peat and Petroleum; Improved Potato Digger, 235.

AGRICULTURAL NOTES from various counties in California and Idaho, 236.

MISCELLANEOUS.—The Woolen Mills of the Pacific Coast and What They Did in 1873, 229.

FLAX.—C. M. J., of Los Angeles, writes: Being engaged in the cultivation of flax, I wish to make some inquiries of you in regard to the straw or fiber. Can you tell me whether there is any sale for it in its raw state, at the rope factories or paper mills? Also please inform me in what condition the fiber must be for market, and at what prices it can be sold. [Flax has been manufactured in this city and vicinity into lines and twine, but at present there can not be said to be any market for flax as a fiber for rope or twine making. It is also used by the paper manufacturers, but could not be shipped from Los Angeles with profit. After paying the expense of hauling, baling and freight, the margin for profit would be altogether left-handed. There is so much waste matter all over the State, available for pulp, that the demand for material is slight, and flax to compete with other substances would have to be raised in the immediate neighborhood of a factory. For the present, flax can be cultivated only for the sake of the seed, which is always in good request. There is no doubt that in time we shall have plenty of manufacturers to work up our textile products, such as flax, jute, and perhaps cotton. Already hemp, wool and silk are profitably worked; the others must follow. It is now reported that the Farmers' Jute Manufacturing Association will have their factory in running order before the close of the year. If this is so, it is a step in the right direction. We will manufacture our own textile products sometime, but that time does not yet seem to have come.—Eds. Press.]

LARGE GRAPE VINES.—Capt. Wm. G. Phelps, of Stockton, has raised 2,000 pounds of grapes from a single vine cultivated by him at his residence, two miles from Stockton. The grapes keep in good condition on the vine until the holiday season. A number of large vines could be cultivated to the advantage, comfort and beauty of many of our rural homesteads in California. Will some experienced reader of the RURAL name some of the best varieties for this purpose, with modes of planting, fertilizing, pruning, training, etc.?

Washing Fruit-Trees and Shrubs.

In urging upon the readers of the Press the practice of washing trees, we do not pretend that "we have something new here," as the canvassers for patents declare. On the contrary, it is just because the practice is an old and tried one, and that we have tested it year after year and have had ample proof of its efficacy.

The early spring season is the proper time to do it. Put about a quart of common soft soap in an ordinary water pail, then fill the bucket with water and stir thoroughly. This of course makes a very strong suds, but it will not injure your smallest trees any more than a little soap and water will hurt your boys; the results in both cases are identical.

In applying this wash a whitewash brush is the best implement. Go through your orchard or garden and give every tree and shrub, large and small, a good washing. If the buds have commenced swelling do not wash over those parts of the branches, as the strong soap-suds would be injurious to them. Begin as high up among the branches as the buds will admit, or if your trees are large, as high as you can reach, and follow down to the base of the trunk. Apply the liquid freely, rubbing the brush up and down the wood, so that the wash will penetrate every crevice. Be particular about this, for it is in these crevices, and even under the scales of the bark, that the tree vermin in their different stages of existence are concealed, and the destruction of these is one of the principal objects in washing the trees.

But this is by no means the only great benefit which the tree derives from washing. Trees that have been treated in this manner will not become bark-bound when young, nor scaly when old. The bark on the growing trees will be smooth to the touch, and be clean and glossy; and even when old tree-trunks have become scaly, this treatment will be far more beneficial than scraping.

We have thus far spoken only of the benefits to the tree above ground; but the wash being applied liberally to the large limbs and trunk of the tree, it runs down to the main roots. Following these out in their ramifications, the minute root fibers are reached by the strong liquid which carries with it death to animal and nourishment to vegetable life.

Should the orchards of any of the readers of the Press be visited by the caterpillars that appear about blossoming time in the orchards of the East, and strip them of their foliage, they will find in the simple article recommended above, a most effective exterminator.

At the approach of night these worms gather together in a few nests, sometimes only one in a tree. They do not leave these camps until the sun is well up. If the owner will visit his orchard early in the morning, he will find myriads of them massed and knotted together, surrounded by a flimsy web. Now is the time to take them; for if they are allowed to remain until the warming rays of the sun reach them, they will at once commence their march towards the extremities of the branches. But the early orchardist, as well as the early bird, "catches the worm." Let him fasten a swab to the end of a long pole, and take his pail of soap-suds, and as he finds these nests give each one a good, thorough "sopping;" and he may rest assured that those devastating armies will "never march more." The career of these worms is limited to a very brief period, and two or three successive visits like that described above will suffice for the season.

SAN FRANCISCO EMPLOYMENT OFFICE.—We would call special attention to the advertisement of the above named office, which will be found on the last page of the present issue. This office, first established in 1855, on Kearny street, opposite the Plaza, by Geo. W. Chapin, was sold to Chas. H. Eaton in 1863, to J. L. Crossett in 1868, to Messrs. Vale & Co. in 1870, and has now passed once more into the management of Mr. Crossett, whose long experience in the business enables him to most fully meet the wants of the public in providing a first-class and reliable employment office.

POTATO FLOUR.—The tubers, after being washed and peeled, are rasped by a revolving grater, and the pulp washed on a hair sieve to free it from feculous matter. When a sufficient quantity has passed through the sieves, the starch particles are allowed to subside, and the water is drawn out. Fresh water is let in, and the whole stirred up and again allowed to subside; this process is repeated till the starch is pure. It can be dried in perforated boxes, or placed on porous bricks to absorb the moisture, or dried by heat or the air.

OREGON reports state that the farmers of Walla Walla county are taking advantage of the present weather, as might be expected, and are putting in their spring crops with all possible dispatch. The indications seem to be that the coming wheat crop will not be as large as that of last season. Volunteer crops will most probably prove a failure.

WOOL, grain and bullion will make a remarkably heavy showing in the exports of San Diego this year.

LARGE VAT.—S. Cole, of Gilroy, is constructing a cheese vat with a capacity of 640 gallons.

Silk Statistics.

Those of our readers who have given up hopes of the silk industry, will find encouragement in the following, from the *American Manufacturer*:

Thirty years ago there was no home market for the silk produced here. Now there are, as shown by the census, more than 150 factories using raw silk in their manufactured goods; of these 50 are located in Boston, 50 in New York, 30 in Philadelphia, 15 in Patterson, N. J., one in Kansas, one in California, and others (but no numbers are given) in Schenectady, Troy, Yonkers, and Oneida, New York; and in Mansfield, Hatfield, and Manchester, in the New England States. In the two or three years that have elapsed since these statistics were gathered for the census report, it is probable that others have gone into operation, and that not less than 200 such factories, probably, are consuming raw silk at the present time in the country. We find this statement in the *Philadelphia Telegraph*, which adds: At one of these factories in Patterson, N. J., the weight of silk used per day is about 100 pounds. This is equal to 30,000 pounds per annum, if the same amount be used through the 300 working days of the year. Another at Canton, Massachusetts, consumes about 1,000 pounds of raw silk per year, at an average cost of eight dollars and a half per pound in New York. A communication from the Chief of the Bureau of Statistics, dated March 13th, 1873, states that the importation of raw silk during the fiscal year ending June 30th, 1872, was 1,063,809 pounds. This quantity divided amongst the 140 factories of the country in 1870 will give 7,592 pounds as the average consumption for each factory; and the 200 factories now in existence will have used 1,418,400 pounds during the past year, representing \$12,056,400 that have gone out of the country for raw silk.

This estimate agrees well with the statement of the *Manufacturer's Review*, which says: The consumption of raw silk in this country, which is all imported from abroad, is estimated at over \$12,000,000 in gold for the past year (1872); while the products of the mills for silk goods manufactured in America will reach nearly \$30,000,000. The *Journal of the Franklin Institute* says of silk manufacture: The statistics of this industry in the United States indicate a most surprising and gratifying increase. Ten years ago it was in its infancy and purely an experiment; now it has attained to vast proportions, and bids fair to become one of the most prominent manufactures of the country. The value of the silk goods produced is estimated at \$30,000,000 to \$40,000,000.

Here, then, is the opportunity for our State. An industry that in ten years has advanced from infancy to its present vast proportions must continue to increase year by year, and send more and more of our gold abroad for raw silk. Pennsylvania was a silk-growing State 30 years ago, and produced silk of the best quality and of the finest and strongest fiber, superior to European silk. Of this there is testimony from M. Homergue, who wrote to Mr. Duponceau, in 1830, "The American cocoons produce one-third more silk and of fairer quality than those of Europe;" and from the Census Report of 1860, in which we read that "the uniform testimony of those employed in the factories, some of whom had followed the business for 20 or 25 years in England, was that they never saw finer or as fine silk as the American. It was said to make a stronger thread than foreign silk, and by many manufacturers was altogether preferred."

Scientific Agricultural Education.

Last fall Senator Boutwell made an earnest and sensible speech on this most important topic, at an agricultural fair at Worcester, Massachusetts, which we regretted at the time, not being able to publish in full. We make the following extracts, characteristic in their pith and vigor:

I turn for a moment to a topic familiar to us all—scientific agricultural education. There is a struggle between intellect and money. In Europe, the struggle for centuries has been between money and mere numbers. For the most part, wealth has gained the mastery. Wealth gives position. Position is power. Intellect, too, especially in this country, gives position, and intellectual position is a greater power. Mere numbers will not give the body of American farmers either permanent power or position. They should be intellectual men, and their calling should be intellectual. Any calling that is followed by intellectual men, is at once clothed with dignity, respectability and power. Ignorance is our common enemy. Farm labor, as labor merely, is not attractive. But to intellectual men, the field of examination, of experiment, of investigation, of test, is as large and inviting as that occupied by Agassiz and his associates. The extent to which we shall apply science to practical agriculture, is the measure of the earth's practical capacity to support human beings. The depopulation and depopulation of the countries east and south of the Mediterranean may be due to ignorance of an immutable law. If at the close of one harvest the land is less fertile than it was at the close of the preceding harvest, and so on, the end will be depopulation and waste; but if at the end of one harvest the land is more fertile than it was at the end of the preceding harvest, and so on, the results are wealth, prosperity, numbers, power.

Notes of Travel—Tuolumne County.

EDITORS RURAL PRESS:—Continuing our journey from Knight's Ferry through the banner wheat producing county of the State, we first arrive at

Oak Dale,

A quiet and pleasantly located little village, situated on the Stanislaus river, and on the line of the Stockton and Copperopolis railroad. It derives its name from the evergreen oaks which cluster thickly around, and add much to the beauty of the locality. This portion of the county is surrounded with most excellent sheep ranges and highly cultivated farms. The principal farmers here are C. R. Callender, M. Ryan and J. Fogarty. All are in excellent spirits over the abundant harvest promise. The Oak Dale, a ride of 12 miles, brings you to

Modesto.

On the banks of the Tuolumne. This city is making rapid strides in its progress. But a few years ago the spot where the people of Modesto now find shelter beneath the roofs of elegant dwellings, was an open prairie; now it can boast of a population of nearly 3,000, which supports two "live newspapers." The court house is a fine edifice, exhibiting much taste, and erected at a large cost. Its church spires are the first objects which greet the eyes of the traveler, as he approaches the city, and their number indicate that this is indeed a moral and religious people, where morals are upward as well as onward. Its business men are social, genial, and ever ambitious to advance the general interests of the place. On looking around Modesto, one is struck with the vast expanse of land which stretches out for miles in every direction, and which at this season of the year is clothed with variegated verdure and luxuriant crops, indicative of an exceedingly productive soil. Modesto is finely located for a country seat, being situated in the center of the grain growing region of the county. Last year Stanislaus carried off the palm in grain growing—being the banner county of the State in that important industry; and present prospects indicate that it will continue to hold its own for at least another year. The number of acres now under cultivation is much greater than it was last year. The farmers around Modesto are an intelligent, prosperous class of men, whose thrift insures success. Your correspondent had the pleasure of spending a pleasant evening with Mr. C. C. Lather, an intelligent correspondent of the RURAL PRESS, and a Lecturer in the Grange. He is evidently the right man in the right place, and it is a somewhat remarkable coincidence that his two brothers have also been thought worthy and able to fill like positions in the Mississippi States. Among others who take a lead in agricultural matters here, I would mention S. Garlinghouse, J. Ripperdam, G. W. Owen, Gillis & Co., J. H. Carpenter, R. J. McKimmon, Amanda Byrnm, J. D. Reyburn, J. G. Elmore, A. H. Elmore, Dexter & Davis, Jas. McNaughton, J. F. Reinhart, D. H. Grubb, A. J. Coffey, W. T. Evans, B. P. Hagiu, J. J. McEwen, R. E. Bangs, N. V. Davidson, J. S. Philips, J. P. Vincent, Benj Sanders, Hughes & Keyes, F. P. Stiles, Jacob Long, Dr. Tynan, A. C. Maze, F. H. Ross, Geo. Shannon, J. R. Briggs, T. Turner, R. McHenry, L. O. Brewster, Mrs. E. Fagan, M. J. McGovern, J. E. Laughlin, J. C. Brown, F. Spinker, Judge H. Davis, D. Harp and W. Chance.

Proceeding onward from Modesto to Waterford—a short drive—we find everything there, also, in the same prosperous condition; crops looking splendidly, farmers rejoicing and Granges flourishing. Thence across the Tuolumne, ten or fifteen miles from Modesto, brings us to

Turlock,

A prosperous town on the line of the railroad, containing a population of about 1,000 persons. This town is of very recent date, but is fast increasing in numbers and wealth. Its whole surrounding country is under cultivation; and, ere many years, Turlock will become an extensive shipping point. Its business men are very energetic and enterprising, and its farmers provident and industrious. Among them we may name the following: J. W. Mitchell, E. McCabe, H. Ritter, J. Fox, J. Warner, E. D. Giddings, E. V. Cogswell, M. Joyce, Mr. Fulkreth and Mr. Kerregan. They have under cultivation many thousands of acres of the finest land in the great San Joaquin Basin. Nearly all the farmers in this county are subscribers to the RURAL PRESS—not only those interested directly in the cultivation of the soil—but stock dealers, fruit producers, and horticulturists as well. They speak in the highest terms of commendation of the paper; and claim that, outside of its valuable articles on farming matters, it takes the front rank as a family paper, by reason of its high moral tone and instructive reading. C. M. D.

TO MAKE HARD PLASTER CASTS.—To a thin milk of lime or lime-water add ten or fifteen drops of liquid silicate of soda for every pint of fluid used; this is then thickened with plaster to a thick cream. Plaster thus prepared will set in five minutes or thereabouts, according to the thickness of the cream. If too much silicate is used, the soda will effervesce on the surface, and spoil the sharpness of the impression.—*Boston Journal of Chemistry.*

LARGE quantities of guano have been recently discovered in Australia.

Requisites in Farming.

There is a prevalent notion that farming is a comparatively simple matter and that it may be successfully attempted by men who are now confessedly incompetent in other directions. To be a lawyer or doctor or engineer, it is admitted, one needs to have passed through a course of training in his future duties, and, to be successful in either profession, should have practiced upon some other cases or bodies or tunnels before he turns his attention to your own. But on the farm, it is urged, how different! Now what we have to say on this subject is not so much for farmers, who certainly do not need to be told the requirements of their position, as for our city friends.

So you are tired of business, worn out, run down, too much confined, and so on, and think you would like to try your hand, just for a couple of years or so, at farming? You have been in the habit of getting off for a week each year, in the grape season, to Blank's vineyard. Blank not only grows grapes, but also raises stock and farms generally. He does not appear to have a very hard time of it either—nothing to do but ride about the place, entertain company, hunt, and occasionally give orders. You hardly expect to have everything go on quite as smoothly for some little time. Blank settled on his ranch twenty years ago, and it has taken most of that time to get the multitudinous wheels all running quietly in their respective grooves. You always found the horses good, the grapes delicious, the air bracing and everything quite Utopian at Blank's, and though you do not think of emulating him in the size and condition of your place, you will get up a snug little farm which won't look so badly, after all, even in comparison, and from which you can clear a comfortable balance annually. Ah, here is the point. You expect to make money by farming, do you? Well, that is what most people farm for. It would be easier, though, if you only wished to farm for pleasure, in the regular amateur style. You could then make a respectable showing in wheat, by applying more money in fertilizers than the crop comes to, and you could shut up your porkers and keep them alive by putting in corn at the rate of 30 pounds to one of lean bacon. But, unfortunately, this will not answer for you; you wish to be a real farmer, and make money. You, of course, have studied it all out long ago, but just to refresh your memory, let us see what you have before you.

The future Utopia has been found and purchased. It is partially "improved" and has been worked, but is still not exactly perfection. Neighborly neighbors have given friendly suggestions as to what crops to make the main reliance, when to prepare to put them in, what new implements and fixtures are needed, etc. But the nearest counselor is a mile and a half from your house, and you can not go to him twenty times a day with questions. You do not like to hire a superintendent for such a very small farm, and your hands do not know much more than you about what is to be done in any given case. It takes half an hour to get a reply from your neighbor, and a week from the *RURAL*, and your promising farming books seem expressly calculated for the latitude and longitude of Connecticut. You never imagined there were so many questions to be answered, so many knotty points to be settled, so many problems to be solved. And this is farming.

Now, to sum up: You have a taste for farming—or you never would have tried it; a fair share of business talent, which will be of great service in disposing of your crops—if you succeed in raising and harvesting any; plenty of common sense—which will get you over any difficulties but agricultural ones; and a fundamental idea of things—which will assist your judgment in distinguishing a potato-patch from a meadow, or a pear tree from most anything, except other fruit trees. No one expects that you will order out the threshing machine for strictly domestic use, when the children are too uproarious, or get in your beets with a mower. But have you experience? Have you a theoretical and applicable knowledge of fertilizers, their properties and their use; do you appreciate the advantages of summer-fallowing or irrigation—in short, do you possess the science of agriculture? Do you see through machinery; are you handy with tools; are you an efficient workman—have you the art of farming? Have you energy, neatness, system, thriftiness? Have you pluck, endurance, patience? If so, there is hope for you as a farmer; but don't call the avocation a simple one; don't think you can fail in business and farm with profit, or break down in teaching the young idea to shoot, and encourage a blade of wheat to sprout, with satisfactory results.

PETROLEUM FOR LOCOMOTIVES.—The Great Western Railway Company, of Canada, has been experimenting in the employment of petroleum for its locomotives. On a trial trip recently made, Mr. Harrison, local superintendent at London, drove the engine himself, and expressed himself satisfied with the results obtained.

WOOL.—Messrs. Severance & Peet, of the Merino Ranch, N. 1's Station, Alameda county, recently sheared 20 two-year old Spanish merinos, with lambs by their side, and the average yield was 19½ pounds of wool. Heaviest fleece 22 pounds. One ram lamb 11½ months growth sheared 20 pounds.

Chinese Kites.

Among the many peculiar customs of this very peculiar people, the Chinese, is that of kite-flying, a pastime to which all are equally devoted, whether young or old. There is a certain pleasure in the practice, as our young friends will assure us, and as we well remember ourselves, though it would be difficult indeed to analyze it. Lazy people enjoy kite-flying, just as they do deep water fishing—not that the young Chinese pictured by the artist can be stigmatized, for they appear to be earnestly intent upon and active in their sport.

Chinese kites are marvellous examples of the wild flights which imagination sometime takes. Those brought to this country are of all sizes, shapes and colors, representing the most exaggerated animals and goblins which can be conjured up, birds, reptiles, dragons, etc., and



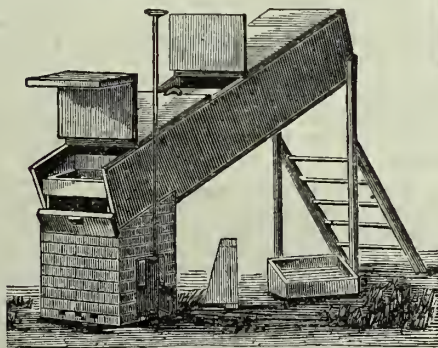
YOUNG CHINESE FLYING KITES.

sometimes being totally indescribable. The light and pliant bamboo slips, of which the framework of these kites is made, permit the constructor to attempt successfully almost any object his fancy suggests, while the filmy tissue-paper, which is especially adapted to receiving paint, is embellished by bright colored decorations of the most brilliant description. We often pity the poor boys of the Eastern States, who have to be content with the standard six-sided and star-shaped kites, and in whose most excited dream of boyish wealth no vision of such wonderful kites has a place.

But to see the national recreation in its fullest development, one needs to visit the Chinese at home in their own land. Those who are among us are too deeply engaged in their work to devote much attention to play, and there are comparatively few children here. We are told by travellers that to form a fair idea of the importance of kite flying, as an "institution" in China, we should enlarge our previous conceptions about tenfold.

Ryder's Fruit Drier.

The need of a cheap and efficient fruit drier for farm use appears to be met in the invention



FRUIT DRIER.

of B. L. Ryder, of Loudon, Pa. The apparatus is very simple in construction, is said to work well, and does not appear difficult to attend and regulate.

From the furnace portion of the apparatus, which may be of brick, iron or other suitable material, the heated air passes up through an inclined chamber, in which are placed the trays of fruit. Fresh fruit is inserted at the lower end, next the furnace, and the tray containing it is thrust upward on the addition of each new one, till it reaches the top. The trays, shown separately in the cut, are themselves inclined, at the same angle as the chamber, and thus the screens are kept level.

The object in making the drying chamber inclined, instead of vertical, as in other drying machines, is to prevent steaming and furnish only dry air to the fruit. The chamber of the smallest size machine (\$35) is two feet wide by twelve feet long, but may be extended by any

rough carpenter to any length found desirable, if more room is desired. The doors, open in the illustration, are closed during the process of drying, and opened to introduce trays of fresh fruit, to note the progress of the operation, and to remove the finished product.

These driers are made of different sizes, from the No. 1, with twelve by two feet chamber, costing \$35, up to any required dimensions, according to the requirements of the user. They are made and sold by the Keeler, Hine & Thomas Co., 306 California street, San Francisco, of whom further information may be obtained. The drying machine will also be found in use among our fruit raisers, who speak well of its performances.

Curran's Harvester Sharpener.

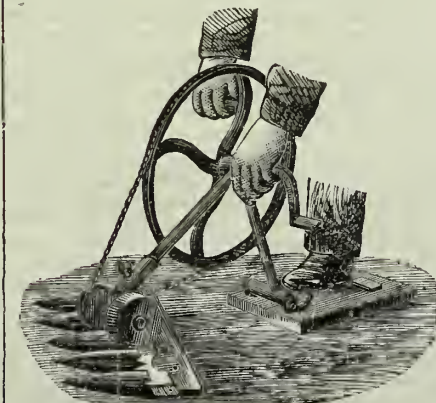
This implement, for which a patent was issued to James H. Curran, of Rochester, New



York, February 17th, 1873, has been used successfully for two seasons in the Eastern States. The inventor claims that there is no method in existence that can grind the harvester knives as perfectly as this machine. There is no doubt but that much labor for the team, and vexation to the operator, would be obviated by the general adoption of some such method as this for keeping the knives sharp. The great difficulty, as our readers will attest, has been to sharpen the points by either file or grindstone, and to avoid the great trouble of sharpening machines are used in imperfect condition, and often condemned for no other reason than the real one—a dull knife.

The solid emery wheels used in this sharpener are recognized to be superior to ordinary grindstones, and are rapidly displacing them in most cases where rapid grinding is required. The smallness of the wheel allows the apparatus to be adjusted to any kind of a knife and for any shape.

Although it is called a "harvester sharpener" it can be used for all purposes suited to common grindstones. The power needed to actu-



HARVESTER SHARPENER.

ate is small, and the regulation quite easy.

The merits of the contrivance will be readily understood. It grinds a cutter without removing it, or unhitching it; it is said to be able to put an ordinarily dull cutter in order in ten minutes, where an hour and the attention of two persons would be required by any other process; it will grind a true bevel of any desired inclination, evidently a great advantage, as very few persons are able to grind any sort of a tool with accuracy—least of all the knife of a harvester.

The machines are made both right and left handed. The emery wheels are four inches in diameter, beveled, and may be replaced when worn out. The sharpeners are manufactured and for sale by McLaren, Pilcher & Bell, 605 Clay street, San Francisco, and may be examined at their office.

A TANNERY is being constructed at Watsonville.

TRAVEL to the Yosemite valley has already commenced.

Ocean Transport.

A friend, F. M. Shaw, who has just returned from Europe, gives us the following thoughts on the subject of transportation and the Bessemer anti-sea-sickness system of constructing ocean steamers:

Cheap transportation, we think it is safe to say, is the most weighty question to-day among the farmers of the United States, and a vital one to all classes on this coast. There was organized in England in 1873, an association called the Costless Public Work's Association. Without entirely endorsing all the positions taken by its founders, we yet can see some good that may arise from their labors. The carefully compiled statistics gathered by them proved that passengers could be carried at one-half cent per mile with profit—this by rail. In the course of our business it was in our way to make estimates and get competent shippers to make estimates upon the cost of transmitting passengers to California. The lowest estimate, which of course left a small margin for profit, was £15 or \$75 for adult passengers, around, via Straits of Magellan, from Europe to California. The simple fact that passengers can now be taken from England to California for £17 or \$85 in gold, via steamer and Isthmus, at a profit, the most of that distance by side-wheel steamers that consume at least 40 tons of coal per day—shows that there is a margin for reduction still, as propellers are fast being substituted that consume only 17 tons per day.

Now, as soon as fares and freights are reduced, so that first-class passengers can come at the price that the lowest come at present, which should be done at once, a different class of emigrants will flock to our shores by thousands. The terrible ordeal which a well-raised person has to pass through now, in crowded steerage and on cattle trains, deters the better class of farmers and artisans, especially the females, who we want most, from hazarding the trip.

An invention has lately been perfected, and patented in England, that, when brought into general use, will enable emigrants to come to our shores, safer, cheaper and quicker than it is at present possible for them to do. Naval constructors and engineers are sanguine of a great reduction in time and cost of propulsion by the improved mode, and some large ship-building firms are negotiating for the right to use this improvement in steam-ships. It has long been thought that there should be some method of propelling vessels cheaper and quicker than has been done to any practical use or extent; and the necessities of the present age demand that this thought find demonstration.

Water transit has always been held in the popular estimate to be cheaper than land; notwithstanding which, parallel lines of railways pass along the great channels of inland water traffic, simply on account of the demand for greater speed. This demand for economy of time in the transit of passengers and freight has called out an amount of inventive talent unparalleled in any former age. The combination by which this increased speed and carrying capacity for steam vessels is obtained, involves no unknown principle, but simply a new arrangement of known laws of propulsion and buoyancy, and is extremely simple, notwithstanding the great results it accomplishes. By this new mode of construction it is said to be quite practicable to obtain a speed of twenty-miles per hour, as the average velocity, for long voyages; and this without increased cost of propulsion.

One of the most important objects that we had in view when we started for Europe last May, from California, was this perfection of plans for the bringing of a better class of people to our shores. We have crossed the ocean by several different lines, and have put many years' labor into this investigation—to find out ways to make travel by sea more pleasant and speedy, for we always suffered greatly from sea sickness, whenever business compelled the adoption of that mode of transit—and the great dread which people have of crossing the waters would be modified if the speed could be increased, and at the same time some plan be devised of avoiding sea sickness. This last we are confident can be achieved by arranging the saloons on oscillating principles, and by so modelling the vessel itself, that there should be less lateral motion, or "roll;" and by publishing a few simple rules for the guidance of those intending to travel by ocean. It is not claimed that an entire and absolute avoidance of sea sickness is obtainable by this mode of construction; but by doing away with the rolling motion, and by previous dietary and general sanitary precautions, the tendency to sea sickness can be so far obviated as to render it not one-hundredth part as objectionable to travel by ocean as at present.

DETECTING ADULTERATION OF WINE.—Into a small quantity of the wine to be tested, says *Le Temps*, drop a piece of potash. If no deposit is formed, and the wine assumes a greenish tint, it has not been artificially colored. If, however, a violet deposit appears, elder or mulberries have been used. If the deposit be red, the adulteration is sugar beet; if violet-red, campeachy wood; if violet-blue, privet berries; if clear blue, coloring matter obtained from sun flower.

ON FILE.—Several communications from correspondents are crowded out of this week's issue which will appear in our next.

USEFUL INFORMATION.

Horse-Hair.

So greatly has the change of fashion increased the demand for horse-hair during the last ten years, that, although the supply has greatly augmented, it has been so far beneath the requirements that the price has risen fully fifty per cent. We depend on South America chiefly for this article. For it is sacrificed the tails and manes, if not the lives of an enormous number of those wild horses which roam in such countless hordes over the far-stretching plains, which are the great physical feature of that continent. We obtain also no small quantity from Russia, the product of many horses which abound in the Tartar-inhabited steppes of Siberia. To this is to be added what is gathered from our horses at home, which, though superior in quality, bulks very small when compared with what comes from abroad. During the last few years our imports of horse-hair have amounted to about 720 tons. A large amount, no doubt, yet nothing as compared with the quantity of manufactured hair sold, much of it, too, at a far lower price than the raw horse-hair had cost. To understand these apparent anomalies we must be acquainted with the process by which curled hair is produced.

Before horse-hair is fit to be used for bedding, it has to go through several processes, each of which requires the application of considerable skill. In the mass it is lumpy, dirty and of diverse qualities; it has, therefore, to be sorted according to strength and color, and afterward passed through a mill, which opens up the lumps, and frees it from dirt and extraneous matter. It is then prepared for the hands of the curler, who, by the aid of a machine adapted to the purpose, twists it into a hard-knotted rope. It has afterward to be thoroughly soaked or boiled in water, and baked in a hot oven, which, when opened out, gives it that durable curl which bestows on it the lasting softness and pleasant spring that render it so excellent a stuffing material.

To eke out the supply of horse-hair, which, from the very nature of the case, must always be limited, the hairy tufts at the ends of the tails of oxen are much used. The hair from these, though never so good as the best which the horse yields, is quite equal to the ordinary qualities; and that it is of great utility is evident from the fact that, although an immense quantity is collected at home, an average of 180 tons is annually imported.—*Cabinet-maker.*

Burning Bricks with Non-Explosive Oil.

A subscriber states that the saving in burning by this method is not less than 33 per cent. One hundred dollars worth of oil will burn 60,000 hard burnt, beautiful facing bricks, and 40,000 hard burnt ordinary bricks, giving a brick equally burnt from top to bottom. End, side and heart of the whole pile all present the same hard burnt, beautiful looking bricks. There is no smoke, neither is there any soot or dirt arising from the fuel during the process of burning by this method; but one continual heat from the beginning until the bricks are sufficiently burnt. After the "water smoke" has passed off the bricks, the heat is regularly increased to any pitch which may be required; and in 48 or 50 hours, a regular, equalized, high pitch of heat is obtained, sufficient to melt cast or wrought iron if required, with little or no loss in burning, producing a hard unshaken brick, imperishable in water or atmosphere, and proof against change of temperature.

But in order to make a brick of this character, it must be borne in mind that all does not depend on the manner in which the bricks are burnt, whether with wood, coal, gas or oil. To make a brick proof against the changes of temperature, the first thing to be done, after it is ascertained that the material of which the brick is to be made is of the right quality, is to dig and cast up loose, in the fall of the year, as much stuff as it is intended to make into bricks in the following season, in order that the rain, snow, frost, thaw, and atmospheric air may decompose and mature every particle possible, and prepare it, ready for the tempering machine in the forthcoming spring.

Bricks, whether of clay or clay loam, prepared in this manner and burnt with non-explosive oil, are vastly superior, as to quality, beauty, and durability, to bricks made of immature raw material. There being neither smoke, dust, nor soot entering the kiln during the process of burning, the bricks, when taken from the kiln, have the appearance of newly planed small blocks of wood.

This method of burning bricks and other clay articles is most certainly destined to revolutionize the whole system of burning clay, throughout the whole of the United States.—*Scientific American.*

AN IRON FILTER.—Spongy iron is produced by calcining powdered iron ore with charcoal. Such iron forms a most excellent filter, more powerful, it is said, than even animal charcoal. It is said that even sewage water filtered through a layer of this substance is completely purified, and will remain sweet for almost an indefinite time.

It is said that if one part of sugar is dissolved in three parts of water and digested with one-fourth part of calcic hydrate, the resulting liquid will readily dissolve glue warm, and the solution will remain fluid on cooling, without having lost any of its adhesive properties.

Adulterated Pepper.

We are adverse to giving private information about any kind of adulterations, for the simple reason that such information may be turned to a bad account, while publicity is the best way to suppress this growing evil. The principal adulteration of the present day was first commenced in France and Germany, and accomplished with refuse material from potato flour factories, which are very common in Europe, but not here for the simple reason of the cheapness and abundance of all other kinds of flour. The dried particles of potato skin are pulverized and mixed with ordinary black pepper. The easiest way to distinguish this adulteration is the microscope or magnifying glass. Good pepper consists of black particles mixed with yellowish gray ones, giving a dark gray appearance, while the adulterating powder consists of uniform dark gray particles. The latter also floats longer on water than good pepper, and the color communicated to the water is also different in the two kinds of pepper. The adulterated pepper is also at first sweetish and afterwards burning to the mouth, notwithstanding it has a much weaker taste and odor. Finally, good pepper contains very little starchy matter, while this kind of adulteration is rich in it, as is easily detected by means of a solution of iodine, which colors starch blue. Other adulterations are pulverized beans, peas, and linseed cake; but these are very easily distinguished by the microscope, as well as earthy matters, which besides are easily separated by burning or calcination, when they remain behind. Also white pepper is often considerably adulterated with lime, chalk, soapstone powder, or starch. The purpose of all these adulterations is twofold; first, to increase the quantity directly, and secondly to improve the appearance of an inferior looking article. There are now in France two principal kinds of adulterated pepper, which Boucharde, who investigated this subject thoroughly, calls "*poivre léger*" and "*poivre blanc*." The first is at present mostly adulterated with the potato skins named, the second with chalk, soapstone, starch, etc.—*Manufacturer and Builder.*

SALT AS A PRESERVATIVE FOR WOOD.—We may learn many things from the experience of others; but, unfortunately, we are very much inclined not only to overlook this, but even often to neglect the lessons of our own experience. The experience of many nations who possess an available seashore is, that timber immersed for some time in sea-water, before being sawed in the mill, is better, harder, and much more durable than if immersed in fresh water; and, in Holland, where very active shipbuilding has been going on for centuries, this fact is universally admitted, and its knowledge applied. It is also found that wooden piles driven in the sand of salt marshes last for an unlimited time. External causes of decay, such as dampness, may be made inoperative by the painting of the wood; but dry-rot takes place, irrespective of the presence of paint, and seems to be due more to heat than to dampness. Paint only protects wood from atmospheric causes of decay; but the internal dry-rot can only be prevented by treatment of the wood when seasoning; and among the simple and cheap preventatives, salt appears to be the most available. It appears that, even after the dry-rot in timber has commenced, immersion in salt water effectually checks its progress and preserves the remainder of the wood. In the salt mines of Hungary and Poland, the galleries are supported by wooden pillars, which last unimpaired for ages, in consequence of their having become impregnated with the salt. Pillars of brick and stone, used for the same purpose, crumble away in a short time by the decay of their mortar.—*Car Builder.*

RESTORATION OF OIL PAINTINGS.—The linseed oil used by most artists contains 80 per cent. of linoleine, while the poppy oil contains 75 per cent. of that substance. This linoleine, solidified by exposure to the air, increases in weight 10 per cent., giving a hard transparent mass called by Milder linoleine, which preserves the colors with which it has been used. To the pictures when finished, varnish is ordinarily applied consisting of solutions of resins in turpentine or fatty and drying oils. If the varnish cracks, more is applied to fill up the pores, and several repetitions may have the effect of ruining the picture. The pictures allow moisture to condense upon them, which is evaporated, and in process of time more is condensed, the result finally being a dulling of the picture. Indeed, the author states, that, by wetting a varnished surface with distilled water, and evaporating the water, wetting again, and again drying, a white spot may be readily made. M. Pettenkofer restores the brightness of the picture by exposing it to the vapor of alcohol, which, by condensing on the picture, causes a solution of the film of varnish, and thereby restores to the resin its uniformity. A varnish of balsam of copaiba, which dries more slowly than most others, is also found to act as a preservative. By way of preparation for the alcohol treatment, the pictures are washed first with water to remove dust, etc., and then with turpentine to remove the excess of resin.

DR. SAGE, of Geneva, thinks that sodic acetate is far superior to common salt, and will preserve meat and vegetables in a condition much more akin to the fresh article.

Electrical Art.

Marvelous things have come from the jerking of the leg of Volta's frog. The nerve fibers of that dissected Batrachian have culminated in telegraph wires stretching over the globe; and the mysterious force that thrilled them under the hands of the earliest of electrical experiments is now applied to half a hundred uses, some of them utilitarian to the case, some of them reaching upward to the confines of a man's loftiest philosophical knowledge. The wires that Melloni extended from a thermo-electric pile to the neck of a sleeper still prove the correlation of vital and physical force; the conversion of electricity to heat when retarded by an imperfect conductor, is the foundation of the most recent plan for illuminating streets and buildings.

Indeed, vast as has been the advancement of electrical science, we are hardly more than beyond its nearest and narrowest edges. Some time since, in conversation with one of the most eminent of electrotypers, we were told that more than one obvious drawback from perfection in that much improved art is yet to be removed by new inventions; studying the records of 30 years ago, concerning the relations of the electric fluid, so called, to vegetable life, we found the question of its utility in promoting plant growth not yet fully answered in the negative; taking a broad view of many of the uses to which bleaching powders are put, we find ozone proposed as a substitute, and its chief obstacle, its cost, only to be obviated by cheapening the production of the electric currents, by which ordinary oxygen is converted into its more powerful allotropic form; casting a glance at the science of medicine, we find electricity, long the founding of empires, giving evidence of a value not yet fairly understood, and it may be, as yet, somewhat dangerous to trifle with; and in the more ordinary and common place realm of the mechanics' workshops, and the draughting board of the engineer, electricity takes its place in projects for motive power, for regulating time pieces, for protecting buildings from fire and burglary, for signaling on railways, and for igniting the gas jets in the lamps of streets. And even more than this, telegraphy itself, which has exercised the best inventive intellect of the world for more than twenty years, gains new triumphs in novel means of transmitting two messages simultaneously in opposite directions over the same wire, thus at once doubling the facilities of communication in all existing lines. From this hasty view of electrical art, and not one-half of the whole is here included, we may well venture the prediction that this occult science has yet undiscovered fields of usefulness before it; that new forms of industrial life are to arise from "the death and decay of metals" in the battery jars.—*Newark Manufacturer.*

WIND AND CURRENTS.—The commonly received hypothesis with regard to the trade-winds is now called in question by some of the best scientific minds. This hypothesis, as is well known, assumes that the lower strata of the atmosphere near the equator, being over-heated by the sun's rays, expand and rise into the upper regions of the aerial envelope, their place being taken by a cooler air, which rushes from the higher latitudes of the north and south; and, moreover, that the ascended heated air travels backwards, as an upper current, to the latitudes where the cool air originates, and then, descending again, the aerial circulation is completed. One of the most striking objections now made against this theory is, that the equatorial zone is far from being the hottest part of the tropical and sub-tropical regions. It is shown, as a matter of fact, that in the North Atlantic basin, the great Desert of Sahara has a temperature from twenty to fifty degrees hotter than the equatorial zone; yet, so far from a cool current of air being drawn in from the Atlantic toward this heated region, the northeast trade-winds pass straight onward in their southerly course, without the slightest indraught toward the African coast.

ODORS.—Mr. S. J. Lyman recently lectured in Montreal on "The Diffusion of Odors." The theories regarding odor were illustrated by many facts of great interest—indeed, it is seldom so much of interest is crowded into an hour's lecture. The history of Jane Bruce, who was deaf, dumb and blind, was given. This girl was left with only the sense of smell and touch, yet was able to recognize friends after a long absence by the characteristic odor of each, and even to select her own linen from the laundry. The fact of the Cariboo detecting the hunter's approach at a mile distance by the odor, was also given to illustrate its diffusion. Quite a sensation was produced when a pair of fine skunks were presented to the audience on the platform. These much dreaded animals, which are extremely pretty, were handled by the lecturer without fear, but it was difficult to impress the audience with the idea of their safety in so close proximity. Mr. Lyman proved that the odor from these animals was so diffused that there were only 1-23,232,000th of a drop in each cubic foot of air pervaded by this nauseous perfume.

SEVERAL specimens of barrels of novel construction were recently on exhibition in the St. Louis Exchange. They are double-staved—really a barrel within a barrel—and all joints being broken makes them perfectly water-tight. The cost of them is to be no more than that of an ordinary barrel, and they are intended to carry all kinds of liquids, as well as flour, fruits, etc.

Sulphuric Acid.

Sulphuric acid, or oil of vitriol, is certainly the most important of all chemical products. It is seldom used for domestic purposes, and we presume there are thousands of our readers who never saw an ounce of the concentrated acid in their lives. But this sour, corrosive liquid is of immense value to mankind. In the great industrial world it occupies a position second perhaps to no other substance. If the amount of its manufacture and consumption by any people does not measure the degree of their civilization, it must be regarded as a common pivot around which revolve all the industries pursued by any nation.

It is through the agency of this acid that we have soda, soap, glass, paper, bleaching and dyeing salts, nitric acid, aniline colors, kerosene oil, superphosphates for farmers, and a thousand other agents which our modern civilization demands. Indeed, it is from the reactions to which it gives birth, that the greater part of the chemical products employed in the arts and sciences, the greater part of the medicaments used in the art of healing, result. Only those who are engaged in some pursuit demanding its employment, or those who are specially acquainted with chemical industries, have any correct idea of the colossal scale upon which this acid is manufactured both in this country and in Europe. At one establishment in the city of Brooklyn, N.Y., the stream of concentrated acid which runs from the platinum retorts is nearly three-fourths of an inch in diameter, and this stream is constant, day and night, month after month, and year after year. This is but one of the many immense acid factories scattered over our country.

In Europe it is produced upon a still grander scale, and the united streams of the fiery liquid, which flow from the thousands of retorts in active operation, would aggregate in volume some of the mountain cascades so much admired in Switzerland. It is estimated that the annual production in Europe reaches 800,000 tons. In order to gain some conception of the volume of the liquid, let us imagine that all the acid made in Europe were carried to Central Park and poured into a canal lined with lead. This canal would require to be six and a half feet deep, 34 feet wide, and more than half a mile long. The acid would nearly fill the basin of the beautiful lake over which the boatmen convey passengers in their gay barges, during the summer.

In Europe the acid is manufactured mostly from iron pyrites, and in this country the pyrites are to a considerable extent being substituted for sulphur. The acid made in this city from the mineral is sold at a lower price than that from sulphur. The strength and effectiveness of the acid from the two sources are the same, but the iron sulphide is apt to contain traces of arsenic, which is found in the acid. This does not, however, interfere with its use in the arts. The enormous consumption of the pyrites in Europe in this manufacture fills one with astonishment. It is estimated that more than 600,000 tons are used, a quantity which would require nearly 100,000 railroad cars to convey the mineral from the mines to the acid works. The statements here presented are well calculated to show the great importance of one of our industrial products not well understood by the majority of readers.—*Journal of Chemistry.*

THE OXYHYDROGEN LIGHT.—Dr. John Nicol describes, in the *British Journal of Photography*, a new mode of making lime cylinders as follows: Four parts of precipitated chalk are intimately mixed with one part of ponderous carbonate of magnesia, and the whole made into a stiff paste with mucilage of gum arabic. The mass should be well beaten in a mortar, or in any other way to ensure thorough incorporation, and made a little stiffer than glazier's putty. It then may be rolled on a slightly oiled marble or porcelain slab, or smooth board, till it assumes the form of an ordinary ruler, and then cut into suitable lengths. The holes are easily made with a wire of the proper thickness; and if the wire be "olive ended," like those used for piercing tobacco pipe stems—that is, having a tiny bulb or button at the end to be inserted—it will penetrate straighter and easier. The cylinders thus finished only further require drying, which may readily be done in the kitchen oven; and as they must be thoroughly dry, they may be left there for two or three days.

THE heat of the sun nowhere penetrates the ocean more than six hundred feet. At a depth of from one to two miles the temperature is about four degrees below the freezing point, caused, probably, by the ice water poured into the ocean from the Arctic regions, northern and southern. This, being heavier than the surface water, sinks to the bottom and forms currents ever flowing toward the equator, to take the place of the water which, there heated and rendered lighter, rises to the surface and forms the Gulf and other warm streams. As these flow again toward the Arctic regions, it will be seen that a perpetual circuit is kept up, the Arctic waters continually lessening the heat of the tropical waters, and these, in their turn, giving out their heat as they flow away from the tropics. England is warmer than Greenland only because of the warmth derived from the Gulf Stream.

New discoveries of coal have been made near the headwaters of Copeland creek, Sonoma county.

The Highest Mountains.

All the highest mountains in territory belonging to the United States are west of the Missouri river. Professor Hayden, the Government geologist, gives a list of more than sixty notable mountain peaks. In this list, only two are included in the Atlantic States, and these figure as mere pignies by the side of the great mountains of the Pacific Coast. According to this authority, the highest mountain is not in California, but is really in Alaska. Two mountains in that territory figure as follows:

Mount St. Elias.....	FEET.
Mount Fairweather.....	15,860
Mount Shasta.....	14,780

But these are estimates, rather than the result of exact measurements. St. Elias, if the measurement does not shrink hereafter, is taller than Mount Whitney.

Mount Whitney, California.....	FEET.
Mount Shasta.....	15,000
Mount Tyndall.....	14,442
Mount Tyndall.....	14,386
Mount Dana.....	13,886
Mount Dana.....	13,227
Mount Lyell.....	13,217
Mount Silliman.....	11,623
San Bernardino.....	11,600
Lassen Butte.....	10,577

This is the best assortment of mountains to be found in any State in the Union. There are any number of mountain peaks ranging from 7,000 to 5,000 feet. But these make no figure among the giants. Colorado makes the following showing:

Mount Harvard, Colorado.....	FEET.
Pike's Peak.....	14,270
Irwin's Peak.....	14,216
Gray's Peak.....	14,192
Mount Lincoln.....	14,145
Mount Yale.....	14,124
Long's Peak.....	14,081
Mount of the Holy Cross.....	14,050
Horse Shoe Mountain.....	13,500
Silver Peak's Mountain.....	13,406
Velle's Peak.....	13,650
Mount Audubon.....	13,456
Mount Guyot.....	13,402
Parry's Peak.....	13,223
Mount Flora.....	13,133
Spanish Peaks.....	12,878
Mount Englemann.....	12,000
Mount Wright.....	12,000

In Oregon the following mountains are most prominent:

Mount Hood.....	FEET.
Mount Pitt.....	11,225
Mount Baker.....	11,000
Cascade Range.....	10,719
	9,000

Besides Mount Ranier in Washington Territory, set down as 14,434 feet high, Mount St. Helen's, in the same Territory, although only 9,769 feet high, is put down as a volcano. In fact, there is not an active volcano within the limits of our whole territory, although the number of craters show that the volcanoes were active at no remote period.

The following tables show the most notable passes over the two great ridges of mountains that have yet been found:

Passes over the Rocky Mountains.

32d Parallel, near El Paso.....	FEET.
35th Parallel, near Albuquerque.....	5,714
38th Parallel, (Cochecopa Pass).....	7,472
41st Parallel (Union Pacific Railroad).....	10,000
42d Parallel (South Pass).....	8,241
47th and 48th Parallels (Cadott's Pass).....	7,085
47th and 48th Parallels (Deer Lodge Pass).....	6,044
47th and 48th Parallels (Lewis & Clark's).....	6,200
Flathead Pass (Northern Montana).....	6,323
Kutanie Pass (British America).....	5,459
	6,000

Passes over the Sierra Nevadas.

Tejon Pass.....	FEET.
Walker's Pass.....	5,250
New Pass, to Owen's river.....	5,300
Mono Pass, to Mono Lake.....	3,164
Donner Pass (Central Pacific Railroad).....	10,700
Beckwith's Pass, to Pyramid Lake.....	7,042
Truckee Pass.....	4,500
Madelin Pass.....	7,200
	5,667

Strange Phenomenon at Gold Hill.

About three minutes' walk, in an easterly direction from Main street, Gold Hill, there is to be seen a most wonderful phenomenon. The ground, either from an earthquake or some other cause, has recently split open for at least a quarter of a mile. The crevice thus created, starting at Fort Homestead, crosses the railroad track, and thence pursues a nearly southerly direction down the west side of the cañon, embraced between Fort Homestead and the hill beyond. It then crosses the cañon, and extends for a considerable distance up the west side of the hill last named. The crevice varies in width from one to twenty inches; and, in places, appears to be bottomless. The most interesting locality to visit first is directly east of Postmaster Chubbuck's residence. In going to the locality indicated, it is necessary for the visitor to cross the cañon named above. The crevice, or chasm, throughout its entire length, is as straight as an arrow, and is of recent origin. It was first discovered by our fellow townsman, Fleming, an old prospector. That it is something more than a land-slide is evident, from the fact that it crosses the cañon in a direction nearly at right angles to the same. Our reporter, who visited the scene of the earth opening, lost all traces of the same at the fort. It is possible, however, that it extends northerly as far as the Imperial works. The ground upon which the town of Gold Hill is built, seems to possess the element of instability; and in many cases, the water-pipes have pulled apart, and boiler beds have gone out of position, owing to this circumstance. The question—"Whither are we drifting?" is a pertinent one. Any person possessed of ordinary curiosity, or having a taste for geological investigations, will be richly rewarded by visiting the scene of the phenomenon referred to above.—*Gold Hill News.*

Agricultural Machinery.

Prof. Fawcett, in his able paper on Wealth and Wages in Great Britain, says: Numerous instances may also be given of the extent to which employers are induced to economize labor by the introduction of improved industrial processes when trade is unfavorably affected by any such circumstances as a deficiency of raw material or a scarcity of labor. Thus it is said: "In their gallant struggles in the difficult times following the war in America our manufacturers developed the resources of machinery to a greater extent than had ever been attempted before, and they succeeded in making a considerable reduction in the amount of labor employed." In consequence of the extremely high wages which are prevalent in the United States, Americans are far more interested than Englishmen in applying machinery with the view of saving labor. Machinery is not only far more largely used in agriculture in the United States than it is in England, but many of the improvements which we have introduced into agricultural implements have been obtained from America. I find it stated that in the United States the application of labor-saving machinery to agricultural operations is increasing every year. The number of patents issued for agricultural implements was, in 1847, 43; in 1863, 390; in 1864, 563; in 1866, 1778; and in 1867, 1800. It can scarcely be doubted that even the comparatively small rise which has taken place in the wages of English agricultural laborers since the formation of agricultural unions, has already acted as a stimulus to many farmers to adopt various means of economizing labor, such as the employment of more machinery. If the supply of agricultural labor should be diminished, as seems not improbable, by a large emigration of agricultural laborers, it cannot be doubted that the farmers would be prompted to make still greater efforts to economize labor, and thus the rise in wages, which would naturally result from a diminution in the supply of labor, would be to a considerable extent counteracted.

PEAT AND PETROLEUM.—Costly coal has had the effect of fostering the production of rival fuels and gas-producers. The result of experiment has been to launch various projects for producing peat fuel on the market. Gas is now obtained from petroleum instead of coal. These pregnant facts induce the careful observer to disregard the warnings of the croakers who predict the rapid exhaustion of our coal supply and the consequent decline of English prosperity. A hundred years ago the power of steam—if known to a few students—had not yet been applied to the purposes which have contributed so largely to the advancement of the present century. It is not likely that discovery will come to a full stop at once, or that our descendants will prove less able than ourselves to unravel the hidden secrets of nature.—*Iron.*

IMPROVED POTATO DIGGER.—A scraper removes the portion of the earth which covers the potatoes, leaving a corrugated roller suspended from the beam to act with good effect upon the smooth surface thus formed. A double or V-shaped plow, following immediately after, is thus enabled to elevate the earth in which the potatoes lie embedded, without injury to them, and with comparatively small expenditure of force. The roller also acts as a colter wheel, in respect both to the scraper and the plow, governing the depth to which they penetrate the soil.

WAKELEE'S

Granulated Squirrel Exterminator.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON
For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is scented so that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed,

3v7-3m

OUR SPECIALTY: "BEYOND THE MISSISSIPPI." GO WEST, YOUNG MAN! GO WEST! Gold by the Bushel! Silver by the Ton! Capital required: Nerve and Honest Industry. THE FAR WEST. The Great Treasure Chamber of America. All about the Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in CROFT'S WESTERN WORLD, for \$1.50 a year. With \$10 Premium Chromo, "AMERICAN PROGRESS," free to each subscriber. Two sample WOODS sent for 10 cents. Agents wanted.

GEO. A. CROFT, Pub'r, New York, San Francisco, P.O. Box 343, P.O. Box 376.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-ff

ATTENTION, DAIRYMEN!

RALPH'S PATENT

ONEIDA CHEESE VATS,

TO HOLD FROM

One Hundred to Five Thousand Gallons.

CHEESE HOOPS,

FROM SMALLEST TO LARGEST SIZE.

PRESSED MILK-PANS, PIECE MILK-PANS,

STRAINER PAILS, CREAM PAILS,

MILK PAILS, ETC., ETC., ETC.

The above are made of the best materials and in the best manner. We are making a specialty of DAIRY-MEN'S GOODS, and sell the same at prices that are very low, as compared with the Eastern States. Dairymen will find it to their advantage to call upon us.

GEORGE H. TAY & CO.,

614, 616 and 618 Battery St.,

25v6-3m SAN FRANCISCO.

LONDON

ASSURANCE CORPORATION.



The Oldest and Wealthiest

Fire Insurance Company doing business in America. Risks taken at current rates.

CROSS & CO., General Agents,

feb14-eow-bp

316 California Street, S. F.

HEALD'S BUSINESS COLLEGE
BRYANT & STRATTON
24 POST ST. SAN FRANCISCO
OPEN TO ALL
GOOD INSTRUCTION
SEND FOR CIRCULARS

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD, President Business College, San Francisco.

IMPROVED POULTRY.

Brahmas, Cochins, Leghorns, Hamburgs and Houdans. Bronze Turkeys, Aylesbury and Rouen Ducks. Fowls and Eggs for Sale.

I have without doubt the largest and finest birds of their respective kinds to be found on the coast. For price list and circular send to

C. W. WILSON,

P. O. Box 1874.

14v7-lm

San Francisco, Cal.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 8th, 1874. Write for Catalogue to ELWOOD COOPER, President Board of Directors.

22v6-ly

LANDS & HOMES FOR SALE

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,

542 MARKET STREET,

ap4-3t

N. E. Cor. Montgomery.

STOCK AND GRAIN FARM FOR SALE.

IN SUISUN VALLEY, SOLANO COUNTY, within one mile of a railroad station and one mile and a half of a landing for vessels, comprising 140 acres good grain land; 100 acres now seeded to wheat and looking well, and 40 acres of barley, also very promising. Also, 300 acres of good tule land, excellent pasture and hay land. Has a good house, barn, corals and fences, and full assortment of agricultural implements, etc. Price moderate. Terms easy. Apply to BERRY & CAPP, 418 Montgomery st., Real Estate Agents and House Brokers

14v7-lm

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

FOR SALE.

100 Acres of Good Land,

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-ff

P. H. SUMNER.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islals Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bpf

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

San Francisco Wire Works, 665 Mission

St., S. F. C. H. Gruenhausen & Co., Manufacturers of all kinds of Wire Work for Gardens, Cemeteries, Flower Stands, Baskets, Tree Boxes, Arches, Bordering and Railing.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Grapes and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, at \$5.00 per dozen; White Leghorns, Game Bantams, Orpingtons, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, (first premium at Buffalo, 1873), Silver Spangled Banded Poland, Golden Bearded Poland, Black Poland, White Crests, Brown Leghorns, White Sultans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland,

At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 41 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C O D 6v7-ff

FOR SALE.

ONE HOADLEY STEAM ENGINE, 8x12.

One SEPARATOR, 36-inch cylinder; one SAW FRAME, STRAW STACKER, BELTS, TOOLS, WATER BARRELS, Etc., in fair order. Price, \$1,200, if applied for before May 1st. Apply to

A. R. WOODHAMS,

11v7-6t

Santa Clara, Cal.

AGRICULTURAL NOTES.

CALIFORNIA.

CALAVERAS.

Times, March 29: The farmers are improving every moment of this fine weather. They are in hopes of good prices this fall.

KERN.

Courier, April 4: Having heard it intimated that Mr. Souther's mammoth plow, made to operate in the construction of the Kern Island irrigating canal, was a failure, we recently interviewed him on the subject, and learned that, so far from his regarding it in that light, the trial he has made of it satisfies him it is a perfect success. He has used such plows before—from which this in no way differs, only in so far as it has the advantage of some obvious improvements in construction. He proposes to "propel" it with oxen. These he is now collecting to the extent of 40 yoke, and expects to commence work in about 10 days.

There have been grave complaints for years past of the inferior quality of the potatoes raised in this vicinity. This is not, as is well known, because they cannot be grown here, but through the fact that the seed has been used too long. The "oldest inhabitant" well remembers when the potatoes grown here were the best in the world. Change the seed—obtain a good variety grown in some different climate and soil—and those days of pristine happiness will return.

SHEEP SHEARING in this county commenced last week, and as the operation is an extensive one will not be completed, we presume, and all the wool ready for market before the 1st proximo. But wool from this vicinity has already commenced to find its way to the terminus. Several teams started this week, and probably every available one will be employed in moving this valuable export for months to come.

LAKE.

THE WEATHER.—*Bee*: During the entire week the weather has been remarkably pleasant. The roads, which by the previous rains were rendered somewhat heavy, are at present in excellent condition. The hills and the valleys have assumed that lively and pleasing hue of verdure which betokens spring. The entire county is presenting one of the most pleasing aspects imaginable, and the face of all nature looks gay. In all directions the tokens of thrift and industry appear, and we confidently look for a prosperous season.

MENDOCINO.

WEATHER AND ROADS.—*Dispatch*, April 4: The road from here to Big river (the Heeser road) is passably good, except from here to the timber, and but little work would make that good. The weather was very pleasant for the last week. A warm rain Friday evening. Reports of crops very good; of the stock very bad.

MERCED.

CHEERING.—*Tribune*, April 4: The crop prospect just now is cheering, although during the early portion of the season the continued cold weather proved a detriment to the growing grain. The warm, sunny weather of the past month has had a very beneficial effect, and grain is now looking well. The ground now is thoroughly saturated and the grain is sufficiently advanced to withstand the drying north winds which generally prevail at this time of the year. That an immense crop will be harvested in Merced county the present season is now almost an assured fact.

Star, April 3: The grain fields along the coast are looking beautiful.

NAPA.

CROPS.—*Reporter*, April 4: The wheat and hay crops of Napa valley are looking finely. Farmers who got their crops in early will enjoy the profits of their thrift and management this fall.

Register, April 3: The farmers are plowing in Carson valley.

NEVADA.

AGRICULTURAL.—*Reveille*, April 3d: Plowing has commenced in most of the valleys in this vicinity, and the ranchers are purchasing seed preparatory to putting in crops. The prospects for large crops were never better than at present, and it is to be hoped that the farmers will this year be repaid for the short crops and losses suffered thereby in previous years.

PLACER.

Herald, April 4: Crops in these parts are growing very fast at present, and all bids fair for more than an average harvest. All varieties of fruit trees are now in bloom and the orchards present a most beautiful appearance. Not so attracting, though, as they will be in a few months.

SAN JOAQUIN.

GROWING WEATHER.—*Argus*, April 4: No better weather could be hoped for by farmers than we have had in this valley during the past week, and the improvement in the looks of the growing grain is so great that farmers are more than pleased at the unprecedented prospect.

SANTA BARBARA.

WILD FLOWERS.—*Index*, April 2: The hill-sides north of the town are literally covered with flowers. We have never seen a greater number of wild flowers gathered together, even on the prairies of the west. The hills show great patches of crimson and white from the town, nearly a mile away from them. On drawing nearer, we find these white and crimson patches interspersed with yellow and

violet, the contrast of colors being as agreeable as if arranged by special design. Horses feeding in these fragrant pastures stand up to their fetlocks in filarree, clover, malver and wild flowers.

SACRAMENTO.

THE CROPS.—*Telegraph*, April 4: Owing to the lateness of the season, the crops are not so far advanced as at this time last year, in this vicinity. Still we are convinced that the yield will be much greater than that of last year, for the rain is later, more abundant, and falls at intervals.

SONOMA.

Democrat, April 4: Gardening is the order of the day in Santa Rosa. The abundant supply of water with which we are now blessed will extend the time of blooming flowers, and to that extent will prolong the beauties of spring.

SANTA CRUZ.

THE LATE STORM.—*Sentinel*, April 3: W. A. Montgomery, the well-known stock man, is back from a trip among his herds in Newark valley. He informs us that the late storm was not so severe east of the Diamond range as here, the total fall of snow not exceeding four inches, the greater part of which has already disappeared. So far as he could learn, no damage resulted to stock in any direction.

Enterprise, April 3: To-morrow, some twenty farmers from the mountains will be in town for the purpose of organizing a Grange. Mr. H. Buckels is actively interested in the work of organization. G. W. Henning, of San Jose, editor of the *Granger*, will be present to institute the Grange and install the first officers.

SAN BENITO.

ITEMS.—*Hollister Enterprise*, April 4: A nice shower visited this locality Thursday night. We are now enjoying the finest growing weather imaginable.

Wood has dropped down to \$10 per cord, so we intend to commence making fires again.

The roads leading into town are getting in fine order, and the streets are thronged with teams every day.

TULARE.

TOBACCO AND HOPS.—*Independent*, April 4: Sixty acres of tobacco and forty of hops are being set out on a ranch near Haywood.

TUOLUMNE.

CROPS.—*Independent*, March 28: We learn that the crops all through the country from here to Modesto, look splendid. Business is brisk at that place, and the railroad company have 200 men at work, with scrapers and four-horse wagons, grading the streets.

YOLO.

THE GROWING GRAIN.—*Mail*, April 2: Some of the farmers inform us that the grain is growing so fast that they fear it will be "too much of a good thing." It would be uncharitable to take from some of our farmers all chances of grumbling. It is some time yet till harvest, and there is no telling what checks may be had by north winds or some other calamitous thing in nature to make all things right. There is, at the present time, the brightest prospect for a heavy crop ever known in Yolo county.

IDAHO.

Statesman, March 31: The ranchmen are busy gathering their herds together and driving them to the hills. The Spaniard that ranched the milch cows for the Boiseites last year, is at it again, with about thirty head. Robert Gillespie is the coming horseman this season, already having a nice little band running on the hills.

San Jose Farmers' Club.

The Club met at the usual hour Saturday, April 4, and was called to order by President Casey.

In the matter of the selection of a question for discussion at the next meeting, it was determined to debate the liquor license question with special reference to the Local Option law.

Professor Denton said he would like to know what had been done in this valley by way of cultivating the grape for the purpose of manufacturing raisins. Mr. Herring said the amount of raisins as yet made in this valley was very small; nearly all the best raisin grapes had been shipped to the East, but the industry was increasing rapidly. That many viniculturists were grafting raisin grapes on their old stocks, and in this way as many as three tons had been produced the first year.

The question for the regular debate was the "treatment of animals," with the proposition to organize a society for the prevention of cruelty to animals. Mr. Hobson believed in treating animals properly, not as a question of mercy or morality, but as a matter of economy. He mentioned numerous instances of cruelty, prominent among which is the practice of butchers in keeping animals tied up in stalls without food or water preliminary to slaughtering them.

Mr. Cronyn said that animals are our fellow creatures. He thought if the old doctrine of the transmigration of souls prevailed, it would be a good thing both for the animals and the human race. The Darwinian theory he thought would do something for the cause of respect for, and humanity to animals. There were two phases of the subject, the selfish and the unselfish; the latter was kindness to the animal for the animal's sake. If it was practiced, we would have more kindness and consideration for our fellow human creatures; he thought this could be accomplished by legal means.

The other view was the selfish one; it injured the value of the animal to treat it cruelly. The speaker took occasion to state that all women were kind to animals.

Mr. Herring took issue on this proposition. He said that a woman would drive a horse to death nearly, or would let it stand all day without food or water.

Mr. Hobson said that many women would abuse animals to an extent that a man would be ashamed of.

Mrs. Herring thought that cruelty to animals grew in a great measure from early training. She cited instances where parents allowed their children to abuse their pet cat or dog, and thought if they would take occasion to teach them in childhood, it would prevent their harshness to animals after they were grown.

Mr. Holloway could conceive of no excuse or apology for wanton cruelty to animals. He thought the allowing of immense herds of cattle to accumulate on the plains where they were liable to starvation any dry season, displayed a lack of humanity and statesmanship. He spoke also of the practice of reining horses up for the sake of style. "Look at your preacher or priest driving up to his church, with a team whose heads were reigned up tight, and their tails set up over their backs by the cruel process of nicking, and see him go into the pulpit fresh from his cruelty, and preach about humanity, mercy and the saving of souls."

On motion, it was ordered that the matter of forming a society be postponed until next Saturday, at which time a copy of the law will be procured, and the exact steps to be taken will be more thoroughly understood.

Col. Younger said he was willing to throw in all his ability and influence to sustain the law. He thought that as we made animals subservient to our convenience and necessities, it was not only our duty, but it is to our interest to take proper care of them. It was his experience that more could be accomplished by kindness than by harshness.

Mr. Erskson thought to prevent cruelty we should commence with our children, and teach them a proper respect for animals. He thought also that farmers should not be allowed to keep more stock than they can care properly for.—*Mercury*.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

By Special Dispatch, Dated Washington, D. C., April 7, 1874.

FOR WEEK ENDING MAR. 24, 1874.

CAR FOR SINGLE-TRACK RAILWAYS.—Thos. M. Rankin, Modesto, Cal.

FENDER FOR VESSELS.—John B. Treadwell, S. F., Cal.

SLIDE VALVE.—Charles O. Farciot, S. F., Cal.

"The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue."

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

WEDNESDAY night the last forms of PACIFIC RURAL PRESS are closed. The first forms are printed earlier. Communications should be sent as early as possible.

THE END-SHAKE THRESHER.—The following letter is from Wm. P. Harkey, Esq., Sheriff of Sutter county, referring to the value of the Lanfenberg End-Shake Shoe for threshing machines:

YUMA CITY, CAL., March 25, 1874.

Messrs. Treadwell & Co., San Francisco.—Gentlemen: In regard to the Lanfenberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I used it throughout the season on a Russell Separator, which I had run previously with a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain. I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thresher. Wm. P. HARKEY.

13v7-3m

The names of victories may be erased from our battle flags; but SILVER TIPPED Shoes will never become obsolete. They are a national institution. ap4

SURPRISE VALLEY, CAMP BIDWELL, Sept. 7, 1873.

Messrs. Treadwell & Co.—Gents: I have tried your Combined Etna Machine, and it has proved to be one of the finest working machines that I ever saw. It cuts the grain all clean, and takes it off splendidly. Every one who has seen it work says that it is the best machine they ever saw working. The Etna Machine is no doubt the best machine that was ever brought to this upper country. Yours truly, R. J. McCONNAGAY.

Dr. E. J. FRASER, Homoeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No. 305 Kearny street, northwest corner of Bush. 6v7-3m

"A READER" is informed that the sole manufacturers of the excellent "Blanchard Churn" are Porter Blanchard & Sons, Concord, N. H.

HINTS FOR INVENTORS.

We will send on receipt of stamp for postage, FREE, our 32-page Circulars containing 112 Illustrated Mechanical Movements; a digest of PATENT LAWS; information how to obtain patents, and about the rights and privileges of inventors and patentees; list of Government fees, practical hints, etc., etc. Address DEWEY & CO., Publishers and Patent Agents, San Francisco.



EACH ISSUE CONTAINS

Sixteen well filled pages.
Original and Choice Engravings.
Editorials on Home Industries.
On various kinds of Stock-rearing.
On Horticulture and Gardening.
Correspondence from Farming Districts.
Answers and hints to Correspondents about Local Farming.
Good Health and Useful Information.
Reports from Granges and Farming Clubs.
Mechanical and Scientific progress.
Agricultural Notes from all quarters.
Domestic Produce Markets.
Home Circle.
Domestic Economy.
Mechanical Hints and Domestic Receipts.
Home and Farm Matters.
Affording, in all, more of real instructive and profitable matter for general readers than any other weekly on this side of the Continent.

DEWEY & CO.,

Publishers, No. 338 Montgomery street, S. F.

DEWEY & CO.,

American and Foreign

Patent Agents.

No. 338 Montgomery St.

SAN FRANCISCO.

Patents Obtained Promptly.
Caveats Filed Expeditiously.
Patent Reissues Taken Out.
Patents Secured in Foreign Lands.
Assignments Made and Recorded in Legal Form.
Copies of Patents and Assignments Procured.
Examinations of Patents made here and at Washington.
Examinations made of Assignments Recorded in Washington.
Examinations Ordered and Reported by TELEGRAPH.
Interferences Prosecuted.
Opinions Rendered regarding the Validity of Patents and Assignments.
Rejected Cases taken up and Patents Obtained.
Every Legitimate Branch of Patent Agency Business promptly and thoroughly conducted.
SEND FOR CIRCULAR.

The Mining & Scientific Press

Started in 1860, is one of the oldest weekly journals now published in San Francisco. It has been conducted by its present proprietors for ten years, during which period it has been repeatedly enlarged and constantly improved. The active and steadfast efforts of its publishers have gained for its conduct an amount of practical experience greater than any other publishers have accumulated on this coast, of a weekly journal.

The sum paid by us for the best editorial talent obtainable for our special class journal; for engravings, for interesting news and correspondence, and for printing a large-sized, handsome sheet, is unequalled by that of any other American weekly west of the Mississippi. As a PRACTICAL MINING JOURNAL it has no rival on this Continent.

It is the only MECHANICAL, and the only SCIENTIFIC journal of the Pacific States.

Every Miner, Assayer, Millman, and Metallurgist in the United States should take it.

Every Pacific Coast Mechanic, Engineer, Inventor, Manufacturer, Professional Man, and Progressive and Industrial Student should patronize its columns of fresh and valuable information.

Every Mining Engineer, Superintendent, Metallurgist, Mine Owner and Mine Worker in the world should profit by its illustrations and descriptions of New Machinery, Processes, Discoveries and Record of Mining Events.

Every intelligent thinker in the land, in high or humble situation, who would avoid literary trash for genuine information, should SUBSCRIBE AT ONCE.

DEWEY & CO.,

No. 338 Montgomery street, S. F.

FOR SALE OR EXCHANGE.

For San Francisco, Oakland or Alameda property—200 acres in Napa Valley, adjoining Yountville, enclosed and cross-fenced with substantial board fence; small Vineyard and Orchard of selected Vines and Fruit; a large amount of Live and Red Oak Timber; accessible at all seasons, on two sides; 130 acres within a mile and a half of Vallejo; well watered by running stream and living springs; desirable place for many purposes. A Cottage in South Vallejo near the railroad terminus and steamboat landing; has fine view of San Pablo Bay; it is provided with outbuildings, barn, well, cistern and city water; the lots are covered with Shrubs, Vines, Fruit and Shade Trees. A span of mares (Morgan and Patchen), good steppers; drive single or double; perfectly gentle. A Concord built buggy—lifting seats and top, pole and shafts. A new 34-inch thrimble skel Wagon, patent brass bearings, hanging brake; Clapp & Bro., makers, Michican. Harness, Saddles, etc. The above mentioned, as well as that not included, will be sold or disposed of in part or as a whole, as may be required or desired. Apply or address, at South Vallejo, ap11-4t-12p G. C. PEARSON.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, April 8, 1874.

While fresh Produce has been, as a rule, dull of sale, a much better feeling has been manifested in the Cereals. In several directions we note a decided improvement; and, though prices have been fairly remunerative all along, the change is a welcome one. So much was promised us last fall in the way of high prices for everything this spring, and so encouraging was the steady rise of Grain during the first months after harvest, that the disappointment was great when the break came. We then had a season of what miners call bed-rock times, enlivened only by spasmodic activity in special articles, as illustrated by the sudden rise in Barley. Why the course of the general market should have been what it was, is not easy to determine. Our local market has been swung by outside influences, which we here were not always able to detect. As our Produce is exported so largely, prices here are fixed by the range in the general markets of the world, and in spite of all the figurings as to deficiencies in particular crops, the mysterious laws of trade have worked in a manner quite unexpected to our prophets.

Barley.

Barley is quite active at present. Shipments East are again being made regularly, and are expected to continue. The Eastern States are drawing supplies of Barley, not only from California, but from Hungary and Scandinavia as well. The total importations into the United States for the month ending March 14th, were 455,203 bushels. With reference to the present and future condition of the Barley and Malt interest the *Gazette* says: We are assured on the best authority that the 1st of April, 1874, will find a larger stock of Barley on hand than did the 1st of April, 1873. As there are yet two good months for maturing, it is to be hoped the trade will recover the check it has received from the high prices that have ruled the last five months. The brewing business at this time is not in the most prosperous condition; but this is not attributable alone to high-priced Barley.

Beans.

A considerable weakening in prices is noted. Rates are still much higher than the average quotations. Following is the latest report from the New York market: Receipts of Beans are running large. Medium are in light demand and favor the buyer, some receivers are asking \$2.00 for lots in store, but that rate is too extreme to be quoted. Marrow have had a fair export demand and have ruled firm; some bolders are very firm in their views and are asking prices which practically exclude their stock from the market. White kidney are dull and nominal. There is very little call for pea beans and they are heavy, especially grades below prime. Red kidney are firm but unchanged.

Broom Corn.

We have no further information concerning Broom Corn. Prices are shuply nominal, and no business is being done. Considerable stocks will have to be held over, as owners are evidently unwilling to make any concessions.

Dairy Produce.

Choice fresh Butter is now selling at Firkin prices and, if anything, the Firkin has the best of it, as much is needed for shipment. The best Point Reyes can be had at 28c to-day. There is no Pickled Roll in market. Cheese has also again fallen considerably, and prime samples of California make are selling at 16½c per lb.

Eggs.

Eggs are in very full supply and prices are low, without any further reduction since our last.

Flour.

Superfine has been sold as low as \$4.50 and Extra \$5.50 at wholesale. Our jobbing quotations are, of course, higher. The best jobbing rates to be obtained to-day are \$6.12½, which is at all events an improvement upon last week's prices. The range at present is unusually large, probably because there is little demand for Superfine for shipping purposes.

Wheat.

Millers are giving \$2.00 for very choice samples. A slight advance is reported in Liverpool, and the local market has materially strengthened.

Wool.

There is more activity than usual at present here, while California Wool in the Boston market has been comparatively unsought.

Hops.

Hops are quiet, both in this and Eastern markets. In contradiction to the unfavorable criticism on California Hops made by a New York trade circular, and reprinted by us last week, we take the following from the special Hop circular of Emmet Wells, also published at New York: Choice California Hops are scarce, and command the highest figures. The last of the renowned Willow Grove (Bates) growth was closed out this week; there is nothing remaining now of California growth that will bring over 40c cash.

Potatoes.

Yesterday choice Humboldt's again touched \$2 cental, but have since declined 10c. Potatoes are still very high, with no prospect of an immediate reduction. No Sweet Potatoe in first hands, though a few are exhibited, as curiosities, by the retailers.

Seeds.

Prices remain unchanged. Business is fairly active, and will not fall off for some time to come.

DOMESTIC PRODUCE.

WEDNESDAY M., April 8, 1874.

Beans em 1 wh. d. 4½ @ 4½	Chile Walnuts 12 @ 12½
do, butter, do. 2 @ 6	Pecan nuts 16 @ 18
do, large, do. 2 @ 7	Hickory do. 9 @ 10
do, small, do. 2 @ 7	Brazil do. 15 @ 16
do, pink, do. 2½ @ 2½	Locusts 7 @ 8
do, pea, do. 5 @ 5½	Almond shell 10 @ 12½
do, Lima, do. 7 @ 8	do, soft, do. 22 @ 25
	Filberts 18 @ 20

BROOM CORN.	POTATOES.
Per ton, 100 lbs. @ 25	Sweet, new, 100 lbs. @ 25
DAILY PRODUCE.	New Cheese Cove @ 25
Butter, Cal. choice 25 @ 28	do Pigeon P. 175 @ 180
do, good, do. 24 @ 24	do Humboldt, 185 @ 190
do, inferior, 20 @ 25	do Petaluma, 175 @ 180
do, thin, 23 @ 25	do 22, do. 145 @ 150
do, pickled, 1 @ 1	do Salinas, 175 @ 180
Cheese, Cal. new 13 @ 16½	do Bodega, 175 @ 182½
do, Eastern 14 @ 17	

EGGS.	POULTRY & GAME.
Eggs, Cal. fresh 24 @ 25	Live Turkeys 14 @ 16
do, Oregon, 22 @ 22½	Hens, per doz. 65 @ 70
do, Eastern, 20 @ 21	Roosters, 10 @ 12
do, Ducks, 20 @ 30	
FEED.	
Barley, per ton 18 @ 20	Large, 50 @ 55
Middling, 27 @ 30	Small, 40 @ 45
Hay, per ton 15 @ 19	Sprig Chickens, 7 @ 8
Straw, 9 @ 10	Broilers, 4 @ 5
do bale, 1 @ 1.25	Ducks, tame, doz 50 @ 55
On cake meal, 32 @ 35	Geese, per doz. 175 @ 225
Corn Meal, 26 @ 27	Hare, per doz. 2 @ 3
FLOUR, SUPERFINE.	Snipe, Enc. doz 22 @ 25
Alviso Mills, 62½ @ 62½	Quail, per doz. 1 @ 1.25
California, 62½ @ 62½	Mallard Ducks, 1 @ 1.25
City Mills, 62½ @ 62½	do small, 1 @ 1.25
Golden Gate, 62½ @ 62½	do white, 1 @ 1.25
Golden Age, 62½ @ 62½	Dove, per dozen 50 @ 75
National Mills, 62½ @ 62½	Prairie Chickens 50 @ 60
Santa Clara Mills, 62½ @ 62½	Grouse, 40 @ 60
Genesee Mills, 62½ @ 62½	Rabbits, 15 @ 20
Oregon, 62½ @ 62½	do 3, 10 @ 12
Valley, 62½ @ 62½	do 4, 12 @ 15
Venue, Oakland, 62½ @ 62½	Cal. Hame, 12½ @ 13½
Stockton City, 62½ @ 62½	do Whittakers, 15 @ 15
Lambard, Sac., 62½ @ 62½	do Duffield, ch 14 @ 14½

FRESH MEAT.	SEEDS.
Beef, fr quality, 10 @ 12½	Alfalfa, 18 @ 20
do, second do. 7 @ 8	Canary, 5 @ 6
do, third do. 5 @ 6	Flaxseed, 5 @ 6
Veal, 8½ @ 10	Ky. Blue Grass, 40 @ 50
Mutton, 7½ @ 8	Sweet V. Grass, 10 @ 12
Lamb, 7 @ 8	Mustard, white, 2 @ 3
Pork, undressed, 6 @ 8½	do, Brown, 3 @ 4
do, dressed, 8 @ 8½	Italian Rye, 25 @ 30
	Perennial do. 30 @ 35
GRAIN, ETC.	Timothy, 15 @ 16
Wheat, Cal. et. cl. 180 @ 190	do 2, 10 @ 12
do, shipping, 185 @ 195	Orchard do. 30 @ 35
do, milling, 190 @ 200	Red Top do. 30 @ 40
Barley, 190 @ 200	Hungarian do. 12½ @ 15
do, Brewing, 190 @ 200	Lawn do. 50 @ 60
Oats, good to choice 160 @ 170	do White, 60 @ 75
do common 155 @ 160	do 2, 60 @ 75
Corn, White, 170 @ 180	do 3, 60 @ 75
do, Yellow, 170 @ 180	do 4, 60 @ 75
Buckwheat, 30 @ 35	do 5, 60 @ 75
Rye, 175 @ 180	do 6, 60 @ 75

HOOPS.	MISCELLANEOUS.
California, 1873, 37½ @ 37½	Beeswax, per lb. 27½ @ 27½
Eastern, 1873, 37½ @ 37½	Honey choice, 17 @ 25
do, new, 37½ @ 37½	do ex. choice, 17 @ 25
	do Los Angeles, 20½ @ 27½
MISCELLANEOUS.	do choice Nribb 15 @ 20
Beeswax, per lb. 27½ @ 27½	do Dark, 8 @ 10
Honey choice, 17 @ 25	do Strained, 8 @ 12½
do ex. choice, 17 @ 25	Pulu, 8 @ 8½
do Los Angeles, 20½ @ 27½	Onions, 8 @ 8½
do choice Nribb 15 @ 20	TOBACCO.
do Dark, 8 @ 10	Cal. Walnuts 13 @ 14
do Strained, 8 @ 12½	Peanuts per lb. 7 @ 8
Pulu, 8 @ 8½	
Onions, 8 @ 8½	

FRUITS AND VEGETABLES.	WEDNESDAY M., April 8, 1874.
The wholesale Fruit market is still rather bare. The Semi-tropical Fruits are in much better supply than Apples, Peas, etc. Vegetables are much more plenty, and are selling at lower prices in nearly every case. Dried Fruits are steady. Latest New York advices were: Market has been quiet for all kinds. Apples are held with confidence, but there are few transactions. Our stock of prime peeled Peaches is about exhausted. Unpeeled are firm but unchanged. Blackberries are scarce; stock is held above quotations. There is a moderate inquiry for cherries. Plums of prime quality are very scarce; some inferior lots are offered for which buyers cannot easily be found. Other kinds unchanged.	

FRUIT MARKET.	DRIED FRUIT.
Tahiti Or. 100 @ 4.00	Apples, per lb. 6½ @ 8½
Loria, do. 100 @ 4.00	Apricots, 8 @ 10
Cal. do. 120 @ 4.00	Peaches, 8 @ 10
Limes, M. 12 @ 15.00	Plums, 8 @ 10
Cal. Lemons, 100 @ 2.50 @ 3.00	Pitted, do 15 @ 18
Messina do. 6 @ 7	do Extra, 15 @ 18
do per box, 100 @ 10.00	Black Figs, 5 @ 10
Bananas, 100 @ 2.00 @ 3.00	White, do 10 @ 15
Pineapples, 100 @ 10.00	Prunes, 6 @ 8
Apples, eatg, bx. 1.50 @ 2.50	do German, 12½ @ 15
do Common, 50 @ 1.50	VEGETABLES.
Onions, 8 @ 8½	Asparagus, 4 @ 5
Blackberries, 10 @ 12	Cabbage, 100 @ 2.50
Strawberries, 10 @ 12	Carrots, 100 @ 1.00 @ 1.25
Gooseberries, 10 @ 12	Cauliflower, doz. 50 @ 15
Raspberries, 10 @ 12	Plum, doz. 50 @ 15
Currents, 10 @ 12	Garlic, 10 @ 12
Apricots, 10 @ 12	Green Peas, 8 @ 10
Peaches, 10 @ 12	Green Corn, 8 @ 10
Pears, Eating, 3.00 @ 3.50	Sum'r Squash, 10 @ 12
do Cooking, 75 @ 100	Marrotat Squash, 10 @ 12
do Bartlett, 75 @ 100	String Beans, 37½ @ 50
Crab Apple, 10 @ 12	Lima Beans, 10 @ 12
Wax Apple, 100 @ 100	Paraspin, 12½ @ 15
Castelo's, 100 @ 100	Shell Beans, 10 @ 12
Pomegranates, 10 @ 12	Peppers, 10 @ 12
Figs, 10 @ 12	Okra, Green, 25 @ 40
Grapes, 10 @ 12	Okra, 25 @ 40
do Muscat, 10 @ 12	Cucumbers, doz. 25 @ 30
do Malaga, 10 @ 12	Tomatoes, per box. 25 @ 30
do Sweet W., 10 @ 12	Egg Plant, 10 @ 12
do Mission, 10 @ 12	Rubiaz, 10 @ 12
do Rose of Peru 10 @ 12	do Morocco, 10 @ 12
do Tokay, 10 @ 12	
do Lettuce, 12½ @ 20	

LUMBER MARKET.	WEDNESDAY M., April 8, 1874.
We quote the following: Cargo prices for Oregon Pine are \$16.18 for rough and \$26.25 for dressed; Lathest \$3.325. Sugar Pine is quiet at \$5.45; Cedar, \$12.50, \$32.50 and \$22.50 for the three qualities.	

CARGO PRICES OF PUGET SOUND PINE.	RETAIL PRICE.
Rough, M. 25 @ 25	Fencing and Stepping, M 37 50
Rough refuse, M. 16 @ 16	Fencing, 2d quality, M 30 00
Rough clear, M. 32 @ 32	Fencing, 1st quality, 1c
Rough clear refuse, M. 22 @ 22	Flooring and Step, M 30 00
Ruetic, M. 25 @ 25	Flooring, narrow, M. 32 50
Rustic, refuse, M. 24 @ 24	Flooring, 2d quality, M. 32 50
Rough, M. 24 @ 24	Laths, M. 35 00
Surfaced refuse, M. 22 @ 22	Furring, 1st quality, 1c
Flooring, M. 30 @ 30	do common, 25 @ 30
Flooring, refuse, M. 20 @ 20	Rough, M. 25 00
Beated flooring, M. 22 @ 22	Rough Pickets, M. 18 00
Beated floor, refine, M. 22 @ 22	Rough Pickets, p'd, M. 20 00
Half-inch Siding, M. 22 @ 22	Fancy Pickets, M. 30 00
Half-inch siding, ref. M. 16 @ 16	Siding, M. 27 50
Half-inch Surfaced, M. 25 @ 25	Siding, M. 27 50
Half-inch Battens, M. 22 @ 22	Surfaced, M. 35 00
Pickets, rough, M. 14 @ 14	do do refuse, M. 27 50
Pickets, rough, p'd, 16 @ 16	Half-inch surfaced, M. 40 00
Pickets, fancy, p'd, 25 @ 25	Rustic, M. 42 50
Shingles, M. 30 @ 30	Battens, 1st quality, 1c
	Shingles, M. 10

GENERAL MERCHANDISE.

WEDNESDAY M., April 8, 1874.

Bage are stronger; a sale of 125 bales standard English Burlaps has been effected at 13½c. There has been no decisive change in Coffee, and the market has been very steady under the high pressure now put on. Fib are in better request. The break in Sugar has at last come, and prices have been put down from 1½c to 2c all around.

BAGS.	PAINTS.
Eng. stand, Wb 12 @ 13½	Gas Light Oil, 1 @ 34
Cal. Machine, 12 @ 13½	Whiting, 1 @ 11½
Gilroy, 12 @ 13½	Putty, 1 @ 2
do 22, do W 12½ @ 13½	Chalk, 1 @ 2½
do 22, do W 12½ @ 13½	White Lead, 1 @ 2½
do 22, do W 12½ @ 13½	Pat White, 1 @ 2½
do 22, do W 12½ @ 13½	Ochre, 1 @ 2
do 22, do W 12½ @ 13½	Venetian Red, 1 @ 2
do 22, do W 12½ @ 13½	Red Lead, 1 @ 2
do 22, do W 12½ @ 13½	Litharge, 1 @ 11
do 22, do W 12½ @ 13½	Eng. Vermilion, 1 @ 21

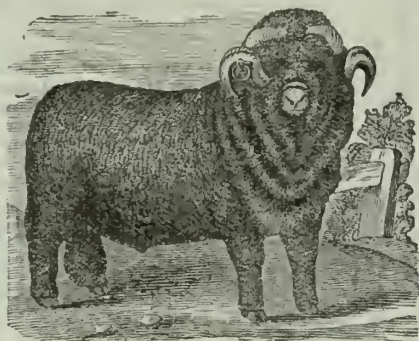
Flour Sacks 1/2	12 1/2 @ 14	Vanetian Red...	3 1/2 @ 5
do 1/4	8 1/2 @ 9	Red Lead.....	8 @ 11
Stand. Gunnies..	20 @ 22	Litharge.....	10 @ 11
" Wool Sacks..	— @ 65	Eng. Vermillion	1 00 @ 1 25
" Barley do...	— @ 15		
Hessian 15-in. gds	— @ 11	RICE.	
do 60	— @ 11 1/2	China No. 1, 3 1/2	6 1/4 @ 6 1/2
Burlap yard	— @ 10 1/2	do 2, do	5 1/4 @ 5 1/2

Stock Notices.



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.
Address **N. GILMORE,**
cow El Dorado, El Dorado County, Cal.

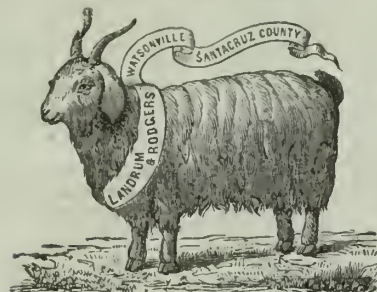


Pure Blooded French Merino Rams and Ewes,

For sale by **ROBERT BLACOW**, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

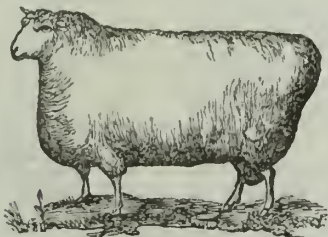
Also a few well-bred young Bulls of the Durham blood. 12v5-3m



We respectfully invite the attention of wool growers to our fine stock of Cotswold Sheep and Angora Goats. We have 200 head of Pure Breed Angoras to select from; we have some of the finest Goats in America; we guarantee everything we sell to be as represented; our prices are as low as any in America for the same grade of stock. Call and see, or address,

LANDRUM & RODGERS,
13v7-cow-1f Watsonville, Cal.

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND CRAIN.

Office—405 Front street, S. F. 14v7-3m

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull,
"DANDY JIM,"

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. B.—Several of his calves for sale at reasonable figures. Any cow sent to Oakland will receive the best care, and calves insured. 4v7-3m

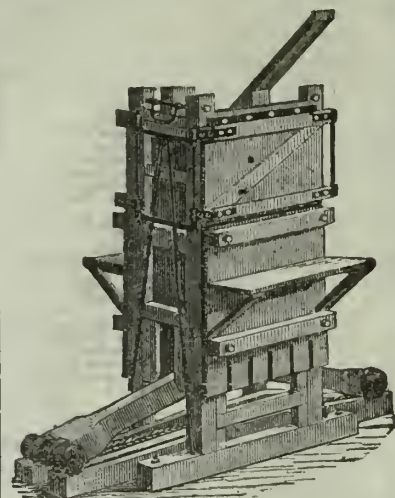
"THE EAGLE HAY PRESS."

THE KIMBALL MANUFACTURING COMPANY,

OWNERS OF THE PATENT AND SOLE MANUFACTURERS ON THE PACIFIC COAST,

COR. FOURTH AND BRYANT STS.,

SAN FRANCISCO, CAL.



Several years were devoted by the patentee to the perfection of this powerful press.

Its unprecedented sale at the East induced the Kimball Manufacturing Company to introduce them in California and the Pacific States.

During the past season a number of important improvements have been made, in order to gain all the power desired in condensing the weight and size of the baler. The wood and iron of the frame have been increased and strengthened, and it is now the most perfect and powerful press in use.

It Possesses Other Advantages:

Being cheap, simple to manage, with no intricate machinery to get out of gear, thus losing time waiting for a new piece.

All who have used these presses pronounce them superior to anything used heretofore.

The power applied by means of two levers increases in ratio to the resistance; and as the levers approach a perpendicular position, the power can be exactly estimated.

Three men, with one horse, can bale from ten to fifteen tons per day; each bale weighing from 300 to 350 lbs., using less rope than any other press.

When a bale is pressed and fastened, the follower runs down of its own weight and the baler can be taken out on either side.

On account of its great power, it is well adapted to pressing hicks, rags, cotton or moss.

The particular attention of wool growers is called to our improved Wool Press, constructed on the same principle, which was tested at the State Agricultural Hall, Sacramento, April 18th, 1871, and stood the test of a bale of wool weighing 550 pounds. Reference, Major Robert Beck.

These presses are manufactured in San Francisco by the Kimball Car and Carriage Manufacturing Co., who have a stock constantly on hand. Prices \$250.00 for Hay Presses; \$350.00 for Wool Presses. Weight of Hay Press, 2,500 lbs.; Wool Press, 3,500 lbs. Can be shipped in pieces or set up. 13v7-2am-3m

Patent, First Premium Windmills & Horse Powers,

W. I. TUSTIN, Patentee.

Pioneer and Largest Manufacturer of Machinery (in this line) on the Pacific Coast.

FACTORY, Corner Market and Beale Streets, SAN FRANCISCO.

Send for Circular and Price List.



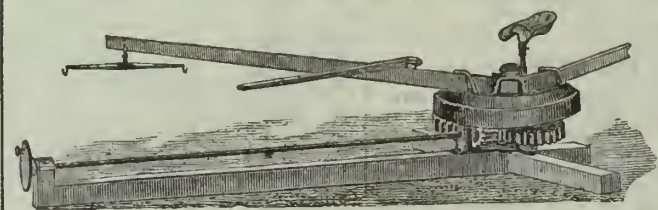
ECONOMY.



ECONOMY—For One or Two Horses.



EUREKA.



EAGLE—For One or Two Horses.

coast, and are in general use along their line, giving perfect satisfaction, which can be proved by reference. 9v7-1am

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE
Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO. 2v7-6m



THE BEST
Sewing Machine

FOR ALL KINDS OF
WORK

THAT WAS EVER PUT BEFORE THE
PUBLIC.

Send for Descriptive Circulars and samples of work.

Angora Goats at Auction.

ON WEDNESDAY, MAY 6TH, AT 2 O'CLOCK P. M., I will sell to the highest bidder Seventy Head of Thoroughbred Angora Goats, imported by their owner, Mr. A. Euytchedes, from Asia Minor. Sale Positive. Terms cash, in U. S. Gold Coin. **ROBT. BECK.**

I have also the best imported Alderney, Jersey and Ayreshire Cattle; Spanish and Silesian Merino Sheep at private sale. **R. B.**
Sacramento, March 10, 1874. 11v7-6t

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 15 Thoroughbred Spanish Merino, imported last year, and bought of Hammond. **J. H. DODGE.**

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal. ja24-1f

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

PURCHASERS please say advertised in Rural Press.

CALVERT'S



SHEEP WASH.

Sole Agency on the Pacific Coast at

T. W. JACKSON'S,
feb14 416 Sacramento Street, San Francisco.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,
Manufacturers of and Dealers in

Monuments, Headstones, Tombs, MANTLE PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO. 21v2-1v

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F. 14v7-3m

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO.,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



Peerless Self-Rake Reapers.
World Self-Rake Reapers.

World Mower and Reapers, with Dropper.

World Reapers, and Mowers with Dropper and Hand Rakes—side delivery. Clipper Mowers and Reapers, with Dropper.

Cayuga Chief Mowers and Reapers.

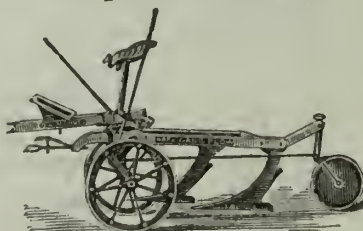
Sulky Rakes—Furst & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps; Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators, Mortise Head Hay Rake, Scythes and Snaths.

Soule, Ketsinger & Co.'s First-Class Farming Tools.

Gold Medal Forks, Hoes and Rakes, Batchelor's Forks.

Friedman Harrow, Scotch Harrows, Whistle-trees, Ox Yokes and Bows.

Road Scrapers, Canal and Garden Barrows.

Hay Cutters—Burdick's National, Belcher & Taylor's Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Headley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & CO., San Francisco.

MATTESON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870. This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over or under knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m MATTESON & WILLIAMSON, Stockton, Cal.

G. CREGO. S. O. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship. We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey; Helfield & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:

O Graham, New York; J. R. Hill, Ouncord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingles, etc., at wholesale and retail.

CREGO & BOWLEY, No. 9 Merchants' Exchange, California street, 24v6-3m San Francisco.

H. C. SHAW,

STOCKTON, CAL.

Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros." General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Gear Headers.

The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW, 14v7-3m Box 95, Stockton, Cal.

WM. ZARTMAN & CO., CARRIAGE and WAGON MAKERS,

OUR ENGLISH & HOWARD STS., PETALUMA. Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate.

SPECIAL RATES TO GRANGERS. 12v7-3m

AVERILL'S CHEMICAL PAINT

Of any desired Shade or Color,

Mixed ready for application, and sold by the gallon

It is Cheaper, Handsomer, more Durable and Elastic than the best of any other Paint.

Office, corner Fourth and Townsend streets, San Francisco. Send for sample card and price list.

16v29-3mewbwp HEALY & JEWELL, Agents.

NURSERY NOTICES.

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices.

Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care. Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

100,000 Ramie Plants for Sale Very Low.

Address THOMAS MEHERIN,

516 Battery Street, SAN FRANCISCO. 24v6-3m

P. O. Box 722.

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

SUPERIOR FRUIT TREES, TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSEYMAN.

T. CORLEY, 4v7-3m No. 315 Washington st., S. F.

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph Avenue and 22d Street, Oakland.

On hand a large and choice collection of

Evergreens, Shade, Fruit & Ornamental Trees, Shrubs, Roses, GREEN HOUSE PLANTS, ETC.

We are constantly adding to our varied stock the NEWEST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call.

LANDSCAPE GARDENING attended to. ja24tf

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN Trees, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good reference must accompany all orders. Lombardy Poplars, 1 1/2 to 2 inch trees, 25 cts. each.

E. PARSONS & CO., Nurserymen and Florists, K street, between 8th and 9th, SACRAMENTO, CAL. 4v7-3m

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Celler. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose. Or O. J. CLAYTON, Clayton, Contra Costa Co., Cal. 10v7-6m

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$1 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses. Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrus Deodare, or Deodare Cedar Seeds.

L. M. NEWSOM, East Oakland, 12th St., near Tubbs' Hotel. Send for Catalogue. ja10

PEPPER'S NURSERIES, PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER, Petaluma, Sonoma Co., Cal. 21v6-1y

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plums. The Tinley Peach, Georgia Freestone Seedling, the first offered in the State. Its flavor richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

BRYAN & DOMINGOS, 4v7-2m P. O. Box 157, Sacramento, Cal.

THE FINEST COLLECTION OF PINES,

Cypress, Australian Eucalyptus,

EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices.

Send for priced Catalogue to

8v7-3m A. D. PRYAL, Oakland, Cal.

THE ALDEN

Fruit Preserving Company

OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.

W. M. WHERRY, Vice President.

FRANK PYLE, Sec'y and Sup't.

BANK OF CALIFORNIA, Treasurer.

11v7-6m

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

DAVID CROCKETT.....BURGESS, Master

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,

San Francisco.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

14v28-cow-bn-3m

147 New Montgomery St., S. F.

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California.

My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnice & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass,

Red Clover, White Clover,

Musquit Grass, Timothy,

Redtop Grass, Orchard Grass,

Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the Interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk.

My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v7-3m

1v

9 9 9 9 9 9 9 9 9 9 9

GROVER & BAKER'S

IMPROVED

LOCK STITCH

SEWING MACHINE.



No. 9.

SIMPLE, DURABLE,

LIGHT RUNNING, RAPID,

EASILY OPERATED,

Accurate and Perfect

in Principle,

Beautiful in Appearance,

In every respect the best and most popular
Lock Stitch Machine made.

R. G. BROWN, Agent,

116 Montgomery St., San Francisco.

25v6-lam-sa

SAN FRANCISCO

EMPLOYMENT OFFICE,

No. 606 CLAY STREET,

Crosett & Co., Proprietors.

(Successors to Wm. Vail & Co.)

Having purchased the SAN FRANCISCO EMPLOYMENT OFFICE, formerly owned and conducted by us, we hope to merit and regain the patronage heretofore extended to us. Our thorough knowledge of the business, and wants of our customers and the public, enables us to fill all orders with the best of help, and with promptness and dispatch. Especial pains taken to obtain suitable help to fill all orders, for either City or Country.

COUNTRY ORDERS FOR MEN almost invariably filled with

FIRST-CLASS HELP.

Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the

BEST OF MALE OR FEMALE HELP

On short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction.

Our office is centrally located, roomy and convenient. Call at our rooms, where all information will be cheerfully given.

CROSETT & CO.,

ap11-1f

606 Clay Street.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure Whitefaced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.

7v6-tf-16p2

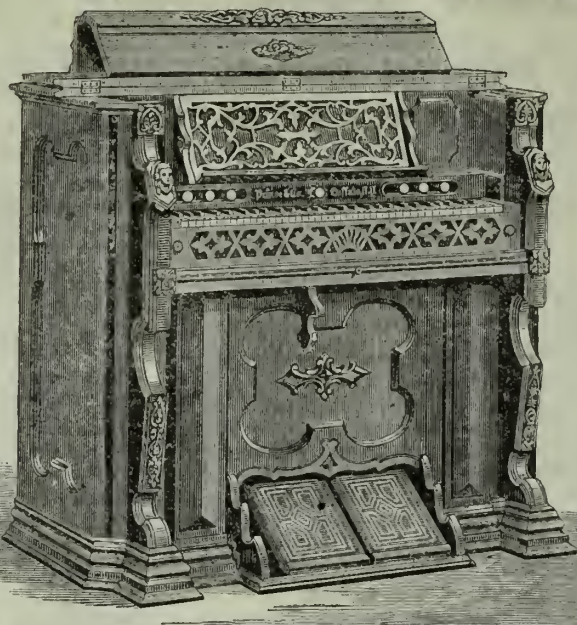
J. Y. BICKNELL,

WESTMORELAND, ONEIDA COUNTY, N. Y.

40 Varieties Land & Water Fowls.

I have shipped fowls to California annually for many years past and they have given entire satisfaction. Circulars with prices and practical hints free. Reference—Editor PACIFIC RURAL PRESS.

ap11-4t

THE PRINCE ORGANS.

PRICE, \$125.

SEND FOR CIRCULARS.

[STYLE NO. 55—THE CHEAPEST ORGAN IN THE WORLD.]

GEO. A. PRINCE & CO.'S CABINET ORGANS AND MELODEONS are to be found in more Families, Churches, Lodge Rooms and Assembly Halls throughout the world than those of any other maker. Nearly 53,000 of these magnificent instruments are now in use, being a much larger number than has been manufactured by any other firm in the world.

No other Reed Organ approaches so near the Pipe Organ in fullness and purity of tone, combined with great volume and power.

Their reputation for durability is unequalled. Instruments manufactured by Princes & Co.—twenty years old—are now valued by their owners as highly as the day they were bought.

The Prince Organs are in use in almost every village and hamlet on the Pacific Coast. They have been tested by every variety of climate, both as regards extremes of heat and cold, and of moisture and dryness, and preserve their remarkable purity of tone and even action under all circumstances.

Owing to the immense facilities of the Prince Manufacturing, which is the largest and most complete in the United States, their Church and Parlor Organs are afforded at very low prices, compared with those of corresponding capacity by other makers.

For Illustrated Catalogues and Descriptive Price Lists of styles not mentioned above, address or apply to

MUSIC DEPT A. L. BANCROFT & CO.,

721 MARKET STREET.....SAN FRANCISCO.

General Agents for

The Celebrated **KNABE Grand, Square and Upright Pianos.** Have taken 85 premiums. The leading Piano of America.

LINDEMAN'S Patent Cycloid Pianos with Crescent hack. A new favorite. See Circular.

McCAMMON'S American Piano Fortes (formerly Bordman, Gray & Co.'s). Medium priced, reliable and serviceable.

W. M. BRANDON.

JACOB W. ROGERS

BRANDON & ROGERS,

California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.

20v6-ly-16p

NOTICE TO FARMERS.**Something Entirely New.****HOME SEWING MACHINE.**

This machine is manufactured after an experience of twenty years. It contains within itself every known improvement. It is the best because the simplest, easiest to understand and by far the lightest to run, and the equitable adjustment of all its parts makes it the most durable Machine in the market. Take the INTERESTED STATEMENTS OF NONE, but

EXAMINE FOR YOURSELF.

SEND FOR A CIRCULAR.

It uses a Shuttle, Straight Needle, Two Threads, and makes a stitch alike on both sides.

E. W. HAINES, Agent,

17 New Montgomery St., Grand Hotel Build'g, S. F.

We also continue to sell another machine, the

HOME SHUTTLE SEWING MACHINE.

Price, \$45.

Mme. Demorest's Reliable Paper Cut Patterns. Send for a Catalogue.

15v7-cow-6m

BRONZE TURKEYS,

Largest and Finest Collection
on the Pacific Coast.

EMDEN GEESSE,

58 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS,

COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address:

M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.

3v7-3m-16p-8p

BEST SHADE IN USE.

—THE—

RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture IS FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE

Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS**Light, Strong & Extremely Durable.**

It Lowers from the Top or Raises from the Bottom.

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are simple, work to perfection, and never get out of order.

Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

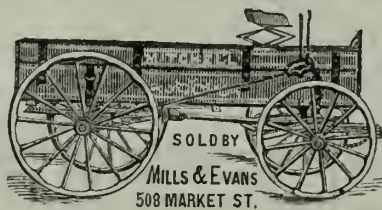
THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.

6v7-16p-3m

THE CELEBRATED MITCHELL WAGON

15v7-3m

EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz; Buff Cochins, \$3 per doz; White Faced Black Spanish, \$4 per doz; White Leghorn, \$5 per doz. Buff Cochins and Light Brahma Fowls for sale. Address:

G. A. DEAN, Pacific Straw Works,

335 Bush St., San Francisco.

12v7-3m-16p

For the very best Photographs go to **BRADLEY & RULOFSON'S GALLERY**, with an "Elevator"

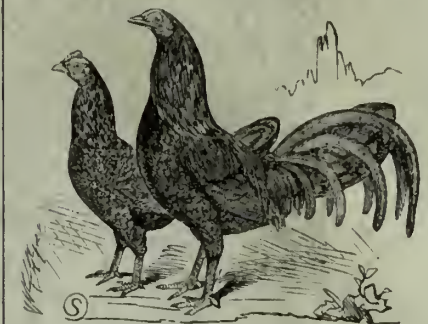
429 Montgomery street, San Francisco.

2v7-6m

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than Poor Ones!

OAKLAND POULTRY YARDS,
COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

**GAME FOWLS!****Warranted to Stand Steel.**

Prize winning strains of the following varieties, just received from the East: Earl Derry Games, Red Pile Games, Blue Pile Games, Heathwood Games, White Georgian Games, Black Breasted Red Games and Silver Duckwing Games. Eggs, \$12 per doz; guaranteed to reach the purchaser safely.

For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed

2v7f

[ESTABLISHED IN 1852.]

New York Seed Warehouse,**R. J. TRUMBULL,**

427 Sansome street.....San Francisco,
WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants,
Ornamental Shrubs, Fruit and
Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE and RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE. BULL CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th.

15v6-6m-16p

R. J. TRUMBULL,
427 Sansome st., San Francisco.

SEEDS! SEEDS!**CROP OF 1873.**

I am now receiving a choice collection of

Vegetable,**Agricultural,****and Flower Seeds,**

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,

ENGLISH RYE GRASS,

RED TOP,

ORCHARD GRASS,

TIMOTHY,

MESQUIT,

RED CLOVER,

WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

EGGS FOR HATCHING,**FROM PURE IMPORTED FOWLS.**

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D.

P. J. PHILIPS,
11v7-1m

608 Clay street, S. F.

DR. ABORN, OCUList,

Catarrh, Throat and Lung Physician.

The Most Difficult Cases are Invited to call.

Offices and Laboratory, 213 Geary street.

Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M.

13v7-1m-16p

FOR THE GIRLS.

A PAPER DOLL BOOK, 7x8½ inches, sent Free for 4 letter stamps. Address, **NOVELTY**, 613 Hayes street, San Francisco, Cal.

ap11-4t



Volume VII.]

SAN FRANCISCO, SATURDAY, APRIL 18, 1874.

[Number 16.]

Who Should be Farmers.

The right man in the right place is so rare a sight, that when it is observed, it is noted as a remarkable circumstance; on the other hand the community are so used to seeing the wrong men in all kinds of positions, presenting spectacles varying from the ludicrous to the pitiable, that it is accepted as a part of the regular social programme.

We see men in the professions who ought to be carrying the hod; and indifferent plow-men or wood-choppers whose proper place is in the law office, the pulpit, or at the counting-house desk; dry good clerks whose sphere of usefulness, and greatest enjoyment also, would have been in the workshop, and dentists who should have been blacksmiths. But the reader surely does not need to have instances of this character pointed out, for we venture to say that he could not walk the circumference of a block in any city, without coming in contact with more such cases than are here mentioned.

Many of these misplaced characters remain through life the victims of these seeming blunders of fate; others with the aid of favorable circumstances are at an early period of their lives placed in their proper sphere; while others still, after a long struggle against the current, are thrown into positions in which they are truly at home. Of such was Descartes, who, up to the age of twenty-eight, carried his musket in the French army, unobserved, except as a very ordinary common soldier, but finally achieved one of the highest positions that the world has accorded to great minds.

But unfortunate as are the consequences of this misplacement of talents, temperament and disposition, we should scarcely have considered it as calling for an article in a rural paper, were we not impressed with the conviction that rural life, as well as the trades and professions, is suffering from the same apparent mistakes of fortune. And this mistake is rendered still more worthy of attention in regard to the country, by the fact that it is accompanied by the delusion that farming opens a field in which all may succeed, and all be happy. We asserted above, that a person could not walk the circuit of a city block without passing a number of establishments where talent and temperament were misplaced. To this assertion we will add that a man could hardly go through any thickly settled farming district, to the extent of three miles, without passing as many cases of similar character.

It is no compliment to farming communities, and can confer no benefit upon agriculture, to clothe country life with a romance which does not belong to it, or to convey the idea that it affords an escape from all care and disappointment. Yet, owing to the shallow flattery of political and other designers, and the mistaken zeal of inexperienced writers, such a mistake as to farming and farm life is quite prevalent. Especially is this a mistake when it represents the country as a place fitted to all kinds of people, and does not discriminate in urging people to adopt farm life. There are many in the country who will never be at home there; and many who would be prosperous and truly contented farmers, are wearing out useless lives in city occupations. Some of the latter, however, by the aid of accumulated fortune, or other favorable circumstances, are enabled to enter their proper calling; beating the instruments of their trade or professions into plow-shares and pruning-hooks; and the enthusiasm with which these new recruits have infused into American farming of late, has done much to give it its true progressive character.

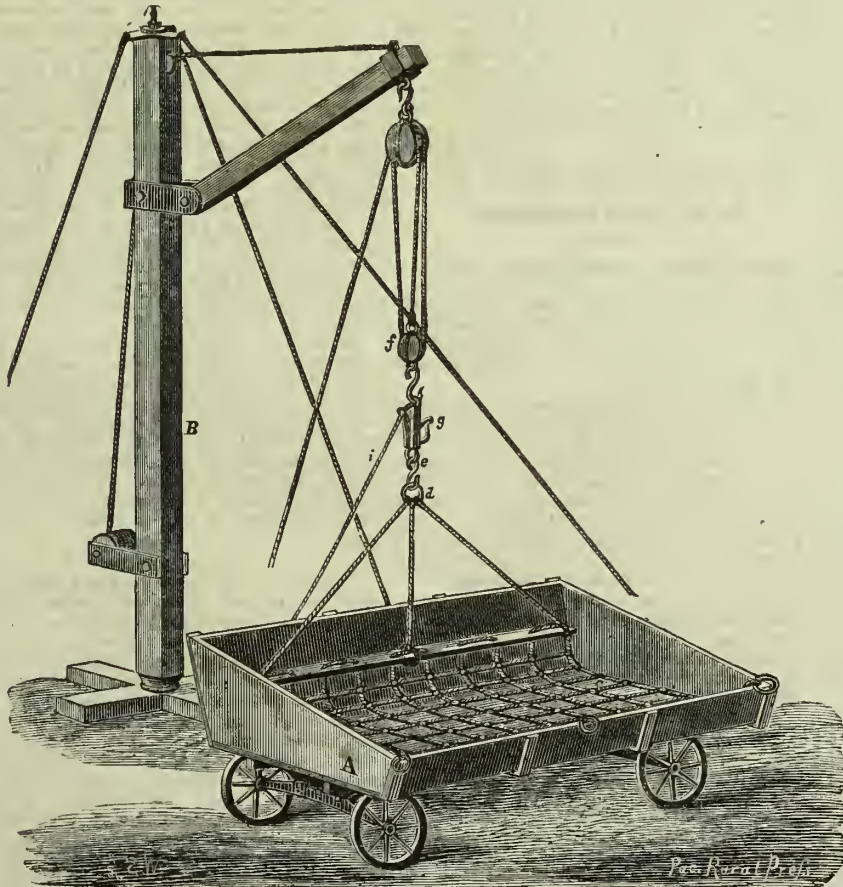
Let us give due credit to those who have left the professions and other callings, and brought with them their much needed capital and their fresh enthusiasm (fully as much needed), and after taking great risks, and subjecting themselves to the ridicule of both city and country people (the latter being particularly severe), have achieved success. We want more recruits of this character. It is hardly consistent in us to clamor for foreign immigration, especially that portion which brings with it some capital, then with the contemptuous epithet, "city farmers," give an uncivil greeting to those who bring from the city to the country, not only "the needful," but an earnest, hopeful enthusiasm, which is fully as needful at the present time as money.

Farming communities have hitherto had the cullings of city society forced upon them, it being a terrible social and financial infliction; but they have it within their power, simply by adopting a more genial and liberal policy, to secure the pickings instead of taking the cullings alone. When practical sense and common justice impel the farming community to extend an open hand to its true friends in the city, it will by the same movement release its grip on those whose sphere of usefulness is manifestly in the city.

While farmers are justly proud of the professional, artistic and other talent which had its original growth in the country, they should bear in mind that similar talent and genius exists at the present time, in its embryo state, in the country; and they should be careful how

Alfalfa Appreciated.

Much attention has been directed of late to the wonderful capacities of alfalfa as a forage crop. Its qualities are well known to our readers, many of whom have had practical demonstration of its worth. Perhaps even more noticeable than its rapid and enormous growth is its hardiness and ability to withstand our long dry seasons and to remain fresh and green when nearly everything else succumbs. On the pampas of South America it thrives, and appears rather to enjoy the drouth than otherwise. The power to withstand great heat and dryness comes from the long, searching tap-



THRELFALL'S APPARATUS FOR LOADING AND UNLOADING WAGONS.

they crush it out, by mistaking the loftiest ambition and the purest longings for a morbid desire to "rush into the vices and follies of the cities."

VICK'S FLORAL PREMIUMS.—We have received a circular from Mr. James Vick, seedsman and florist, Rochester, N. Y., authorizing every State and Territorial agricultural society to offer four premiums, of \$20, \$15, \$10 and \$5, for the four best collections of cut flowers, from seeds grown or imported by him. The offer is not only a telling advertisement for Mr. James Vick, but also is a move in the right direction, and, we hope, will stimulate competition in a field hitherto too much neglected.

ALFALFA FOLLOWING THE WILD SAGE.—Mr. A. J. Hatch, County Surveyor, at Reno, Nevada, has 20 acres of alfalfa growing successfully on ground formerly covered with sagebrush. He continues to irrigate his fields, and is not confident that the alfalfa will do well without it, although it can be cultivated wherever the sage grows. Mr. Hatch has made improvements about his home which contrast radically and pleasantly with the naturally wild sage plains about Reno. He intends outlaying \$5,000 upon his homestead.

A LARGE number of Artesian wells are being bored in Tulare county.

Improved Arrangement for Loading and Unloading Wagons.

Mr. Richard Threlfall, one of the largest farmers of Alameda county, has recently patented a method of loading and unloading the wagons which run between the header and the threshing machine, for the purpose of conveying the cut grain to the thrasher or stack. Usually this unloading work is performed with forks, operating from a swinging derrick or crane; but this method is rather slow to keep the thrasher supplied with a uniform feed. Mr. Threlfall's invention contemplates an arrangement whereby the entire wagon load of cut grain can be unloaded at one operation, so as to prevent the work of carrying the cut grain from the header to the thrasher to be done by a less number of wagons, while the feed of the threshing machine is rendered more uniform, and the grain will be less liable to be cracked.

By referring to the accompanying engraving the operation will be seen. A represents a wagon, such as is usually employed for conveying the grain from a header to the threshing-machine. B is a swinging crane or derrick, such as is frequently used for unloading the header-wagon by means of hay or grain forks. Instead of the hay or grain fork, the inventor employs a netting, C, or other closed piece of fabric large enough to cover the entire bottom and sides of the wagon. The cut grain is then taken from the header and placed in the wagon upon the netting or other false bottom, C, until the wagon is loaded.

When the wagon has arrived at the derrick, B, the loop, d, on one side of the netting or false bottom, C, is caught in the hook, e, which depends from the cord and pulley, f, of the derrick, while the two opposite corners are caught up and secured to a suitable detaching apparatus, g, thus forming a large bag, in which the load of grain is contained. The derrick is then employed to lift the load of grain thus conditioned and swing it around above the feeding table or stack, upon which it is dumped by drawing upon the cord, i, which uncouples the detaching apparatus and releases the grain.

Any of the usual styles of detaching apparatus can be used, and any pliable yielding false bottom will answer.

Mr. Threlfall assures us that this is really a labor-saving machine, as one-third of the expense in harvesting is saved. It can be used for unloading at the thrasher or for stacking grain, hay or straw. For information concerning the machine, address R. Threlfall, Centerville, Alameda county, or W. A. Threlfall, Blue Cottage ranch, near Knight's Ferry, Stanislaus county.

Mr. Threlfall, the inventor of this apparatus, is a representative farmer, and one of the most successful in Alameda county. A *Call* correspondent says that he was the first to put in grain in the gravelly portion of the Livermore valley. Before he made the experiment nobody believed that grain would grow there. He heard the remark of E. L. Beard, that wherever grass grew so ought grain, and he risked the experiment. In 1865 he leased the 4,000 acres of Francisco Aureococha, hitherto considered worthless, and the result was a magnificent crop and the dissipation of the current belief that a great portion of the valley was fit for nothing. Mr. T. now owns some 20,500 acres in two tracts in Stanislaus county, San Joaquin valley, and has this year 10,000 acres under cultivation. He is now fencing, and in a couple of weeks will have some 24 miles of fence constructed. He is turning his attention also to forest culture, and proposes to grow 200 acres of eucalyptus on his homestead property, near Centerville, where his possessions amount to 500 acres.

The *New York Times* replies to a correspondent: "As the eucalyptus will not grow in any place where it is exposed to frost, it is entirely useless to procure or plant seeds; it is doubtful whether it will thrive even in California, except in the southern part of the State." Not doubtful at all, as most of the eucalyptus trees now planted are in the central part of the State. It is true that, in the eucalyptus fever, which we have just passed through, the hygienic and other merits of the really valuable tree have been wildly overstated, but at all events the eucalyptus can stand alone,

roots, which are sent deeply down into the soil and find moisture which is inaccessible to other less energetic vegetation.

Alfalfa, we are told, was transplanted into Greece from Persia nearly five hundred years before the Christian era. At present it is largely cultivated in England, France, and other parts of Europe, and gives great satisfaction as a forage plant. It is being introduced quite extensively into the interior of our own country, and though as yet California is far ahead in its culture, in time alfalfa will be a prominent crop in places where the winters are not too severe.

Some time ago an interesting discussion was published on our correspondence page, as to the merits of alfalfa for feeding stock, as compared with root crops, etc., and it was shown that alfalfa ranked higher in value, in the quantity raised per acre, alone, than many supposed.

In this connection it may not be out of place to remark that California is beginning to be recognized as the most active experimental corner, in agricultural matters, of the world; and while a good deal of fun is poked at us for the eagerness with which we enter into new specialties, it is a noticeable fact that our experiments set an example which is followed by older localities.

The city papers estimate the grain crop of the State for 1874 at 30,000,000 bushels, as a minimum.

CORRESPONDENCE.

"Hagar" on Household Help.

[Written for the Press.]

I have always been taught that it was a breach of politeness to neglect replying to a straightforward question. And my apology as well as excuse for not answering the question addressed to me in the Press of February 7th, is that I did not receive the paper containing it until a few days ago. The question asked me was as follows, (and was included in a few comments, made by the Press, upon an article of mine, referring to the difficulty of obtaining household help in this State):

When we were young, mother and sisters, sometimes with the help of one of the older boys for a few hours, one or two days in the week, performed all the kitchen and household work for the family easily and cheerfully. And we would ask "Hagar" in the case referred to—during the intervals in which no help was in the house, and "too much women me no like"—who did the work then? And would it not be better for all concerned that no kitchen help be called in? It is a crying evil of the times that women of the period are altogether above doing the kinds of work their mothers were able and willing to do, and do cheerfully, because contributing largely to the prosperity of the household.

We will presume that the memory of the gentleman who penned the above remarks, does not extend back to the times when women performed all the household work, including its drudgery, and besides manufactured the wearing apparel from the raw material—the wool as it came from the sheep's back and the flax from the field; but only to that latter period when these things could be bought cheaper than they could be manufactured at home, and when women did much the same kinds of house work required of them now. Claiming the privilege of the challenged party, I shall choose my weapons of defence, and shall expect my reply to be received in the same kindly spirit in which the question was given.

The charge that women of the period are above doing the kinds of work their mothers did cheerfully and willingly, does not apply to the women of the San Joaquin valley; for I doubt if a more willing, harder-worked community of women than they are to be found anywhere, or could have been found even in those palmy days of our grandmothers, when women performed such wonders in the world of work.

I would ask what is to be done where there are no sisters in the family, where the eldest boy is a four-year-old, the sole woman representative (baby excepted) being the wife and mother, as was the case referred to in my letter, where the lady was a young, delicate woman, with several small children? And I would further ask my friend of the Press if he ever knew a woman who would walk the floor from six o'clock in the evening until four in the morning with a six months old teething baby in her arms, and having quieted it to sleep, would go to the kitchen and cook breakfast for thirty men, besides the members of the family; cooked dinner in the middle of the day and supper at six or seven, and sometimes at eight o'clock in the evening, for the same number; who did the work of a dairy, which occupied never less than eight, and sometimes eleven and twelve hours of the day, (I speak from experience); did the thousand and one duties pertaining to housekeeping, in addition to all this; did it all unassisted, and who kept up this routine of toil for six and eight weeks at a time, and who did it all cheerfully, because contributing largely to the prosperity of the household? And does he think that in cases such as described it were better that no kitchen help be called in? And I would further inquire if the gentleman of the Press cuts his grain with a sickle, threshes it with a flail on his barn floor, and carries it to mill in a sack, the wheat at one end, and a rock of corresponding weight in another to balance and make the load easy; because his forefathers did those things and probably did them cheerfully? And I would ask further, who cooks the gentleman's food, washes his linen and blacks his boots? It is safe to conclude that he does not perform those offices as necessary to the comfort of a gentleman, himself. And taking it for granted that he is a good christian who practices the precepts he so earnestly recommends for the good of others, we will suppose he employs no household help. And as the duties mentioned are a part of household work, does his wife perform them for him, and do it willingly and cheerfully because contributing largely to the prosperity of the household? Hagar.

Lockeford, March, 1874.

CREDIT WHERE CREDIT IS DUE.—A correspondent, J. H. A., writing from El Monte, Los Angeles county, calls our attention to the fact that in the announcement of earth poultices as applications in treating small-pox, published by us November 8th, 1873, no mention is made of the physician who has the honor of first making public the remedy referred to. Dr. E. S. Bunker, nearly two years ago, initiated and announced the new cure, and to him the credit is entirely due. We thank our correspondent for his thoughtfulness in suggesting the correction.

and hasten to make the *amende honorable* with pleasure. We took our information from a current item, which also omitted to give Dr. Bunker's name. It is regretted that the crowded state of our columns forbids the republication of the long, though very interesting, article from the Los Angeles Star, containing a fuller description, which our correspondent has kindly forwarded.

Correspondence from Windsor.

We have been taking the RURAL PRESS for three years or more, and think we could not do without it. But in all the time we have taken it I have never noticed any correspondence from Windsor. I want to tell you what a pleasant country this is, situated between Santa Rosa and Healdsburg, on the line of N. P. R. R., on a beautiful level, the whole surrounding country covered with grand old oak trees; the hills to the east covered with their beautiful green foliage, St. Helena standing guard over all. Everything is lovely now; spring has clothed all in a beautiful mantle of green, and the earth is carpeted with flowers. I care not to gaze on a more lovely sight. Those confined to cities cannot half enjoy life. How tired I become when I visit the city. I pity the children who never have an opportunity to gather the wild flowers, to romp and play on the green grass, in the shady grove, or grow brown and rosy in the glorious sunshine. How my darlings come in from their rambles, with rosy cheeks and sparkling eyes, with arms full of fragrant flowers, these lovely spring days. My heart pities the children of cities. I don't think this part of the country has ever been praised enough. There is not a more healthy place in the State, and the situation is very desirable, only a few hours' ride from San Francisco. There is quite an excitement here over the quicksilver mines; there have been some very rich leads discovered in the mountains, five or six miles east of Windsor. The specimens are very rich and are in the same range as the Pine Hall mines, above Healdsburg. The farmers here have not sown much grain this year on account of the late rains, but what has been sown looks very promising. I understand there will be a large amount of corn planted in the Russian river valley. FRANKIE.

Windsor, Sonoma county, April 10, 1874.

Is the Filere Indigenous?

EDITORS PRESS:—A correspondent from Sacramento thinks "Ralph Rambler" was mistaken in asserting in your issue of Jan. 17th, that the *filere*, is not a native of California. If he will only take time to examining the following points, he will probably be convinced that friend Ralph was right.

1st. Our leading botanists acknowledge that our two common species of this valuable plant are *Erodium cicutarium* and *E. moschatum*. 2d. London, in his encyclopedia of plants, (the best authority), page 568, asserts that these specimens are natives of Great Britain, and give none as natives of America.

Professor Asa Gray, the Chief of American botanists, shows that *E. cicutarium* is found in the States of New York, Pennsylvania, etc., though rare; and he states that it was introduced from Europe—see Gray's Manual of Botany, page 108.

No other authorities mention it as found anywhere else in the United States, except on the Pacific slope.

If our friend from Sacramento will carefully weigh these points, no doubt he will have to admit, as "Ralph Rambler" did, that our favorite pasture plant, thoroughly naturalized and generally spread as it now is through California, was indeed introduced from Europe. A slight investigation will be sufficient to convince any unprejudiced mind, that hundreds of plants, useful and otherwise, are distributed in a similar way throughout the world. The third species, referred to by your Sacramento correspondent, is very probably *E. romanum*, given by London as a native of Italy. It appears much later in San Joaquin valley than the more common species, and is not very abundant.

J. W. A. W.

Alabama, March 21st, 1874.

Salt-peter for Corn-Worms, and Garget in Cows.

EDITORS PRESS:—I notice in the Benicia Tribune that salt-peter is recommended to prevent worms from disturbing growing corn. Soak it in a solution of salt-peter, in the proportion of half a pound to a bushel of corn. We have been greatly troubled in the same way as one of your correspondents, and hope this may be a sure remedy. I am glad we have an oracle to which we may propound our "Conundrums."

Can you tell the occasion of garget in cows, and a remedy. I have tried Epom salts, a great spoonful given in the feed, but dislike allopathy even for cows. Cordially,

C. A. COLBY.

Nord, Butte Co., April 4, 1874.

[Garget arises simply from inflammation of the lymphatic glands. It is claimed that the following remedy, if applied in time, will cure the disease: Give one ounce of salt-peter; wash the bag in soap-suds; let it dry, then rub on bacon fat.—Eps. Press.]

Short Horns.

Whilst I agree with you, and many others, in the beauty and value of the short-horn cattle, allow me to say that many a ranch of cattle have been materially damaged by the introduction of the short-horn blood. Those who have level, rich pasture lands can have success with short-horns, but those who introduce the short-horn on poor mountainous ranges, such as constitute more than half of California ranges, will be apt to meet with poor success.

God, in his creative wisdom, always puts light, active animals on broken mountainous pastures. The short-horn is too dull, too heavy, and too soft for mountains. The calls from a South California drove of beet cattle, crossed with the Devon blood, made the prettiest and, in my opinion, the best stock of cattle for a mountain ranch I ever saw in this State. They were fair milkers, and were beef fat, when the short-horns were tumbling in the ditches, from leanness and starvation. The old adage is, "a place for everything, and everything in its place," and a short-horn on a mountain side, is out of his place.

Geo. Kay Miller.

Vacaville, April 6th, 1874.

THE APIARY.

Advantages of Extracting Honey.

When honey is abundant, says Mr. Quimby, and the weather cool at night, the bees will bring in honey much faster than the brood will consume it. The surplus is stored as near the brood as possible, and of course all cells surrounding the brood on every side are filled with honey, leaving no room for more brood, except a bee hatches, when the cell is at once used for an egg. A worker lives but a few weeks—summer time—and the few hatchlings in such haste scarcely more than replace those that are dying off. It takes a long time to get a strong colony under such circumstances.

With the extractor, and movable combs, we soon help matters greatly. These combs next the brood, filled with honey, can be taken out, bees brushed off, and the honey thrown out, and the combs returned to the hive for refilling. The queen will take the advantage of the empty cells surrounding the brood, and deposit eggs in much larger space than before. The weather being warm, the bees will protect and nurse a much larger brood, which will soon greatly add to the number of bees. If a few pounds of honey obtained, we have gained that, besides the increase of bees. The honey thus obtained is of the purest kind, pure as the box honey, and the chances of box honey are much increased by the operation.

When the colony is strong early, and strong enough to enter the box fully, and box honey is the great desideratum, the extracting can be omitted, but the quantity is much less than when the extracting is followed up. The great amount of honey can be obtained by extracting as often as once in four or five days during the greatest yields. To test the matter fully, begin early with a strong colony—it increases the bees in strong colony proportionally.

IS BLACK COMB USEFUL.—Black comb, unless it be very old and choked with pollen and filth, is as useful for breeding purposes as any other. For guide combs it is better than any other, as it is tough and will not break away from its fastenings as a new comb will. Care should be taken, notwithstanding, to discard all comb from which the bees of former seasons have not hatched out. Sometimes in old combs some cells may be observed from which the sealing has not been removed; some such cells may have small perforations in them, their crowns being sunken and their contents dried up; others may still retain the remains of dead brood, but wherever these are seen the comb should be consigned to the melting pot, for there is danger that the combs are infected with foul brood.—British Bee Journal

SWARMING BEES.—A bee-keeper gives the following plan to prevent a swarm of bees from getting far away from the hive, with the statement that after ten years' experience he has never known it to fail but once: As soon as they show the first symptoms of swarming, stop up some of the outlets to the hive so as to force them to be a considerable time coming out. The swarm being made up in part of young bees, many of whom cannot fly well, and as nothing can be done by the swarm until all are out, and fly about in the air; by prolonging their exit the feeble ones become tired, and finding their plans frustrated, they alight to rearrange their journey. If they can leave the old hive all at once, they carry very little about alighting.

HINT TO BEE FANCIERS.—A correspondent of an English rural publication relates a case from his experience which may be useful to other fanciers. Taking possession of new premises, he placed his bee shed where it would be least in the way of his alterations and improvements. But he soon found he could no longer go among the bees with impunity. They became unaccustomed to seeing human beings, "and relapsed into the condition of savages." Thus it appears that the folks who would keep bees, must place them where they will become accustomed to people passing and repassing; while those who hide them away as creatures unworthy of their confidence will find them a little difficult to manage.

THE VINEYARD.

Plowing Vineyards.

A correspondent of the Rural World argues that plowing, if done properly, from the time the vineyard has been planted whenever needed, and especially in the fall, is one of the most beneficial operations the vintner can perform. He says: As I have followed it for more than twenty years, whenever I thought it needed it, I ought to know something of its effects. But it should be commenced as soon as the condition of the vineyard requires it, which is every time during the summer when it is weedy and grassy, and only in dry weather, and not when the ground is wet. I commence in spring with a common corn plow, throwing a shallow furrow from each side of the row, then hoeing lightly in the row and around the vines with a two-pronged hoe or karst, stirring all the soil, but not deeply. Then the pulverized soil is thrown back to the vines with the plow, and as many furrows plowed in the row as it requires to mellow and stir all the soil, leaving a shallow furrow in the middle. As my plowing and hoeing is done three to four times every summer, in about the same way, only substituting the common garden hoe for the two-pronged hoe later in the season, and always as shallow as the plow can run, say two to three inches, it will be readily seen that I never tear any large roots, nor are they exposed to the action of the frost, but the surface is kept in a mellow condition, which is especially necessary in dry weather, as the mellow soil is about the best mulch we can give the vines. Even in wet seasons, the furrows in the middle of each row serve as drains to lead the water from the vines. I can, however, well imagine how late plowing can be injurious to vines that have been "let alone" through almost the whole summer, and where weeds and grass have become a tangled mass; and to get through such vineyards at all, the plowman must run his plow deeper, and will necessarily tear some roots; the uncultivated, hard soil will turn up in clods and thus allow the frost to play the mischief with the tender rootlets.

We all know that the most tender part of any plant is its collar or crown; that is, the part from which the roots start. Fall plowing, by bringing up the well pulverized earth around and over the collar of the vine, protects it thereby. It also serves to cover the weeds and grass, if there are any, and the fallen leaves of the vines, thus giving the vine the best manure it can possibly have, its own decayed leaves. The vine, by its action, stands on a ridge, and the moisture is drained from its roots by the middle furrow in each row. But plowing, like summer pruning and all other operations in the vineyard, should be followed regularly and systematically to be beneficial; not spasmodically by fits and starts, when time and convenience will allow. There must always be time found for it, as for everything else. Those who are not willing to do this have no reason to complain of its bad effects, if done badly and irregularly.

Profits of Grape Culture.

Some months ago Mr. T. H. Yeatman, a distinguished grape grower in the vicinity of Cincinnati, stated that "grape growing cannot be profitably followed in this latitude." To this a committee of the Cincinnati Horticultural Society have replied. They deny that grape growing has become unprofitable. In support of the conclusion that grape growing is still profitable, they recite the experience of Col. Waring, of Indian Hill, Hamilton county. That gentleman has a small vineyard of two acres, which yielded last season 650 gallons of wine. The previous year one acre of vines yielded 560 gallons. The 650 gallons sold for \$1.40 per gallon, or \$2,655 for the whole. There was received in addition, for cuttings, \$1,500, making the total value of the product of two acres, \$4,155, or \$2,075 per acre.

Messrs. Bogan, of the same county, have a vineyard of one and a half acres, planted with Norton's Virginia. In 1864 it yielded \$2,300 worth of wine and cuttings. Messrs. Bogan have also one-third of an acre planted with the Delaware. It yielded 87 gallons of wine, at \$6 per gallon, cuttings \$450, and roots from layers to the value of \$2,050. Total yield of one-third acre \$3,022. The cost of cultivating is placed at the low sum of \$22, leaving the net profit of \$3,000, or at the rate of \$9,000 per acre, which seems almost incredible.

Mr. J. E. Mottier's vineyard of one and a half acres of Delaware grapes yielded, in 1864, 200 gallons of wine at \$6 per gallon, \$1,200; roots from the layers to the value of \$2,880; total product, \$3,580. Expense, \$700; leaving the net profit at \$2,380, or \$1,440 per acre.

PROPAGATING FROM A SINGLE EYE.—Take a shoot, as directed for cuttings, and cut it up into single eyes, leaving an inch of wood on each extremity. Plant these, with the eyes upward, into pots or boxes, a one-half inch below the surface of the soil. By repotting them frequently and nourishing them, in one season, they may be made to grow twelve feet, and they make the finest and most vigorous plants. Let those who doubt what we say try it. Empty cans, with a nail hole punched in the bottom, will suffice for the experiment.—Florida Weekly Press.

POULTRY YARD.

Colds, Roup, Etc.

EDITORS PRESS:—Very many letters reach me asking cure for "swell head," to use the expressive words of some correspondents, and for colds, and which, from the descriptions given, must be an epidemic akin to epizooty in horses, and nearly allied to roup. After giving the remedy I am often answered that part of what I recommended had been tried without success. The majority expect a bird to commence its recovery from the moment the first dose is given, to show a manifest improvement the first day, or at farthest on the second. No one expects a physician, in all cases, to arrest the disease at once, nor does he give way to despair, though the patient grows daily worse under his hands until the disease culminates. His medicines have assisted, and finally cured, but it has been a work of time. Let me say to all readers of the PRESS, that unless they are prepared to keep up the "doctoring," in some cases for two weeks, they will not be competent to pronounce a remedy worthless or successful. I have cured cases in a few days, while others, apparently not so bad, have taken weeks. Now to remedies: A simple cold, running at the nostril, swelling mayhap around the eye. Confine in a dry, warm coop, give a teaspoonful or more of castor oil, according to size, for three days, and wash the head inside and out with strong allum water. If it grow worse and show symptoms hereafter described, treat as recommended for these symptoms. Few observe a fowl with a simple cold until it grows worse, mayhap turns to roup. The next stage is difficulty of breathing, elongation of the neck with a gasping effort to breathe, a wheezing noise, frequent shaking of the head with a shrill noise caused by the effort to void some obstruction in the larynx; some of these symptoms, very rarely all combined. Remove to a warm, dry coop, give the castor oil as for cold, wash with allum water, take a small brush or feather, dip in a solution of chlorinated soda and pass into the slit in roof of mouth. To any one who has many cases to "doctor," I will, upon application, give a formula for making chlorinated soda, at a nominal cost. Ask for Labarraque's Solution, which may be had at any drug store. If rightly done a cheesy mass will often be extracted. Empty two or three spoonfuls of the solution, diluted with one-half water, down the throat; "doctor" three times a day. Any hard, cheesy mass to be treated with the undiluted mixture.

Examine the trachea particularly, and if it be filled with a cheesy substance, push a feather, dipped in the solution, into it. Canker or ulcers, alone or with any above symptoms. In all cases give the doses of oil. Touch, using a camel's hair brush or a feather, with Labarraque's solution, three times a day for two days. Examine especially the rim and inside of the larynx. As long as any cheesy substance appears, use the sol. of chlor. soda. After the second day paint the ulcers with tincture of muriate of iron, with a camel's hair brush—discontinuing the use of the chlor. soda. If you are prepared to follow the directions understandingly you will cure a far greater percentage than physicians do of their patients. If you do not care to take so much trouble, but would not mind a very small amount of exertion to save some fine fowl if attacked, you may succeed by giving oil, and using the allum water, and painting the ulcers with the tincture of muriate of iron once a day.

Napa, April 4th, 1874.

M. EYRE, JR.

REARING DUCKS.—There are no kinds of domestic poultry more easily kept than ducks. Their appetite is such that almost anything which is naturally thrown to the pigs is acceptable, and on this account many object to them, saying they eat too much. It is no doubt true that more food is required to rear young ducks than chicks, but this is overbalanced by their quick maturity, after which no more food is required for ducks than hens. Disease seldom finds its way into the duck-yard, unless caused by feeding ducklings too much hard or uncooked food.

Keep the young ducks from water, save enough to drink, until about two weeks old; then let them have full range. Ducks can be successfully bred in dry yards, with only a pan of water, but no farmer having a pond or stream of water convenient for ducks should do without them, for in such cases very little food is required, save what can be found by them in and around such places. At early dawn they may be seen very active in snatching up the worms that find their way to the surface of the ground in pastures, thereby benefiting rather than injuring the soil.—*South-east Planter*.

DEGENERACY IN FOWLS.—Frail, fancy beauty in fowls but shows a degeneracy in constitution and usefulness. When fowls are looked upon from a utilitarian standpoint, they are but animate machines for the conversion of food into eggs and flesh, and their true value is in proportion to the quantity and quality of these two articles produced. Hens in a wild state only lay what eggs they can cover and then incubate; what they do perhaps twice during the season. The production of eggs in large quantities is, therefore, not a natural but an artificial or developed power. Such an undue prepon-

derance of the egg-producing powers must necessarily try the constitution, even if this production has become second nature; so that in order to obtain the largest yield of eggs possible the largest stock of stamina and elasticity possible, must be infused into the laying stock; and as they get it, of course, from the breeding stock, it becomes all-important that the breeders should possess it in order to be able to impart it. The choice of a cock with remarkable constitutional vigor may improve the health and consequent value of hundreds of descendants, ten or twenty per cent.—*Poultry World*.

PRICES OF LIVE AND DRESSED POULTRY.—It is sometimes convenient to know the price per pound for poultry. Live weight is equivalent to a given price, dressed weight. Preparing for market will cost about eight cents for each fowl, when labor of the usual quality is employed, and a considerable number of fowls butchered at a time. Making that allowance for dressing, and leaving out fractions, the relative prices in cents, of live and dressed weights, are as follows:

21c-14c	26c-17c	31c-21c	36c-25c
22-15	27-18	32-21	37-26
23-15	28-19	33-22	38-26
24-16	29-20	34-23	39-27
25-17	30-20	35-24	40-28

The above, from one of our exchanges, gives the average proportion between the prices of live and dressed poultry. The figures given cannot cover all cases, for the relative prices will depend upon the condition; a thin fowl will lose as much and be as much trouble to dress as one well fattened, and yet will not be worth as much per pound dressed. In fowls, as they are usually sold, we find the table sufficiently correct.—*Journal of the Farm*.

HOME AND FARM.

Early Rising.

There should be reason in all things, and we believe that six o'clock the year round is as near the proper hour for rising, all things considered, as an earlier one. There are farmers, and their name is legion, who go to bed with the chickens and get up in the morning long before these systematic fowls have thought of starting from their dreams; men who gauge the capacity of their neighbors by the time they leave their beds, and flatter themselves that the principal part of labor consists in arousing their wives and children before the sun has lighted up the earth, and eating their breakfast by candle-light. Now we have a great admiration for system, but we wish to be allowed our choice among the various ones in vogue, and we have no good reason for believing that there is any particular merit in making ourselves and those about us very uncomfortable by reducing the hours of natural rest. "Early to bed and early to rise," etc., may be carried to an extreme, never anticipated by the learned Franklin when he enunciated the theory—and if we admit that going to bed at six and getting up at three is a meritorious act in itself, we must carry the idea further and acknowledge that he who sleeps half the day and prowls about half the night is deserving of the praise of all men. How often have we seen these extremely early risers making everybody uncomfortable about them for several hours before dawn, only to get on their horses and repair to the nearest village to spin yarns and trade horses at the corner grocery for the rest of the day. We have a theory about rising as well as our neighbors. We assert in the first place that early rising is not in itself any evidence of industry or thrift. We assert, moreover, that the steadiest and hardest working men it has been our lot to meet were not early risers, in the sense of being extremists—that early rising, in nine cases out of ten, is as much a habit as chewing tobacco, and those men who announce to you that they "can't sleep" after such and such an hour, do not deserve any particular credit for "getting up." It is, we believe, determined that average human nature requires about eight hours sleep in the twenty-four, and a proper and intelligent arrangement of the remaining sixteen hours for work and leisure, has more to do with the condition of mind and body than "old saws" or doctors.

Let the farmer rise at six as above suggested, feed, or see that the stock are fed, and take a look about the premises where breakfast is being prepared; and if he remains at home and attends to his business during the day, he will accomplish quite as much as if he had turned night into day at an earlier hour, and made his wife and children parties to his own discomfort. When the day's work is done, let the family gather in the general sitting room, and divert the mind with appropriate reading, either from the papers or some good book, or with games at once amusing and instructive—retiring at ten to rise again at six. Farmers must read and think, and the quiet of evening, when the mind is at rest and the outer world still, is the best time to give the thoughts play. If you subtract two from the eight hours of rest which nature craves, in the morning, you must add them in the evening, and this is exactly what we object to—two hours of the evening spent in pleasant and instructive entertainment by the family circle, is worth all the dark hours of all the early risers combined. There would be fewer complaints of the children leaving the

farm if there was more rational enjoyment of life at the old homestead, and less of this everlasting "Early to bed and early to rise." There is such a thing as "too much of a good thing."—*Journal of Agriculture*.

RATS.—An old housekeeper—who should know better—asks us how she is to get rid of rats. Shall she poison them? We answer no. There is no protection against rats to compare to two or three good cats. We have tried almost everything else and failed. But you must get good ratters. And these are not the expensive imported ones. Our own native breeds are the best. Make pets of your cats, but do not feed too liberally if rats are about, and your premises will be kept clear of them. Both our house and stable are thus completely protected.—*German Town Telegraph*.

THE DAIRY.

Coloring Cheese.

One of the means employed to give cheese a rich cream color, is to expose the curd, before and after salting, to the air, instead of hurrying it into the hoop or press, as is usual with the majority of dairymen. Every cheese-maker must have observed the fine golden color acquired by the particles of curd that have accidentally remained out of the hoop, and exposed during the day to the atmosphere. This is the precise color desired by the dealers, and in warm weather an exposure long enough for the desired color is practicable, and the appearance of the curd can be materially changed for the better by letting it remain in the vat or tub until it has acquired the proper temperature for the press. It is always preferable to cool curd in this way, instead of using water or cold whey on the curd, as is sometimes done for this purpose, as these last have a tendency to impoverish the cheese by washing out a portion of its richness, besides injuring somewhat its flavor. Fine flavor, quality, and the proper texture in cheese are important requisites to ready sales and good prices. But all these may be present, and yet the cheese sell low in market for its bad appearance. The eye must be satisfied as well as the taste, and it is difficult to make the consumer believe that pale, white cheese is as rich as that which has a fine cream color. Again, many dairymen are troubled, more or less, in preserving a smooth, elastic rind; the rind checks, and deep cracks are found here and there in the cheese. This results often, and, for the most part, from the air being allowed to blow on the young cheese; cheese, when it comes from the press, and for several days after, or until the rind has a firm consistency, should be kept where the air may not blow directly upon it; and washing the cheese twice a week with hot, sweet whey will add much to its outward appearance. Annatto is in general use during spring and fall, for coloring milk for cheese-making, but as much of it is adulterated with poisonous materials its use should be avoided in summer, when the desired color to the cheese can be obtained as above described.—*Canada Farmer*.

Butter Factories.

Just now, factory butter, like factory cheese, brings an extra price. In butter factories, as in cheese factories, a superior class of help is employed, and we think the expenses to the patrons are lightened and the profits increased. We find it so among our cheese factories, and no farmer's wife who has been once rid of cheese-making would be willing to return to the old method. It would be just so with farmers' wives, if the farmers in the butter districts were to once adopt the factory system of making butter. It is such a relief to the family! And as the sales are generally made oftener, there is the advantage of always having ready money. The same mode of dividing expenses and the proceeds of sales may be employed in butter factories that are employed in cheese factories. Or a company may be formed to buy the milk. Or, as we have elsewhere suggested, only cream might be taken to the factory. As to the buttermilk and skimmed milk, that may be fed to hogs or calves. If the factory is conducted on the *pro rata* system, a good way would be to purchase calves or hogs, with the money of the patrons, taking those of the patrons at a fixed rate per pound, put them together and employ a man to take care of them. If any additional feed is needed, let it be purchased with the common fund, by an executive committee. In the fall, when the calves or hogs are disposed of, let the profits be divided *pro rata*. It seems to us that this would give satisfaction, and we know it would make freer, happier homes, to get rid of the care and drudgery of the dairy. This, to us, is a vital consideration, and induces us to favor any kind of profitable association that will lift the burdens from the backs of our women.—*Utica Herald*.

STRAINING MILK.—Now this may seem a very simple subject, and one that most people think they can do well enough in their way, but I think there is a more excellent way than that practiced by a great majority of our farmers. I find that most all of our milk raisers are con-

tent to simply let the milk run through a wire sieve or strainer attached to the pail. I don't care how neat a person tries to be during the operation of milking, there will always be a little fine dust or particles, which will go through the "strainer pail" perhaps almost unnoticed. But let it sit for a short time, then look at it through a magnifying glass or with the naked eye, and it would almost surprise one to see the dust and specks that will be visible. Now my method is to strain all the milk through a coarse cotton cloth or linen strainer (in addition to the one in the pail) fixed over the snout of the pail so as to let it run through both at the same time, and I find there is a great difference in the looks of the milk, and in the color, flavor and quality of the butter, where farmers strain their milk in this way instead of the other. Now if you want purer milk and sweeter tasting butter, some that will sell higher in the market, just try the cloth strainer and see the difference, and especially where the cows are stabled.—*Cor. Mirror and Farmer*.

What is Jet?

What is jet? This is a question often put, but never satisfactorily answered. Nearly all the jet workers have an opinion on its origin, and most of them, in common with the greater part of the inhabitants of Whitby and its neighborhood, believe it to be of ligneous origin. Some, however, believe it to be of mineral origin, and others think it combines the two. Taking the opinion of Mr. Martin Simpson, the curator of the Whitby Museum, who has studied the geology of this district exceedingly well, and with whom I have talked on this subject, he puts his theory as follows: "Jet is generally considered to have been wood, and in many cases it has undoubtedly been so; for the woody structure often remains, and it is not unlikely that comminuted vegetable matter may have been changed into jet. But it is evident that vegetable matter is not an essential part of jet, for we frequently find that bone and the scales of fishes have also been changed into jet. In the Whitby Museum there is a large mass of bone, which has the exterior converted into jet for about a quarter of an inch in thickness. The jetty matter appears to have entered first into the pores of the bone, and then to have hardened, and during the mineralizing process, the whole bony matter has been gradually displaced, and its place occupied by jet, so as to preserve its original form."

With this latter opinion I am inclined to agree, for jet has the appearance of a substance that has distilled from the rock, and in some cases has impregnated vegetable, and in other cases animal substances, while in others it has simply filled up a fissure in the rock, and solidified. In some specimens I have seen the grain, apparently of wood, distinctly; in others, scales and bones of fishes; and in one of the best specimens that has been found here, the mass in form and structure was that of a tree, with bark, knots, and roots, and in the curled portions of the roots, stones and soil conglomerated were imbedded.

That it has been formed from distillate from what is called the jet rock is supported by these facts. Experiments tried on portions have been successful, and proved that at least ten gallons of oil could be extracted from one ton of the shale, and that this pure oil gave out a clear and brilliant light when burnt. A piece of jet on fire gives out a similar brilliant, clear light. Again, the substance is always found in seams, detached, and in a horizontal position, and spreads itself out in shallow layers, as water or fluid substances always do. The two kinds with which we are acquainted are the hard and soft; these are evidently of different species. The jet rock occurs in the twenty foot formation. This formation, commencing at the peak about eight miles south of Whitby, traverses the whole coast to about fifteen miles north of Whitby, and from the bold and precipitous cliffs that skirt the sea to Tees' mouth. The rock divides into the upper and lower lias, with a marlstone series intervening, in the upper part of which we have the Cleveland ironstone. Then comes the dogger or jet rock, and it is here that our hard jet is found in compressed masses or layers of various lengths and thicknesses, some having been found from an inch or two long and one-eighth thick, to masses thirty inches wide, six feet long, and four inches thick. It appears that the largest piece ever found was six feet four inches in length, four and a half to five and a half inches wide, and one and a half thick, weighing eleven pounds and a half. The net price was ten guineas; for this sum it was offered to the curator of the British Museum; he declined to purchase it, and the specimen was afterwards sold for fifteen guineas, and cut into four inch crosses.—*Artisan*.

THE national inventive faculty has taken a queer twist in the direction of cigar boxes. The patent office is said to be overrun with models. We are at a loss to guess whether this is the effect of a freak like that which flooded the land with straw-cutters and washing machines, or a suggestion of the excise on cigars which makes a new box necessary for every hundred sold, as an addition—wholly unnecessary, and unproductive of any revenue to the government—of eight per cent, to the cost of them. If it is the latter, probably a repeal of the onerous and useless exaction of a new box for every new stamp would relieve the disorder.—*Iron World*.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

ORDERS FOR GRANGE MATERIAL.—We are constantly receiving orders from newly organized Granges for regalia, blank books, implements and other articles for Granges, mostly accompanied by remittances per P. O. order. In our issue of January 3d, we announced that Bro. W. H. Baxter would furnish such supplies from that date. The prices of the goods are payable in coin, and all orders should be addressed to W. H. Baxter, Secretary of State Grange, P. O. H., No. 320 California street, San Francisco, Cal.

We have been requested by Bro. Baxter, to state that prices affixed for all Grange supplies, furnished through his office, are upon a gold basis; and that gold instead of currency must in all cases be forwarded in payment.

List of Organizing Deputies.

COUNTY.	DEPUTY.	POST OFFICE.
Alameda.	A. T. Dewey.	Oakland or San F ^{co} .
Butte.	Wm. M. Thorp.	Chico.
Butte.	G. W. Colby.	Nord.
Colusa.	J. J. Hook.	Grand Island.
Contra Costa.	R. G. Day.	Antioch.
Lake.	J. M. Hamilton.	Guenoc.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Merced.	H. B. Jolley.	Merced City.
Monterey.	J. D. Fowler.	Hollister.
Napa.	W. H. Baxter, (Gen'l Dep.).	San Francisco.
Sacramento.	W. S. Manlove.	Sacramento.
San Francisco.	I. G. Gardner.	General Deputy.
San Francisco.	John Hegler.	Ellis.
San Joaquin.	E. H. Stiles.	Moro.
San Luis Obispo.	A. J. Motherhead.	Pescadero.
San Mateo.	B. V. Weeks.	San Jose.
Santa Clara.	W. G. Henning.	Snien.
Solano.	R. C. Haile.	Santa Rosa.
Solano.	J. C. Merryfield.	Windsor.
Sonoma.	Goo. W. Davis.	Modesto.
Sonoma.	A. B. Nally.	Woodland.
Stanislaus.	J. D. Spencer.	Los Angeles.
Yolo.	Wm. M. Jackson.	Santa Barbara.
Los Angeles.	Thos. A. Garey.	San Buenaventura.
Santa Barbara.	O. L. Abbott.	
Ventura.	Milton Wasson.	

Farmers desiring to organize Granges, can apply to J. M. Hamilton, (W. Master), Guenoc, Lake Co.; W. H. Baxter, (W. Sec'y), 320 California St., S. F.; J. W. A. Wright, (W. Lecturer), Borden, Fresno Co.; or to the nearest Deputy to their locality. Thos. H. Merry, (W. Ex-Lecturer) of Healdsburg, is also deputized to organize Granges.

The Patrons of Husbandry.

For many years the agricultural press of the country has persistently urged upon the attention of farmers the importance of securing more home comforts and attractions for the farm; that the systematizing of farm labor and the introduction of better habits and practice on the farm would lead to greater profit to the farm owners; that more attention should be paid to an interchange of ideas and experience among farmers; that farmers were laboring under serious disadvantages, because of their lack of unity of effort in throwing off the oppressions of middlemen, especially those engaged in transportation; that too little attention was paid to intelligent plans and practice in farming, and many other matters of like import. The agricultural press has never been unmindful or negligent of its duty in calling attention to these things; but, until recently, very little progress has been made toward any amelioration of the condition of the farmer in these respects; and why? Simply from lack of unity of action among farmers themselves. Their isolated condition and their ancient repugnance to, or inexperience in matters political, commercial or social, and outside of farm life, have rendered them unable to cope with the unjust consolidations of interests which have flourished all the more through this very inaction of the farmers in their own behalf.

How changed has all this become within only a few months past—at most within two years. Now, no interest in the land is so thoroughly united, so completely organized as that of agriculture. We have but recently witnessed the assemblage at St. Louis of the representatives of more than 1,000,000 of farmers—all intelligent, conservative, but earnest men (and women, too), who have put forth a declaration of principles, and needs, embodying all the needed reforms in connection with agriculture, which are essential to enable the farmer to reach that high position in the economy of nations to which he is justly entitled, and to the active support of which all this vast army of producers is pledged as one man. Such a declaration, if it had been announced three or four years ago, would scarce have attracted the least attention. Now it is read and commented upon by all the leading papers of the country; and statesmen, politicians and capitalists, everywhere, are giving it a careful study, as a matter which is destined to effect a greater or less modification of every important industry and interest in the land.

If any doubt has existed in men's minds, hitherto, as to the possibility that the Patrons of Husbandry would reach any measure of success as a national movement, that doubt must now be quite effectually removed from the mind of every reflecting man. They have already advanced well into the season of most successful fruition.

While the agricultural interest cannot fail to reap large and most important benefits from this new movement, it is most fortunate for the country at large that there is no single element of danger or disaster therein, to any competition or associated interest. The farmers are proverbially a conservative element in the community, and fully recognize the fact that no one productive industry should be built up at the expense of another. They act, both as individuals and in their associate capacity, upon the broad and generous principle of "live and let live." Hence this movement, conducted upon such a principle, cannot fail to give a vast

and most healthy impetus to every other industry of the land. Farmers fully recognize the fact that when other industries increase, a better market is sure to exist for the products of the soil. Hence nothing but good need be feared from the farmer's movement to every producer of values. There is, however, a certain class of middlemen, which has of late years grown more numerous and more exacting than is needed or profitable, which may find the movement injurious to their interests; but they are few in numbers and have generally grown fat on the toil of others, and are abundantly able to meet with the little reverses which may overtake them. There is room enough, however, for them, also, to become honest and useful producers; in which capacity they will do the world more good than by standing as unnecessary toll gatherers in the way of honest producers of wealth.

"Come Join the Grange."

The Gilroy Advocate is earnest in its advocacy of the cause of the Patrons of Husbandry. It talks to the farmers of that neighborhood as follows:

"In the present advanced stage of the Order throughout the United States, when its purposes are so well understood and its importance so generally recognized, there surely is scarcely any necessity for dilating on the advantages which agriculturists and farmers can derive from membership in an organization at once so powerful and so wide spread.

Self-protection is a principle inherent in communities as well as in individuals. It is a vital one, and it is the one which has cemented this vast organization in such indissoluble bonds. When farmers were harassed in raising unprofitable crops, and ground to dust in paying exorbitant interest, it was this principle—this instinct of self-protection that caused them to look around for some avenue of escape from their miseries, and to seize on the idea of forming an organization for mutual protection. The organization has become more than a success, it has become a power, and now that it is fairly afloat, and safe beyond the mischances and perils of infancy, it might be well for those for whose behoof it was founded to seek protection under the shadow. Those "rings" that heretofore reaped such abundant harvest by cheating the farmer out of the honest profits of his labor, are not quite extinct. They have some life in them still, and will battle, we may be sure, for their wonted ascendancy whenever an opportunity offers.

Besides obtaining good prices for grain, there are considerations collateral thereto, which should engage the farmer's attention, and these considerations will be best subserved by his becoming a member of the Patrons of Husbandry. The price of sacks and machinery is an item of expenditure that enters largely into his calculations, and by whatever means this item can be reduced to the lowest minimum of cost is a problem that demands solution at his hands. An organization necessarily possessing such vast resources as the Grangers, can purchase sacks and machinery cheaper than can any private individual; and this organization, making as it does the protection of the farmer its special business, would sell to him these indispensable appliances cheaper than he could buy them on his own individual account. Through the agency of this Order in San Francisco, farmers can purchase not only these appliances at cheaper rates, but even the groceries for his family. In view of such solid advantages, need we say how remiss in his own interest would he be if he refused or neglected to associate himself with a body having his special interest at heart?"

GRANGES IN THE SOUTHERN STATES.—It seems to be pretty generally admitted that the establishment of the Patrons of Husbandry in the Southern States is being attended with, if possible, more marked benefit than is derived from the movement at the North. The order in the South seems to have given a marked impetus to white immigration, so much needed to occupy the fertile yet unimproved lands in those States. Manufactories are also springing up, by which the raw product of that region is being wrought into fabrics at home. The Patrons have also exercised a most important influence in toning down bitter sectional differences and the rancor of party spirit, which have heretofore exerted such a demoralizing influence upon all industrial pursuits there. They have stimulated improved modes of agriculture, and accomplished much in relieving southern farmers and planters from the exorbitant demands of middlemen. Hence it is no wonder that the order is popular there, as much so, perhaps, as in any section of the Union. The measure of usefulness of the Patrons of Husbandry is as wide as are the bounds which enclose their field of action.

DANCING IN THE GRANGE.—A Minnesota Patron says:—"We need knowledge and enlightenment, rather than dancing, in the Grange, and when you run this amusement in the Grange, generally after business, it will soon be the main business, and it would kill the cause in one year if generally adopted. Those who would become members, if they could have that privilege and none else, are not needed. There are plenty of times and places for amusements, without having them mixed in the Grange. We have work to do, and it is for us to elevate the cause to a position of respect, and it requires enlightenment, labor and union.

From the Granges.

CENTREVILLE GRANGE, ALAMEDA COUNTY.—Our Grange was organized Nov. 18, 1873, with twenty-nine charter members; since then we have received by application thirty-nine members, making a total of sixty-eight up to the first inst. We now have a class of twenty-six in progress, which will make a total of ninety-six—no inconsiderable increase when we consider the newness of the movement in this State, together with the prejudice in the minds of many, and the timidity of embarking in novel enterprises. On the first instant we celebrated a harvest feast, and were honored with the presence of some of the members of Livermore Grange. We were sorry there were not more present; but the affair passed very pleasantly, and if our friends enjoyed our company half as much as we did theirs, they were well repaid for the day. Mr. Clark, of Wisconsin, gave us words of encouragement, and spoke of the success of the Grange movement in the State he has left. He is pleased with California's fine climate and generous soil, and expects to make his future home here. We can welcome him as a great gain, not only to us alone, but to the whole State. Speeches were made by several others, the Worthy Overseer and Master of Livermore, and Bro. Shinn, Worthy Master of our Grange. On the evening of May 1st we propose having a social reunion at the graduation of our present class. These reunions we hope to have often to promote acquaintance among the farmers and cultivate the social element, the want of which makes the farmer life irksome to so many, and fills our cities with the youth that should remain in the country to help develop the boundless resources of the State, instead of wasting their lives in useless speculations and in over crowded offices. To encourage and promote sociability is one of the missions of the Grange; and if success attends in this particular, one of its greatest ends will have been accomplished.

J. L. BEARD, Sec'y.

KIWELATTAH GRANGE, HUMBOLDT CO.—Our Grange held its first regular meeting about the middle of November last, four and a half months ago, and has held regular or intermediate meetings once a week ever since, and occasionally special meetings, in order to get through with the work demanding our attention. To-day we enjoyed our third harvest feast, after conferring the degree of Husbandman upon nine brothers, and degree of Matron upon four sisters; and, with the aid of a minister, united in the holy bonds of matrimony a newly-made Husbandman and Matron. It gives me pleasure to say to you, and to the many Granges of our State, that we are working together like a band of brothers and sisters, for the good of the Order; notwithstanding, we made a very shabby beginning, and progressed with much difficulty at first; but the greater majority of our members, from the very start, took hold of the matter with the determination of carrying out the principles of the Order, and by the help of our Great and Worthy Master, of Grange No. 1, Eternal in the Heavens, we have, I hope, made a success. We have learned to place faith in God, nurture hope, and dispense charity; and ere long, by efforts in the right direction, hope to be noted for our fidelity.

During our short existence we have made mistakes; and as our Worthy Master, J. H. Hamilton, of the State Grange, said to me, "It would be strange if we did not; yet I can, with certainty, say that no mistake of any importance whatever has been made by any member of Kiwelattah Grange." Our harvest feast to-day has been a great affair with us; in addition to our 76 members, we had of invited guests at least as many more, to help us enjoy it. After the inner man was satisfied, to crown the labors of the day and assist digestion, the Assistant Stewart called off the harvest dance and several other figures, and all joined with a glee in the innocent recreation. Yours fraternally, LEWIS K. WOOD, Master.

SAN BERNARDINO GRANGE.—We have received the following as a corrected list of the officers of San Bernardino Grange for the present year, with the statement that the list as previously published was incorrect. In answer to the Secretary's letter, we would say that we have now no recollection as to who forwarded the list as published. Subjoined are the officers as now furnished: R. Shelton, M.; I. E. Small, O.; A. Parks, L.; Mrs. George Lord, C.; N. E. Bledsoe, S.; A. B. Anderson, A. S.; H. Suverkup, T.; I. Broodhurst, Sec.; Mrs. M. C. Willis, Ceres; Mrs. A. Parks, Pomona; Miss Ida Willis, Flora; Mrs. R. Shelton, L. A. S.

KELSEYVILLE GRANGE, LAKE CO.—Bro. D. C. Davee, of this Grange, writes: Our Grange is far up in the mountains, and I perceive you don't hear from us very often. We now number about 70 members and are in good working order. Our prospects are promising for a good crop, although it will be late. I expected to have sent you another club before this, but money matters are so close that I have not yet been able to accomplish my desire, but hope soon to do so.

DENVETON GRANGE, SOLANO COUNTY.—We have a letter from Bro. R. C. Haile, giving some account of a Harvest Feast at Denvetion Grange on the 10th instant. They had a very interesting time, pleasant and profitable to all. Bro. Haile adds that the Patrons of Solano do not intend to neglect the social features of the Order. In conclusion he states that he had to leave before the feast was over to organize a new Grange at Binghamton, the particulars of which are given under its appropriate head.

SANTA CLARA GRANGE, SANTA CLARA.—Bro. Henning was present at our last meeting, and if anything were needed to revive life in the Grange, he supplied that want. He referred to our first meeting, eight months ago, in a small, dusty room, and traced our progress up, step by step, as we had grown and strengthened, till he beheld one of the largest and most comfortable halls on the coast, well-filled with earnest Patrons of Husbandry, disciplined by time, and cemented in a bond of union by common sympathies, working in perfect harmony for a common purpose.

He had to-day witnessed the conferring of the second degree on 14 of the class of sisters who started the month with us; and although Bro. H. still clung to San José, his "first love," he had not the face to claim a better looking class; and, in considering their numbers, he gracefully yielded them the "Champion Belt," and welcomed them to a common plane with their brothers in the Grange and in the Order.

Fraternally yours, I. A. WILCOX.

April 14th, 1874.

ANTELOPE GRANGE, YOLO COUNTY.—J. M. Dutton, Lecturer of Hungry Hollow Grange, writes: "I had the pleasure of being present at the meeting of Antelope Grange, on Saturday, March 21st, and witnessed the initiation of 15 ladies and the same number of gentlemen in the first degree of the Order of P. of H. After the initiation was over, Master G. L. Parker, of Hungry Hollow Grange, proceeded to install Brother W. J. Clarke Master of Antelope Grange. The members of Antelope appear to be alive to the good cause, and are pulling together. That is just what the farmers have got to do; they have got to make a long pull, a strong pull, and all pull together; that should be the motto of the farmers, and then they will succeed.

SACRAMENTO GRANGE.—Bro. Rich writes that this Grange is flourishing. They have recently procured a fine organ, the melodious sounds of which, on their symbolic farm, cheer the toilers on their way. The Sacramento Council met at Pioneer Hall on the 31st ult., called together by Deputy Manlove. Five Granges were represented. A constitution was submitted for approval, and officers for this present year elected. Regular quarterly meetings will be held, with called meetings as occasion may require. A large attendance is expected at the next regular meeting.

CARPENTERIA GRANGE, SANTA BARBARA CO.—O. N. Caldwell, Master, writes:—Our Grange is prospering. Applications are coming in, and most of the brothers appear to be in earnest; but "seed time" is not a favorable season for filling our hall; still we manage to meet every two weeks, and we shall try to see that we do not get behind.

Santa Clara County Council.

EDITORS RURAL PRESS:—The delegates were nearly all present in the Council held on Monday of this week, at Santa Clara. A large number of fourth-degree members, from the various Granges of the county, were also in attendance. All were represented, excepting Gilroy, which is a newly-organized Grange, and has not yet wheeled into line.

The forenoon was occupied in completing the organization and plans of co-operation. But the afternoon session showed that the business of the Council is solid work. Of course, this is not of a public nature. But it is not too much to say, that it is to deal with questions of the day, and of the hour, regardless of their apparent magnitude; it being an undertaking to comprehend the "situation," and organize success.

Brother C. J. Cressy, of Modesto, was present by authority, and presented the matter in hand in his original way, adopting the motto of "Never say can't; and never turn back on an undertaking."

At the conclusion of his address the following resolution was unanimously adopted:

Resolved, That the thanks of this Council are due and hereby tendered to Brother Cressy for the interesting, instructive address with which the Council has been favored; and that the sentiments of the address are worthy of earnest consideration.

Council resolved to hold their future meetings alternately at San José and Santa Clara. Then adjourned to meet at S. J. on the second Monday in May, at 10 A. M. Fraternally yours, I. A. WILCOX, Sec'y.

A GRANGE WEDDING.—At a meeting of Kiwelattah Grange, Humboldt Co., held on the 4th inst., at the conclusion of the ceremonies of conferring the Fourth Degree, a newly-made Husbandman and Matron were joined in wedlock; an incident which added much to the interest of the harvest feast which followed.

SEWING MACHINES.—We have this week to add to the list of Granges which have "resolved" to act in unison with the Dixon Grange on the Sewing Machine question, the following: Spring Valley Grange, Colusa Co.; Eden Grange, at Haywood's; and Salinas Grange, Monterey Co.

GONE EAST.—Mrs. W. H. Baxter, wife of the Secretary of the State Grange, and Pomona of that Grange, took her departure for the East on Wednesday last, on a visit of a few months to the home of her parents and relatives in New Jersey. She will return in season to be present at the meeting of the State Grange, in October, next.

New Granges.

SAN MATEO GRANGE, SAN MATEO COUNTY.—Was organized on Saturday, April 11th, by Deputy B. V. Weeks, of Pescadero, with 15 charter members. The following were elected and installed as officers for the current year: A. F. Green, M.; David S. McLellan, O.; W. G. Price, S.; Levi Flagg, G. K.; J. E. Butler, G.; John Spaulding, A. S.; Orin Brown, L.; W. M. Newhall, C.; W. H. Lawrence, Sec'y; Mrs. J. E. Butler, Ceres; Mrs. Orin Brown, Pomona; Mary P. McLellan, Flora; Mrs. W. G. Price, L. A. S. Bro. Weeks says there is splendid material in San Mateo for a good Grange, and thinks the one started will meet with the fullest success.

BINGHAMPTON GRANGE, BINGHAMPTON, SOLANO CO.—Was organized on Saturday, the 11th instant, by Deputy R. C. Haile, with twenty-nine charter members, earnest and worthy men and women, and intelligent withal. The following officers were duly elected and installed: Albert Bennett, M.; Jackson F. Brown, O.; Geo. C. Mack, L.; Henry C. Gay, S.; Jeremiah Tuck, A. S.; Frank B. Dodge, C.; Chas. E. Plummer, T.; Edgar A. Beardsley, Sec'y; John A. C. Thompson, G. K.; Mrs. Susan A. Mack, Ceres; Mrs. Mary E. Ryehard, Pomona; Mrs. Florence E. Gay, Flora; Miss Ida Jameson, L. A. S.

SAN PEDRO GRANGE, VENTURA COUNTY.—Through some oversight we have neglected to publish, or have never received the particulars of the organization, by Deputy Wasson, of San Pedro Grange, Ventura county, which came into existence on the twenty-eighth of February last, with the following list of officers: J. Y. Saviers, M.; G. Hill, O.; W. H. Cook, L.; S. D. Pinkard, S.; A. M. Neece, A. S.; Thos. Alexander, C.; J. Barchard, T.; D. D. DeNure, Sec'y; J. S. Cook, G. K.; Mrs. Nettie J. Hill, Ceres; Mrs. M. K. Saviers, Pomona; Mrs. S. D. Pinkard, Flora; and Miss Minnie Alexander, L. A. S.

COSTA PINES GRANGE, LEE TOWNSHIP, SACRAMENTO COUNTY.—Was organized April 13, by Deputy W. S. Manlove, with the following list of officers: James A. Elder, M.; C. W. Pierce, C.; Gillis Doty, L.; William K. Lindsay, Jr., S.; William D. Hass, A. S.; John W. Witt, C.; Owen Ingersoll, T.; J. H. Atkins, Sec'y; Townsend, D. French, G. K.; Mary Jane Hass, Ceres; Caroline French, Flora; Emma Richards, Pomona; Alice Elder, L. A. S. The Grange is named from the river in the valley in which most of the members reside. The post office address is Sacramento City.

MOUNTAIN GRANGE, SAN BENITO CO.—Was organized on the 9th of April, by Deputy J. D. Fowler, with a charter list of nineteen members. The following were elected and installed as officers for the current year: S. Kennedy, M.; G. W. Butterfield, O.; W. H. Blosser, L.; B. Smith, S.; J. F. Taylor, A. S.; J. Mantes, T.; J. W. Mathews, Sec'y; W. McCool, C.; C. P. Bryant, G. K.; Miss S. M. Bryant, Ceres; Mrs. C. C. Butterfield, Pomona; Miss M. J. Kennedy, Flora; Mrs. R. H. Blosser, L. A. S.

PROPOSED GRANGES.—A new Grange was to have been organized to-day (Saturday) on the Russian river, in Sonoma county, by Deputy Geo. W. Davis, of Santa Rosa. Full lists are prepared for organizing new Granges at Coloma and Diamond Springs, in El Dorado county, and at Jenny Lind, in Calaveras county. We hope to get reports from each of these localities next week.

Land Monopoly—Equal Taxation.

Resolutions Adopted by Chico Grange, April 4th, 1874.

From the earliest settlement of the valleys of California by an American population, it has been generally and justly held that the monopoly of farming lands, inaugurated by the system of Spanish grants, and continued by speculations in school, swamp and other public land warrants, and now rapidly multiplied by the railroad lands, is the greatest drawback to the material prosperity of the community.

Every quarter section of arable land in the State can be made to support a family, and to furnish them with all the necessities, and many of the luxuries of civilized life, besides contributing to the support of schools, churches, and the public treasury; and it should be the aim of all societies, formed for the promotion of the public welfare, to hasten a result so desirable.

For these and other reasons, equally plain, the following preamble and resolutions are offered:

Whereas, Land monopoly is now, and for many years has been, the greatest evil afflicting the body politic, far exceeding in its injurious influences the exactions of railroad corporations, or the result of maneuvering stock speculators and middlemen, and doing more to retard the prosperity of the State than all the rings combined; and

Whereas, It is well known that an additional tax of 20 per cent. was imposed upon the people of this county the past season, by the State Board of Equalization, for the sole reason that the lands held in large bodies were not assessed at as high a valuation as other real estate; and

Whereas, The only feasible proposition yet advanced for the reduction of the weight of this monopoly is, that large tracts of land shall be taxed at the same rate per acre that small farms are assessed for; and

Whereas, Experience has demonstrated that it is futile to seek for relief from legislation, so long as we are represented by lawyers, merchants and mining speculators; therefore,

Resolved, That a committee of three be chosen by this Grange, whose duty it shall be to attend all meetings of the Board of Equalization of this county, and there take such measures as will insure the actual, instead of nominal equalization of the burden of taxation, so far at least as the real estate of this county is concerned, by taking the proper steps to secure the taxation of large tracts, held by one man or by any corporation, in accordance with the market value thereof, at the same rate that small farms are assessed.

Resolved, That the necessary expenses of such committee, when audited, shall be paid from the treasury of this Grange, and that the Granges of the county be invited to co-operate.

The resolutions were referred to a committee, and, receiving a favorable report, were adopted, and ordered published in the RURAL PRESS, Northern Enterprise, and Butte Record.

H. BARNES, Sec'y.
E. HALLET, L. W. M. pro tem.

WOMEN AS PATRONS OF HUSBANDRY.—A woman, not a Patron, asks, through the Rural New Yorker, some P. of H. the following question:—"Have you realized any or all of your expectations? Are your homes happier, your burdens lighter, your prosperity greater? To which a lady correspondent, who is a P. of H., replies as follows:

It is too soon to look for great results. The oppressions which called our Order into existence were the growth of years, and it will take time and patience to remove them, but it will be our own fault if we fail in the end. Our homes are happier in proportion as order and intelligence pervade them; and will it not assist us in this to impart our ideas to others and get theirs in exchange? And cannot this be done to better advantage in the company of fifty or a hundred farmers' wives than by spending so much time in miscellaneous visiting as some do? The social part of the Grange promises to be more beneficial to women than men, as they live more isolated from each other. Every one's prosperity will be greater in proportion as he or she applies the maximum of economy, taught by the Grange, to business.

GRANGE PICNICS.—The Granges very generally throughout the State are making preparations for grand picnic celebrations on May day, which comes this year on Friday—a very convenient day for such a celebration.

RYDER'S AMERICAN FRUIT-DRYER.—We would call special attention to the advertisement, in another column, of Ryder's American Fruit-Drier, a new device for drying fruit, which has already been largely introduced among the fruit-growers of the Eastern States, and more recently, to some extent, in this State. It was put in operation last fall, on Mr. Reed's ranch, in Yolo county, where, as we learn by a letter from Mr. Smith, the gentleman in charge, it has done most satisfactory work. This device, by its simplicity and small cost, appears to be just the thing for general introduction among the fruit-growers of this State, who desire to utilize their crops of peaches, apples, plums, etc., instead of, as heretofore, allowing their surplus growth to rot and waste upon the ground. The principle of the machine is distinctly set forth in the advertisement, or may be readily learned from examination of the illustration which accompanies the same. The fruit cured by this drier at Reed's ranch, last year, took the premium at the State Fair.

THE SLUTHOUR PUMP.—One of the most valuable devices for raising water is the Sluthour pump, which has now been for some time in use in this city. Its work has been witnessed and approved by thousands, when it has been employed to raise water for laying foundations for numerous buildings along the city front. It was employed at the Appraiser's building, now being constructed on the lot adjoining the Custom House, and may be seen at work at the new Palace Hotel. It has also been used in the mines, and for irrigation and general farm purposes. It is claimed that it cannot be excelled in the economical use of power by any pump in use, or in the simplicity and durability of its parts. We would refer the reader to advertisement in another column, where small illustrations are shown of the construction of the pump, both as a lifter and as a force pump.

MANGE IN STOCK.—Our Vacaville correspondent thinks he can beat the recipe from the New York Sun, published by request in the RURAL, particularly in the cost of the ingredients. To treat a herd of mangy stock with apothecaries' materials is more expensive than practicable, and he claims that their use is not so effectual as his plan. After grooming freely, use strong lime-water, or even lye; then next day rub with hog's lard, to which a little coal-oil has been added. Unless the weather is cold, he says, never mind the washing off. After having tended to the stock, go through the barn and sheds with a strong lime whitewash.

PAPER STOCK.—Among many new materials suggested for making paper, a peculiar grass, known as marsh grass, found in the Southern States, is one of the latest. It seems as though almost any refuse vegetable fiber could be utilized in this way. When we have more paper factories in operation in this State, many things will be found of value which now are worthless, or only injurious.

CONVENIENT.—A method has been patented for the preservation of yeast, which consists in washing the yeast with water, drying by pressure and with the aid of a centrifugal machine, finally in a partial vacuum at a low temperature; the dry powder is then packed in hermetically sealed cans, and may be preserved for months.

THE FLOWER GARDEN.

Bouquet Making.

Arranging flowers loosely and prettily and naturally in vases and other ornamental receptacles for flowers, is a very easy work, requiring only good taste and some knowledge of the harmony of colors. As a rule, flowers do this work well, and need no superfluities from us. The making of baskets is a little more difficult, but more formal or artificial. First, line a basket with tin foil, or scatter a little cypressum or other green material, to form a kind of green lining, and over this put a lining of strong paper. If the basket is not so open as to show the lining, a simple lining of paper will be enough. Then fill the basket with damp sawdust, rounding it off at the top and covering with damp moss, inserting the stems of the flowers in the moss. If the natural stems are not suitable for this work the flowers can be "stemmed," that is, fastened to sticks, as recommended for floral designs. It is well to give an edging or border mainly of green. Very few flowers have stems suitable for nice bouquet work, so it is the custom to "stem" all flowers; that is, give them artificial stems; and the material used for this purpose is broom-brush or wire, to which the flowers are attached with spool cotton or fine wire. These stiff stems can be made to hold the flowers in any position desired. To keep the flowers from crowding each other, and also to supply moisture, it is usual to wind damp moss around the stem of the flower at its connection with the artificial stem. The central flower, which is usually the largest, must have a stiff straight stem, for this really forms the back bone of the bouquet, as well as the handle. Fasten the stems of all flowers around this central flower.

After the flowers are all properly attached, and the bouquet formed, cut off the handle to the desired length and cover this with tin foil, or wind with white ribbon, leaving a loop, so that the bouquet may be suspended if desired. Ornamental papers, prepared for the purpose, are very pretty, and can be obtained at a small price of most florists. These cover the handle and bottom of the bouquet, and also usually make a quite ornamental border. Our remarks are, of course, designed for hand bouquets, but larger bouquets are made in the same manner, except that they are more pyramidal in form. Small bouquets, usually called button-hole bouquets, are becoming very popular and almost indispensable. They are worn principally by gentlemen, but to some extent by ladies in the dress and hair. They are made in two ways, of a single flower, such as a rose bud or tuberose, with a leaf as a back ground, and also of several varieties of small flowers. The lower part or stem is sometimes wound with tin foil, and fastened to the coat or dress with pins. A better way, however, is to use the neat little button hole bouquet holders, made of glass, of all colors, and attached to the dress or coat by the pin which belongs to the holder. These holders contain water, and keep the little bouquets fresh for several days, while the stems fit so tight to the mouth that no water can escape. —Vick's Floral Guide.

WARM WATER FOR PLANTS.—There is no mistaking the perfect effect of warm spring rains upon young grass and plants, and its influence upon the germination of seeds; whilst autumn rains—unless they, too, are warm—produce no such sudden and vivifying effect. Let us learn care from these effects in nature, and not chill our flowers with cold water, nor poison them with filthy water.

PLANTS WITH SLENDER BRANCHES which naturally hang down, are the most suitable for hanging baskets. "Mother of Thousands"—the "Wandering Jew" with its pretty marked leaves—the Lobelias, and some of the trailing Campanulas or Bell flowers—the well-named "Rat-tailed Cactus," and the so-called "Ice-plant," are all more at home when suspended than when grown in any other position.

THE BLUE KING.—The "Blue King" is the name of a new and really good blue-colored bedding pansy, just introduced in English gardens. The flowers are described as fine in form, of a deep, vivid blue color, with a bright and conspicuous yellow eye. It is not liable to sport, nor be scorched by the summer's sun. We hope it will be introduced in this country.

SOIL FOR FLOWERS.—Which is the best soil for flowers? I think it is the best to take one part of black loam, one part sand, one part charcoal, and one part old cow manure; I used this for Mignonette, and have always had good luck with it. —Cor. Floral Cabinet.

SEA WATER AND SEEDS.—M. Thuret, who has been making investigations on that subject, finds that a long immersion in sea water does not always destroy the vitality of seeds; three species out of twenty-four germinating after being immersed more than a year.

The Los Angeles Chamber of Commerce is preparing statistics of the resources of the county, showing its desirable features to immigrants.

DOMESTIC ECONOMY.

Preserves vs. Canned Fruit.

Will you allow an old-fashioned housekeeper to correct an idea which passes current for a fact, because no one takes the trouble to dispute it? I allude to the idea that almost all housekeepers have, that canned fruit is cheaper, more wholesome and better than preserves—an idea which had better be considered before taking it for granted. Canned fruit does not require so much sugar as preserves, but it requires cans. Tin ones cannot be used more than two or three years, and the more extensive self-sealing glass cans are the subjects of innumerable breakages. This item of cans fully makes up in expense for the extra sugar that preserves require. Then when a can of fruit is opened, if it is not all used at once the remainder spoils, while the preserves left after tea can be returned to the jar. As to their being more wholesome, one hardly would make an entire meal of either; and in the small amount used at one time, I do not think the extra sugar of the preserves would materially injure one's digestion. In regard to their being better, I notice that people who advocate the putting up of fruits in cans, generally prefer, at my table, the golden citron with its syrup of liquid amber, or the delicious strawberry preserves to any canned fruit I could offer them. Not that I would exclude canned fruit from my store of "goodies" for winter use, but do not let them crowd out entirely a few jars of old-fashioned preserves. —Rural New Yorker.

HOUSEHOLD HINTS.—Many young housekeepers are puzzled at the utter failure of receipts for cooking, which have been given them by famous housekeepers; they cannot understand why their bread, cake or custards should not be as good as the trouble they cost would seem to warrant. We believe that a frequent cause of failure in rolls and cakes is the mismanagement of the stove. We well remember a disappointment of our own, when the "puffs" we expected to see as light as air, came out of the oven a sodden mass of dough; yet we knew that the eggs were light and the receipt an admirable one. They were not baked through, yet they had been in the stove three times as long as necessary. A more experienced friend soon told us what was the matter—the stove needed cleaning. Another time our custards were whey, and we learned that a slow fire was necessary for them. An admirable suggestion has lately been made which, if carried out, would be of inestimable service to housekeepers. It is that a thermometer should be attached to the oven of stoves, which might indicate by words instead of degrees the proper heat for baking different articles. Such an arrangement would save American housekeepers many annoyances, and assist in preserving the peace of the household, which is often sorely disturbed by failures in the cuisine. —Jou of Ag.

SETTING THE TABLE.—Do not be afraid to be a little extravagant in your fresh table cloths, when soap, water, and a little labor are all you have to pay. Will you, having the best china, do with stoneware every day? or will you pay yourselves the respect usually reserved for company? Clearly, you are yourselves the persons to whom it is of the most importance. Will you sit down to odd plates and cracked saucers six days that you may enjoy gilded china the seventh? By no means. Have plain white French china, which can always be matched when broken, and sit down to it every day. In the same way bring out the best knives and plated or silver forks, also napkins and butter plates, and partake of food with a sense of your own deserts. —Mf. and Builder.

HONEY VINEGAR.—It is said that the best of vinegar can be easily and quickly made from honey. To twenty gallons of rain water add five pounds of honey and two gallons of cider vinegar. If the weather is warm, or it be kept in a warm room or cellar, it will be fit for use in a few weeks. More vinegar added would hasten the process. Every family that keeps bees should be able to have good vinegar all the time. After a barrel is once made, honey and water may be added as the vinegar is used, so as to always keep it nearly full. The barrel should never be entirely full.

FRIED APPLES.—These may be fried with fat, but are still better with slices of fat pork. Put the pieces of pork on the fire; when very hot and frying add the sliced apples—when they are brown on one side, turn them and sprinkle over a little brown sugar. In this case there is an apparent contradiction to the rule for frying—for, but little fat should be used; and, indeed, properly speaking, they are pan-fried, not fried. Ripe apples are best, but green may be used. A few slices of pork, three or four, and a few apples may thus be made into a nice dish for breakfast or dinner.

If our San José friend, who desired information regarding co-operative stores, will send us his name, which we have unfortunately lost, we shall be happy to forward to him the articles of incorporation adopted by a co-operative store in Iowa; these we have received since our previous answer to his inquiry.

FIRE.—A destructive fire took place in Ia Grand, Oregon, April 12th.



My School Days.

By J. J. WHITTIER.

Still sits the school-house by the road,
A ragged beggar sunning;
Around it still the sumachs grow,
And blackberry vines are running.

Within, the master's desk is seen,
Deep-scarred by wraps official;
The warping floor, the battered seats,
The jack-knife's carved initial.

The charcoal frescoes on its walls;
It's door's worn sill, betraying
The feet that, creeping slow to school,
Went storming out to playing!

Long years ago, a winter's sun
Shone over all at setting;
Lit up its western window-panes,
And low eave's icy fretting.

It touched the tangled, golden curls,
And brown eyes full of grieving,
Of one who still her steps delayed
When all the school were leaving.

For near her stood the little boy
Her childish favor singled,
His cap was pulled low on his face,
Where pride and shame were mingled.

Pushing with restless feet the snow
To right and left, he lingered.
And restlessly her tiny hands
The blue-checked apron fingered.

He saw her lift her eyes; he felt
The soft hand's light caressing,
And heard the trembling of her voice,
As if a fault confessing.

"I'm sorry that I spelt the word;
I hate to go above you,
Because—the brown eyes lower fell—
"Because, you see, I love you."

Still memory to a gray-haired man
That sweet child-face is showing;
Dear girl! the grasses on her grave
Have forty years been growing!

He lives to learn, in life's hard school,
How few you pass above him,
Lament their triumph and his loss,
Like her—because they love him.

"Country Messes," Etc.

EDITORS PRESS:—"Apricola," in last week's RURAL PRESS, constitutes himself the farmer's apologist, and brings the poets, classical and modern, to his assistance.

Dickens tells a story of a resurrectionist, "Jerry" by name, whose wife, good woman! was in the habit of praying continually for his reformation. One day Jerry found her "flopping," and rated her for always being "agiu him." "Oh! Jerry! I was not prayin' agin yer, I was prayin' for yer." "Well then, said Jerry, I object to being took the liberty with."

Now, as a farmer, I object to be apologized for; I object to be spoken of as living on "herbs and contry messes." What have dwellers in cities to eat more than farmers? Is my chicken-broth less nutritious because it never figured on a menu, as *potage a poulet*? or my "hash" less palatable because it never bore the title of *fricassee de cochon aux haricots*? Do my asparagus and rhubarb taste less toothsome because they have not acquired that staleness which the manipulation of multitudinous middle-men imparts, and because I have not to pay a high price for them? Shall I be sad because I have not to choose whether I will sit in the blue, green or yellow drawing-room? or because my kitchen and dining-room are divided by a line as arbitrary as the first meridian of longitude? I trust not many farmers vex their souls, as they compare their lots with the enviable position of the free lunchers.

Mrs. Nichols' address to the Potter Valley Graugers mentions troubles of a far weightier nature. The want of society in our sparsely settled farming districts is no doubt in some ways an evil. Not altogether an unmixed evil, I fancy. Our children may lack something of that sharpness, which, as iron to iron, so the countenance of man imparts to man.

"Handsome and brave, and not too knowin'," will probably satisfy most of us as well, and the keenness that verges on dishonesty will be little loss to them.

That society of "intrinsic worth" is indeed a desideratum; when man to man the world o'er,

"Shall brithers be and a' that."

What little I have seen of "society" does not prepossess me much in its favor. Accepting the dictum that "all the world's a stage," the stagers seem at present employed in giving a grand representation of the fable of the bull and the frog. The million taking the part of the frog, and trying their utmost to look as high and feel as big as the "upper ten," who are as unconcerned at their futile efforts as the bull was at the frog, even when he did arrive at his untimely end.

I know city folk will benignly inquire if we country folk don't "feel lousome." How a

grain farmer feels I don't know, but I can answer for it. It used to be considered that country life and content were more or less inseparable; but as a country life has now to be apologized for, we may consider that even the California farmer is included in that trite saying of Pope's,

"Man never is, but always to be blest."

It seems to me, Messrs. Editors, that we almost all make the fatal mistake of considering that our happiness consists in what we have rather than in what we are. If we can only join ourselves to that blessed fellowship of the rich how happy we should be.

Reason and revelation alike tell us that a "man's life consisteth not in the abundance of things which he possesseth." If we analyze our feelings we shall probably arrive at the conclusion that happiness consists in the power of accomplishing our wishes. Man can conceive of no higher happiness than the perfect fulfillment of his will, whatever that will may be. He who should possess this happiness would indeed have "found the philosopher's stone."

And yet this happiness all may possess. Nay, it is pressed on the acceptance of all! "Let this same mind be in you which was also in Christ Jesus;" conform your wills to God's will and all things are yours; all power is given you in heaven and earth; and though having nothing, as regards the tawdry tinsel of time, you will yet possess all things. All God asks is the voluntary concurrence of our wills with His, and giving this we are obviously "equal with God," heirs of the kingdom; refusing this we leave Him no alternative but to compel submission to His power, the outer darkness of impotent will. He can ask no less, we can give no more.

This is no verbal juggling, as I showed in my last letter. One will alone is excellent, for the simple reason that one will alone can be accomplished. We must then, necessarily, ally ourselves and identify ourselves, either with omnipotence or impotence.

E. BEWICK.

Courting Under Difficulties.

Katie Blake was the only daughter of Jacob Blake, the old miser of Westbrook. She was more than commonly pretty, and her frank, engaging manner enhanced her charms. At her father's death she would be heiress to seventy-five thousand dollars; and although men pretended not to be interested by pecuniary affairs in love, yet it is supposed that this prospective wealth did not lessen the number of her lovers and adorers.

Among those most ardent, and perhaps most sincere, was Will Darnmouth, a rattle-brained carpenter, with a heart larger than his purse, and very little thought or care for consequences. Fortunately, old Jacob never suspected the partiality of his daughter for Will; he would have put her on bread and water before he would have consented to the slightest degree of intimacy with Will Darnmouth.

Jacob Blake was not in favor of marriages. Those who knew his circumstances were not surprised at this; for Mrs. Blake was a Tartar, with temper enough for two Tartars.

A maiden sister of Mr. Blake resided in the family, whose principal business seemed to be to act as an echo to her brother and his wife. Whatever they thought she thought too. She regarded it as a primary sin for Katie to associate with young men; and this doctrine was perseveringly drilled into her niece, who, though she never dissented, had her own views on the subject.

One day Mr. Blake and wife went to Dedham to attend a fair, and Miss Peggy being sent to a friend, Katie was left alone. Will Darnmouth in some way learned the state of affairs, and early in the afternoon he came over to keep Katie company. As her parents were not expected home until the next day, and Peggy not till late in the evening, Will felt perfectly secure in stopping awhile after supper; and he and Katie were having a jolly time popping corn in the old-fashioned frying-pan, over the huge wood fire, when there was a sound of voices at the door.

"Good gracious!" cried Kate, turning white with alarm, "there is Aunt Peggy. Oh, Will, what shall we do? She will scold me to death, and father will be furious. Get under the lounge, quick. Oh, Will, do for my sake."

Will could not withstand the pleading of Kate's eyes, and deposited himself in the designated place. Kate put out the light, and darted into an adjacent room, and in a moment was apparently fast asleep.

Peggy's voice was heard speaking softly in the entry: "Be careful, Mr. Pike, there's a loose board there. I don't want to disturb my niece. Softly; the board may creak."

"Peggy, dear, where are you?" responded the squeaking voice of the Squire, the widower of a year; "I can't tell which way you've gone." "There, Daniel, be easy. Good heavens, Daniel Pike! Well, I never! and a report burst in the ear like the uncorking of a bottle of champagne. "Oh my," cried Aunt Peggy, "what would Jacob say? I declare I haven't been kissed by a man since!"

"Let Jake mind his own business," retorted the Squire; "you and I can take care of ours without his help," and then followed a report similar to the first, only more of it.

"Do be quiet, Daniel, and let me get a light. Sit yourself down afore the fire and make yourself at home."

A light was soon procured. Peggy divested herself of wrappings, and, blushing like a girl, in her teens, sat down opposite the Squire.

"It's a fine evening," said Peggy, by way of opening conversation.

"Very," replied the Squire, drawing his chair close to her and laying his hand over the back.

"Oh, good gracious, Daniel, don't sit quite so near me. I—that is—I don't consider it strictly appropriate. Mercy! what is that?"

Both listened attentively. "It was the wind rattling the windows, I guess," said the Squire. "Don't you think you are getting nervous, Peggy?"

"I thought it was Katie waking up. And if she should, I would never hear the last of it."

"Hark! there's a noise—I!"

"Gracious airth, it's the bells. It's Jake and marm coming back! What shall I do? We're done for. Oh, Squire, taint right that we should be nothing to each other. Do help me! What shall I do?"

"Tell me where to go, Peggy; say the word! I'll go anywhere for your sake, if it's up the chimney."

"Under the lounge, quick! quick! don't delay a minute."

The Squire obeyed, but the space was already so well filled that it was with difficulty that he could squeeze himself into so small a compass. And just as he had succeeded, Mr. Blake and his wife entered the room, floundering in the dark, for Peggy, deemed it best to extinguish the light.

Jake made for the fire, which still glowed red with coals, and fell headlong against Peggy, who was standing bolt upright, trying to collect her scattered senses.

"The deuce!" cried Jake. Look out, old woman, or you'll be down over me. It's dark as a pocket here, and I've fell over the rocking-chair or the churn, I can't tell which. Hullo! what is this?" reaching out his hand to feel the situation, and coming in contact with the bearded face of the Squire.

"By George, it's got whiskers! Peg! Peg! where are you and where is Kate, and what's this?"

The Squire did not relish the assault made on his hirsute appendages, and by way of retaliation he gave a series of vigorous kicks, which hit Will Darnmouth in the region of the stomach, and stirred his bile.

"Look here, old chap, I'm perfectly willing to share my quarters with you, seeing as we are both in for it; but you had better not try that play again."

"Hevings," ejaculated Miss Peggy, "whose voice is that?"

"Who in the deuce is here? that's what I want to know," cried Jake, struggling to get an upright position. Hullo! who's fell over my legs?"

"I'll let you know who's up or down," said the voice of Mrs. Blake, and the old lady scrambled up only to get instantly down again over a chair. "Jake, where are you! Get up, this instant and get a light, or I'll shake the breath out of your body when I get on my feet again."

Jake started to obey; just then Tige, the watch dog, bounded into the room, and hearing the uproar, managed to break loose from his chain, rushed upon the scene and set up a bow-wow.

The Squire had a mortal dread of dogs, and neither fear nor love was strong enough to keep him quiescent now. He sprang to his feet with a yell. Will followed. Katie, full of alarm for her lover, appeared at the door with a flaming tallow dip. Peggy threw her arms around the Squire's neck with a cry of terror, and Jake was silent with amazement. Mrs. Blake was the only one who possessed her wits. She seized the corn popper and laid it about her with vigor.

Her aim was not always correct, and in consequence she smashed the looking-glass into a thousand fragments, demolished two bowls and a pitcher that were quietly reposing on the mantle, and knocked down the clock from the shelf.

The Squire broke from Peggy's embrace and darted out of the window. Will followed, and Mrs. Blake would have pursued by the same outlet, but she was a little too large to get through with ease.

A dreadful council was held; Jake stormed, and Mrs. Blake threatened, and at last Katie and Peggy confessed; and Jake and his wife were so rejoiced at the prospect of getting rid of Peggy that they forgave their daughter, and took Will Darnmouth home at the end of the year, and in due time Peggy and the Squire were made one flesh.

How TO WIN A RACE.—I conversed with a raicist to-day. He told me how he won a race in New Haven. For four weeks he mixed soft rubber with the horse's oats, and every day he hitched that horse to a post, and opened a blue cotton umbrella in his face, making him pull back, stretching his neck awfully. Then he'd shunt the umbrella, the horse would stop pulling, and his neck would resume its original length. He got the horse's neck very elastic, and on the day of the race, just at the finish, the driver struck this man's horse a bat behind his ears, and his neck shot off almost a rod, winning the race by a neck. It is said to be the biggest homestretch on record. I believe the story to be true because the man is the only son of a deacon.—Exchange.

A FEMALE student of medicine wants \$20 "to buy a man to cut up." Most women can cut up a man cheaper than that.

Animal Teaching.

Long years before the American Rarey's usme was heard as a "horse-tamer," a secret existed, as a family heirloom, among a branch of the O'Sullivan family in the south of Ireland. This family was known as "The Whisperers," and they possessed the power of rendering as quiet as a lamb the most stubborn and unmanageable horse that ever existed. Whether they did anything more to a horse than to breathe into his nostrils we know not, but by doing this and by kind soothing, and other ways known to themselves, they effected their purpose and retained their fame. Putting the question of drugs or stimulants, or other fascinating means aside, and coming to the point of pure and unadulterated domestication and teaching, perhaps there was no person in modern times achieved so much success in animal teaching as S. Bissett. The man was a humble shoemaker. He was born in Scotland, in 1721, but he afterwards removed to London, where he married a woman who bought him some property.

Then, turning to a broker, he accumulated money until the year 1759, when his attention was turned to the training of animals, birds and fishes. He was led into this new study on reading an account of a remarkable horse shown at a fair at St. Germain.

Bissett bought a horse and dog, and succeeded beyond his expectations in teaching them to perform various feats. He next purchased two monkeys, which he taught to dance and tumble on a rope, and one would hold a candle in one paw and turn the organ with the other, while his companion danced. He next taught three cats to do a great many wonderful things, to set before music books, and to squall notes pitched to different keys. He advertised a "cat's opera" in the Haymarket, and successfully carried out his programme, the cats accurately fulfilling all their parts. He pocketed some thousands by these performances. He next taught a leveret, and then several species of the birds to spell the name of any person in the company, and to distinguish the hour of the day or night. Six turkey-cocks were next rendered amenable to a country dance, and after six months' teaching, he trained a turtle to fetch and carry like a dog, and having chalked the floor and blackened its claws, he made it trace out the name of any given person in the company.—Land and Water.

INDIVIDUALITY.—A man of real individuality is not desirous to display his exceptional qualities. In the presence of common-place people he accepts their views as far as he can, and does not care to impress his own. It is a poor spirit which seeks to startle weaker brethren by the utterance of extreme views. The attitude of the superior genius is based upon the assumption that what he has to say will not be understood. Success for him is only attainable by a mystification of his hearers, and in the cloud of false surprise he escapes without revealing his own intellectual short-comings. It is quite different with the man who has really something to say. As a rule he is not very anxious to say it, and is quite content that he should be judged as an intellectual disappointment.

THE latest instance of implicit faith in the efficacy of prayer comes from a small town in the northern part of Maine, where it is presumable the scientific tests of Prof. Tyndall are as yet unknown. The people were holding a joyous religious meeting, and the pastor had covered all the local matters within his knowledge, when, finding himself still in trim for a mighty wrestle with the Lord, he generously remarked that if any present had absent relatives or friends, prayers would be offered in their behalf. No sooner was the proposition made than one whose simple looks betokened his unshaken confidence in the pastor's power, arose and drawled out: "I sh'd like to hev ye pray for my brother. He went off two weeks ago, and I ain't heard from him since. I don't know jest where he is, but you needn't pray below Bangor."

AN old gentleman by the name of Gould, having married a very young wife, wrote a poetical epistle to a friend to inform him of it, and concluded it thus:

So you see, my dear sir, though I'm eighty years old
A girl of eighteen is in love with old Gould.

To which his friend replied:

A girl of eighteen may love Gould, it is true;
But believe me, dear sir, it is Gould without U!

A WAG went to the station of one of the railways one evening, and, finding the best car full, said in a low tone, "Why, this car isn't going!" Of course this caused a general stampede, and the wag took the best seat. In the midst of the indignation the wag was asked: "Why did you say this car wasn't going?" "Well, it wasn't then," replied the wag, "but it is now."

COMMON-SENSE is looked upon as a vulgar quality; but nevertheless it is the only talisman to conduct us prosperously through the world. The man of refined sense has been compared to one who carries about with him nothing but gold, when he may be every moment in want of smaller change.

ELI PERKINS said: "When I lectured before the House of Representatives at Springfield, (Ill.) hundreds of people left the house, and they said if I had repeated my lecture the next night they would have left the city."

BOUND TO GET A SUBSCRIBER ANYWAY.—He was once on a jaunt in the township of White Oak, Ingham county, sticking to every farmer until he got his name and money, and so it happened that he came to a house where death had called a few hours before. The farmer's wife was laid out, and the husbandman and his children were grieving over her loss when the editor knocked at the door.

"What's up?" inquired the editor, as he saw the farmer's solemn countenance before him.

"My wife is dead," replied the farmer.

"Is that so?" mused the editor, a little disappointed. "Did she die easy?"

"Dropped off like a lamb."

"Did she say anything?"

"Not a word—just went right to sleep like."

"I didn't know," continued the editor, a sad look on his face, "but what she might have requested you to subscribe for the *Cascade*, which you know is the best paper in the county. If you want it I'll take your name right in, and under the circumstances I won't charge a cent for the obituary notice!"

The farmer hung off a while, but before the editor went away he had two additional dollars in his pocket, and had written out an obituary notice for publication in the next issue, which the bereaved husband pronounced "a mighty smart piece."—*Detroit Free Press*.

A GOOD MEMORY.—While journeying by rail, not long since, I witnessed the following incident: One night after I had scrambled into my sleeping berth, I heard loud and angry voices proceeding from the rear of the car. "I tell you this is a sleeping car, and you can't come in without a ticket." "Begorra, I had a ticket." "Where is it?" "I've lost it." "If you really had the misfortune to lose your ticket, perhaps you can remember your berth." There was an interval of silence, Paddy evidently employing his thinking powers. "Och, be jabers," he exclaimed at length, "I was born on the 26th day of October, 1848."

QUEEN VICTORIA is credited with an amusing and amiable witicism. Some one at the court had spoken disparagingly (of course) of the hostile criticisms pronounced by Sir Charles Dilke on the civil list. "It is strange," the Queen is said to have replied, "for I remember having him as a boy on my knee and stroking his hair. I suppose," added her Majesty, after a moment's pause, "I must have stroked it the wrong way."

THE London *Hornet* gives the following as one of the effects of the late royal marriage: "Bookseller.—Will you have those volumes bound in Russia or Morocco, sir?" Retired coal-dealer.—"Well, if I can't have 'em bound in London, send 'em to Russia. We must encourage the Czar now, you know."

"How did it happen that your house was not blown away by that hurricane last week?" asked a scientific observer, who was following the track of a tornado, of a farmer whose house lay right in the line of destruction. "I don't know," replied the farmer, unless it's because there's a heavy mortgage on it."

A STOICAL Scotchman was addressed by his sick wife: "Oh, John, I shan't leave this bed alive!" "Please theesself, Betty, and thee'll please me," returned John, with equanimity. "I have been a good wife to you, John," persisted the dying woman. "Middlin, Betty, only middlin'."

LAMARTINE was asked by a friend if he did not spend too much in advertising. "No," was the reply, "advertisements are absolutely necessary. Even Divine worship needs to be advertised. Else what is the meaning of church bells?"

THE capacity of Americans for public speaking strikes Charles Kingsley very forcibly. He says he heard last week half-a-dozen better speeches thrown off upon the spur of the moment than he would have heard in England in twelve months.

A SHEWED old gentleman once said to his daughter: Be sure, my dear, you never marry a poor man; but remember that the poorest man in the world is one that has money and nothing else.

"PADDY," said a joker, "why don't you have your ears cropped? they are entirely too long for a man." "And yours," replied Pat, "ought to be lengthened; they are too short for an ass."

A HOUSEKEEPER, writing of poor servants, says that if women would study housekeeping as their husbands study law, medicine, and book-keeping, there would be less complaint of bad servants.

"Who goes a borrowin', goes a sorrowin'." More often it is "the other way up." Who goes a lendin' too often goes a sorrowin', while who goes a borrowin' not unfrequently goes on his way rejoicing at his dexterity.

THE man who is awfully urbane to his wife before strangers is generally also "her bane" behind their backs.

A MAN, who is eulogized as an "energetic citizen," was run over by a funeral in Providence, R. I., last week.

A TERRIBLE man, who has been trying to make both ends meet, is living on head-cheese and ox-tail soup.

Young Folks' Column.

The Way to Do It.

By M. M. D.

I'll tell you how I speak a piece:
First I make my bow;
Then I bring my words out clear
And plain as I know how.

Next I throw my hands up, so!
Then I lift my eyes—
That's to let my hearers know
Something doth surprise.

Next I grin and show my teeth;
Nearly every one;
Shake my shoulders, hold my sides;
That's the sign of fun.

Next I start and knit my brow,
Hold my head erect;
Something's wrong, you see, and I
Decidedly object.

Then I wabble at my knees,
Clutch at shadows near,
Tremble well from top to toe;
That's the sign of fear.

Soon I scowl, and with a leap
Seize an airy dagger.
"Wretch!" I cry. That's tragedy,
Every soul to stagger.

Then I let my voice grow faint,
Gasp and hold my breath;
Tumble down and plunge about:
That's a villain's death.

Quickly then I come to life, —
Perfectly restored;
With a bow my speech is done.
Now, you'll please applaud.

—From St. Nicholas for April.

Grizzley From His Cage.

About Bug-Bears in General.

Those of my young friends who are old enough to begin to loiter about the tents of science, and in whose minds a longing curiosity is springing up to know what is there hidden from the vulgar gaze, have, I venture to say, in most cases been discouraged and disheartened by the reports of those who are continually returning from a superficial examination of the exhibition. They will try to make you think that there is so much to learn in there, that it's all nonsense for common folks like you to try your hand at it. So don't you see, we have a bug-bear even in the threshold of knowledge. But, my young friends, I hope you will not be frightened by such stories. You just walk in and take your seat at the repast which science sets before all; (wait, however, until your mental appetite is good and sharp) and you will enjoy a never-ending feast. Take up botany, for instance, one of the most charming as well as most useful of sciences. Begin with the first principles, and don't be afraid of the big books on the subject, and you will be astonished at the ease and clearness of the progress which you are making.

Or take animated nature; and you will be charmed with the simplicity of the rules by which the many classes of animals are defined. For instance: You may sometimes wonder whether a certain animal is of the dog kind or the cat kind. Does it sheath its claws? If it does, it is of the cat kind. If it does not, then it is of the dog kind; though he may not be a kind dog. And so when you want to find out whether an animal is a bug-bear or a real bear, just look into its mouth. A real bear has lots of sharp teeth; like these of mine—you can put your hands in my mouth and feel them, if you choose—while the bug-bear has no teeth at all. This is very easily seen, for they always have their mouths open. Having no teeth, they can't hurt anybody; but they do a good deal of damage by going about the country, frightening women and children and newspaper editors.

There are a great many of these animals going about. Now the members of my family care more about seeing than being seen, whereas with the bug-bear it is quite the reverse. But some of these fellows are getting a little too bold, and are seen in places where they do not belong. There is the Chinese bug-bear; who, not satisfied with frightening the timid occupants of the nursery and the editorial sanctum, is trying to scare the working-classes out of California. Now I have made up my mind to go after some of the California bug-bears, and I think I had better begin with this Chinese chap; and probably by the time you see me again I shall be able to show him up in such a light that, instead of being frightened by him, hereafter you will only laugh at him. It's possible that I may succeed in getting my arms around him; if I can, why, there's just where the choke will come in.

Two little girls were comparing progress in catechism study. "I have got to original sin," said one; "how far have you got?" "Me? Oh, I'm way beyond redemption," said the other.

COORING is well enough before marriage, but the billing doesn't come till after; and then it comes from the tradesman.

YOUNG married people who have their houses built, should have it built round, so that discontent can find no corner in it.

Good Health.

Root Filling of Teeth.

Dr. Hirsche says, in the *Dental Cosmos*: Many of the most experienced and able members of the profession still advocate the use of solid gold filling in roots as the best and most reliable method. Admitting the value of such a filling, I think we can, at present, entirely do without it.

One object in filling the pulp canal is to prevent the collection of fluids, and to avoid the deleterious effects resulting therefrom. If we can accomplish this more readily by cheaper processes, it is our duty to do so.

This, however, is not my main reason for objecting to gold fillings. Observation has taught me that many times periostitis, and even the loss of the tooth, ensues, when the operation has been performed in the best manner and by the most experienced dentists. I therefore resolved at the commencement of practice to attempt another method, not being aware at that time that this practice was being used by others.

Considering the relations of dentistry to the public, and those of the latter towards dentistry, it is not surprising that at the present time, in Germany, we have a larger proportion of dead and exposed pulps to treat than have our colleagues in America.

I shall not dwell upon the preparatory steps necessary to be taken in different cases, as these are familiar to the profession; but when the root is in a proper condition for filling, I proceed as follows:

Select a thread of lint, separate or loosen the fibers as much as possible, and then moisten it with chloride of zinc from the cement boxes; then rub oxide of zinc well into it, omitting one extremity of the lint, which is reserved for the application of a small quantity of carbolic acid. The thread is simply the medium for conveying the cement to the extremity of the canal, and is entirely imbedded in it. The end of the lint saturated with carbolic acid is, of course, the first inserted, and is carried directly to the apex. After the root or roots are filled, the cavity in the crown is temporarily closed with cotton and sandarac, and an appointment made with the patient several days subsequently. If, in the meantime, the tooth has been perfectly comfortable, and the patient in a healthy condition, I insert a gold filling in the crown cavity. If, on the other hand, the pulp has been deprived of vitality for a long period, and the tooth easily irritated during preparatory treatment, I fill the cavity with cement and dismiss the patient for the time. By operating in this cautious manner, I am able to assert that I never had periostitis occur in the large number of teeth treated in this manner.

As none of these teeth had given any trouble, I never had an opportunity to satisfy myself in regard to the condition of the root and the filling, until, by an unfortunate accident, a young patient split off the labial surface of a first superior bicuspid, treated in this manner two years previously. The tooth was extracted, at her request. On splitting the root to the apex, I found, as I expected, the filling hard and perfect, and the periosteum in a healthy state.

NOT ENCOURAGING.—In a paper read to the Paris Academy of Medicine, the necessity is argued of preventing perfumers from selling poisonous or dangerous articles, which should be left exclusively to the responsibility of regular chemists, and not sold without a physician's prescription. Arsenic, the nitrate of mercury, tartar emetic, cantharides, colchicum and potassa caustica, are common ingredients in these cosmetics. The so-called lettuce soap does not contain the slightest trace of lettuce; and this and other soaps are colored by the sesquioxide of chromium; or of a rose color by the sulphuret of mercury, known as vermillion. The cheaper soaps contain thirty per cent. of insoluble matter, as lime or plaster; while others contain animal nitrogenous matter, which having escaped the process of saponification, emits a bad odor when its solution is left exposed to the air. The various toilet vinegars are also declared in this paper to be so far noxious, that being applied to the skin still impregnated with soap and water, they give rise to a decomposition, in consequence of which the fatty acids of soap, being insoluble in water, are not removed by washing, become rancid and cause chronic inflammation of the skin.

A CURE for catarrh is as follows: To an ounce of glycerine add fifteen or twenty drops of carbolic acid, and thoroughly apply with a small sponge, to be found at all drug stores, known as the ear sponge. The stimulating and antiseptic properties of the carbolic acid combined with the soothing qualities of the glycerine, are said produce the most happy results. This remedy also affords immediate relief to an ordinary cold.

PURE glycerine should not produce, when locally applied, a burning sensation, which it always does when the fatty acids are not extracted. But even absolutely pure glycerine, when undiluted, is a water-extracting body. It should, therefore, when used as a cosmetic, or for medical application, be always diluted with water.

TRUE ECONOMY OF LIFE.—The true economy of human life looks at ends rather than incidents, and adjusts expenditures to a moral scale of values. The real wastes of life are not those men prate about most volubly and condemn in censorious tones. De Quincy pictures a woman sailing over the water, but awaking out of sleep to find her necklace untied and one end hanging in the stream, while pearl after pearl drops from the string beyond her reach; while she clutches at one just falling another drops beyond recovery. Our days drop one after another from our too careless holding, like pearls from a string, as we sail the sea of life. Prudence requires a wise husbanding of time to see that none of these golden coins struck in the mint of God's own eternity are spent for nothing. The waste of time is a more serious loss than the extravagances against which there is such loud acclaim. Here are thousands who do nothing but lounge and carouse from morning till midnight—the drones in the human hive, who consume and waste the honey honest workers wear themselves out in making, and insult the day by their dissipation and debauch. Here are ten thousand idle, frivolous creatures, who do nothing but consume and waste what honest hands accumulate, and entice others to lives as useless and worthless as their own. Were every man and woman honest toilers, all would have an abundance of everything and half of every day for recreation and culture. The expenditure of a few dollars for articles of taste and *virtu* is a small matter in comparison with the waste of months and years by thousands who have had every advantage society could offer, and exact every privilege it affords as a right.—*Herald of Health*.

RHEUMATISM IN WHALES.—There is, unquestionably, a great deal of unknown and unrelieved suffering in the world. If want of sympathy and difficulty of finding relief add much to physical distress, it is sad to think of the new field of woe on the largest scale, which Dr. Struthers has discovered in hitherto unexplored regions of pathology. In studying the osteology of whales, he has discovered that they are very liable to rheumatism. He has seen many examples of rheumatic ostitis in whales of different kinds. It has been said that animals are not subject to disease until they are brought into connection with man, but this fact contradicts the theory. It is the more remarkable, seeing that whales are less subject than man to variations of temperature. The cold-water treatment does not seem to be efficacious in the cure of the disease.—*Jour. of Chemistry*.

ACTION OF ANTISEPTIC SUBSTANCES UPON VIRUS. M. Davaine has recently examined the following substances, which he classes in regard to their power as antiseptics in the subjoined order: Ammonia, silicate of soda, ordinary vinegar, and carbolic acid; then caustic potash, chloride of oxide of sodium (?), hydrochloric acid, permanganate of potash, chromic acid, sulphuric acid, iodine. The power of ammonia, of vinegar, and of carbolic acid being represented by 1—200, that of iodine would be by 1—12,000. Iodine should therefore be considered as the best antiseptic to be employed in the treatment of maladies, such as malignant pustule, boils, carbuncles, and the like, when, not having become localized under the form of a simple pustule, they have taken up a certain extension. Injections of 1-6000 of iodized water are recommended.

COOLING DRINKS.—A good substitute for lemon-juice is tartaric acid. This is the sour principle in wines, and is made from the deposits in wine barrels, which is tartrate of potash. Cream of tartar or bi-tartrate of potash is also used to acidulate drinks, but objectionable for the reason of the amount of potash it contains. The best substitute of all is the crystallized citric acid itself, as it is extracted by chemical means from the fresh lemon juice. The lemonade made from it is equivalent to that of lemons, especially when flavored with a piece of lemon or orange-peel; and if this cannot be had, a single drop of the oil of lemon. As the crystallized citric acid is very powerful, it takes very little to acidulate a large quantity of sugar-water. As the taste differs in different individuals, it is best to mix by trial, gradually adding acid and sugar to the water until suited.—*Ex.*

CONTRADICTIONS.—The life of a physician is a life of contradictions. He is misrepresented, abused and derided; yet he is sought for with avidity, and freely received into the bosom of families. His opinion can blanch the cheek, or suffuse the eye with tears of joy; and his lips are as closely watched as if from them proceeded the issuance of life and death. He lives by the woes of others; and while he would starve, if confined to the profession, if constant health were the attribute of our race, he is endeavoring to banish sickness from among men. While success in his avocation would ruin him forever, he is always warring against his own interest.—*Boston Journal of Chemistry*.

A REMEDY FOR HYDROPHOBIA.—Professor Maisch recently presented to the Philadelphia College of Pharmacy a sample of *trompatilla*, a new remedy for hydrophobia, from Mexico, where it is said to have been successfully used in the cure of the terrible malady mentioned. It is administered in the form of a decoction. *Trompatilla* is obtained from the stems and branches of *Bouvardia triphylla*.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. DOONE.

PRINCIPAL EDITOR, W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

SATURDAY, APRIL 18, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Who Should be Farmers; Alfalfa Appreciated; Improved Arrangement for Loading and Unloading Wagons, 241. Saving Straw; Neglected Friends; Department of Agriculture Reports; A Useful Implement, 248. Agricultural Progress; A Novel Wire Fence; Killing Weeds; Coal Ashes, 249. Patents and Inventions, 252.

ILLUSTRATIONS.—Threlfall's Apparatus for Loading and Unloading Wagons, 241. A Novel Wire Fence, 249.

CORRESPONDENCE.—"Hagar" on Household Help; Credit where Credit is Due; Correspondence from Windsor; Is the Filare Indigenus? Saltwater for Corn-Worms, and Garget in Cows; Short Horns, 242.

THE APIARY.—Advantages of Extracting Honey; Is Black Comb Useful? Swarming Bees; Hint to Bee Fanciers, 242.

THE VINEYARD.—Plowing Vineyards; Profits of Grape Culture; Propagating from a Single Eye, 242.

POULTRY YARD.—Colds, Roup, Etc.; Rearing Ducks; Degeneracy in Fowls; Prices of Live and Dressed Poultry, 243.

HOME AND FARM.—Early Rising; Rats, 243.

THE DAIRY.—Coloring Cheese; Butter Factories; Straining Milk, 243.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 244-5.

THE FLOWER GARDEN.—Bouquet Making, 245.

DOMESTIC ECONOMY.—Preserves vs. Canned Fruit; Household Hints; Setting the Table; Honey Vinegar; Fried Apples, 245.

HOME CIRCLE.—My School Days (Poetry); "Country Messes," Etc.; Confronting Under Difficulties; How to Win a Race; Animal Teaching; Individuality, 246. Bound to Get a Subscriber Anyway; A Good Memory, 247.

YOUNG FOLKS' COLUMN.—The Way to Do It (Poetry); Grizzly from His Cage, 247.

GOOD HEALTH.—Root Filling of Teeth; Not Encouraging; True Economy of Life; Rheumatism in Whales; Action of Antiseptic Substances upon Virus; Cooling Drinks; Contradictions; A Remedy for Hydrophobia, 247.

USEFUL INFORMATION.—Preservation of Wood; A Car-load; Good Idea; Varnish for Wood Carvings; Leather Cardboard for Roofing Purposes; Making Fat Persons Lean; Slugs and Snails; Bleaching by Means of Ozone; Coal Shafts; Detection of Acetic Acid in Wines; Some of the Uses of Leather; The Agassiz Memorial; An Improvement in Inside Window Blinds, 250.

AGRICULTURAL NOTES from various counties in California, Nevada and Oregon, 252.

MISCELLANEOUS.—What is Jet? 243. Reports on the Alden Process; Value of Silver and Gold, 251.

ORCHARD GRASS.—Farmers in the East are speaking very highly of the merits of orchard grass. A writer in the Philadelphia Press says that he has had a field in orchard grass over thirty years, that still gives bounteous crops, "breast high at maturity." The soil is a strong sandy loam. It was originally seeded in connection with red clover and timothy, which were long ago run out, and there is now annually some white clover and blue grass, which aids to make a thick and nutritious bottom growth; but the orchard grass maintains the supremacy; and he knows of nothing, alfalfa excepted, which will yield annually so much cattle food. But it is even superior to alfalfa, or lucerne, as it is called sometimes, because better adapted to the more rigorous climate of the Eastern States.

ON FILE.—We have communications from H. B. Red Bluff; A. R. W. Santa Clara; W. H. R. Santa Rosa; J. T. W. Napa; "Sonoma," Sonoma; O. N. C., Carpinteria, and others, which are necessarily omitted from this issue.

SINCE the 1st of April, according to Tennent's gauge, .79 of an inch of rain has fallen, making a total of 23.31 inches for the season, which is .23 of an inch in excess of the average for twenty-four years.

It is estimated that the coal fields of Montana cover 70,000 square miles.

The grain and fruit crops in Sonoma valley are very promising.

Coffee is being cultivated in Amador county.

Saving Straw.

The Vallejo Grange, P. of H., unanimously passed the following resolution, March 7th, 1874:

Resolved, That we deprecate the burning and wilful destruction of the straw from the grain fields, as is commonly practiced by the people throughout the State, believing that in so doing a valuable food for earth and kine is wholly and entirely lost.

This resolution expresses a feeling which is now beginning to be generally felt among our farmers, although it refers more particularly to waste in one direction only. There is no doubt of the fact that we have been as prodigal and wasteful in farming as Californians are apt to be in other and all things in which they engage. While annually the same results are brought about, we as regularly destroy useful and nutritious matter which is at hand and only needs a slight preparation to make palatable. Every year thousands of cattle are lost or only barely kept alive at considerable expense, when a more careful use of means would go far to obviate the disaster.

The case is sufficiently grave to attract the attention of the provident and economical farmer. In most instances straw has not been destroyed willingly and wantonly, but reluctantly, in order to clear the ground for the path of the plough, and to the farmer there has been no better mode available for the purpose than that so vigorously and deservedly denounced by the Vallejo Grange. In addition to the loss of material as food, burning the straw destroys much valuable fertilizing substance, as the organic parts are nearly entirely resolved into their constituent gases and escape into the air.

But how is the ruinous and costly custom to be dispensed with or avoided? The heavy growth of standing straw on our best valleys will not be eaten by cattle in its long, coarse state, and by the plow it cannot be turned under. As necessity is laying her finger upon the farming community, and urging farmers to discountenance the so-called cheap custom of disposing of straw, and as cattle will not, can not eat in its coarse condition, and as the ground must be plowed in proper time, season and manner, the question naturally arises what disposition shall be made of the straw if not destroyed by fire?

Some time ago Mr. W. A. Dawson invented and patented two machines, which for sake of convenience and clearness he designates respectively as No. 1 and No. 2.

Machine No. 1 is intended to travel over the grain field after the header has done its work, and reap the standing straw near to the ground like a mower; chops it into short pieces and crushes it between one set of plain or grooved rollers and scatters it evenly over the surface of the land, which then presents to the eye the appearance of a vast sheet of chaff.

Straw thus cut, chopped, crushed and scattered is vastly improved as an article of feed for cattle and sheep, and will be eaten by them with a relish; what they refuse to eat can be conveniently turned under by the plow, to mature and fertilize the ground on which it grows.

The machine is of simple construction and can be built at a cost not exceeding \$250, and will cut from 20 to 25 acres per day, drawn by four horses and operated by one man. The cutters are self-sharpening, and would require but little attention. The machine would probably not be more severe on a team than the well known Haine's header.

For the profitable utilizing of the heaped, stacked or collected straw, machine No. 2 was invented and patented, and is simply a crushing and chopping combination attached to the higher and outer portion of the straw carrier or endless belt which carries the straw from the threshing cylinder of a threshing machine, and so arranged as to chop and crush the straw as fast as it comes from the threshing cylinder. Thus the straw can be chopped not only by hand and horse but by steam power. This combination is applicable to all threshers whether driven by horse or steam, and can be constructed at the most trifling cost. Chopped feed can be secured in large quantities and large numbers of work stock can be attended and fed with comparatively little toil. Milch cows can be kept in the fall and winter where they are hardly now seen.

Mr. Dawson has been hitherto unable to place his inventions before the public. We think his plan merits attention, and invite those who are interested in agricultural machinery and economy to communicate with him, at his address, No. 449 Fifth street, this city. Whether this mode of disposing of the now refuse straw be the most practicable one or not, it is evident that some means should be adopted to remedy the evil referred to.

An English gardener suggests what seems a good plan for ridding plants of ants. It is at least safer than scattering poison. Bits of dry, clean sponge, sprinkled over with sugar, are placed in the vicinity of the ant runs; they quickly fill the interstices, and may be dipped into boiling water for a few seconds, and again used in the same manner on a second crop. Bones, with a small portion of meat attached, prove also an excellent bait, and bottles containing a little sweet oil, placed near the nests, will entice ants in considerable numbers.

The carriage-road to Mount Diablo is nearly completed, and will be open for travel by the first of May, on which day its completion will be celebrated by a picnic on its summit.

Neglected Friends.

A humanitarian reaction appears to be setting in, favoring many members of the animal kingdom heretofore mistakenly thought to be useless and wanton. Birds of prey and rapacious fishes are now conceded their due. A correspondent sends us extracts from newspapers which prove the innocence and respectability of the mole—we have not space to reprint them here. The probabilities are that ground-squirrels will be known as benefactors, and that in time popular prejudice will change to sympathy for the poor, down-trodden monopolist. A writer in the Country Gentleman propounds the question, "Are Crows Useless?" We think not. They are excellent objects for long range practice with duck guns, and are eminently capable of educating young America in the refinements of stalking and trapping, besides inculcating lessons of patience which cannot fail to be highly beneficial. He answers it as we have done, but his argument is somewhat different from ours:

"It would be well for every farmer to endeavor to answer this question to his own satisfaction. We all know how provoking it is, in the spring time, when the corn and other grains are planted, and work drives hard, to see an army of crows encamped upon our fields rapidly destroying the newly planted crop; and we cannot wonder much if the farmer's temper does rise and impel him to shoulder the musket or rifle, and deal death to the marauders. Farmers are apt to regard crows as their natural enemies. What about cutworms and white grubs? Are not they pests to the cornfields, and are not they the natural food of the crow? To be sure, his appetite prompts him also to taste your corn, and pull up the young wheat, and tear open the husks of the ears of corn. Should he not take a little toll as well as the miller?"

"Destroy every crow, and your corn and wheat will not be taken in the kernel perhaps, but they will stand a chance of being cut down when they are two or three inches high, and force you to plant them over, when it will put your crop back at least two weeks for that season. Crows are undoubtedly useful birds in destroying the myriads of vermin which attack our crops; and so I feel inclined to speak a good word for them, although few of your readers may incline to do so when they are suffering from their depredations, and daily see them pulling up hill after hill of corn. I think that one might find a remedy in planting thickly—putting ten grains of corn or wheat where four are needed, and allowing Mr. and Mrs. Crow to dine on the other six, while they also devour cutworms, etc. But if war must be waged against them, commence it by setting a steel trap in a tuft of grass, and bait it with a blown egg-shell, or a bit of fresh meat. If you succeed in catching one crow, its cries will teach all the other crows that danger is there, and it is thought to be a safeguard for the whole field. Crows are, as we all know, exceedingly wary birds, and smell danger from afar; so if one dead crow is hung up in a field, it is the most effectual scarecrow that can be furnished. Poisoned corn will soon rid the farmer of the nuisance of crows. Yet I think it a very mean resort, and feel assured that he who undertakes it will have his crop blasted with cutworms and other vermin, and will pray for a return of his black enemies."

EXHAUSTION OF GRAIN AND HAY BY RAIN.—Dry summers have their advantages, and harvesting a crop in California is not the uncertain piece of business it is in the Eastern States, where frequent showers threaten the farmer. According to Kuhn, frequent wetting of hay, etc., should be avoided as much as possible, since in time it may thereby be rendered almost worthless as fodder. Two and a half pounds of unthreshed oats were sprinkled with an equal weight of water, which was allowed simply to filter slowly through into a vessel beneath, after which the oats were dried at a gentle heat. The filtration occupied one hour, and 7½ ounces of a brown liquid were found in the vessel. The oats lost one-fortieth of their weight, partly by extraction in the liquid, and partly by drying. Similar experiments with dry red clover and meadow-grass hay gave a loss of one-tenth its weight by the former, and of one-eighth for the latter, the filtration, however, occupying one hour and a half. These experiments show the advisability and necessity of keeping hay and feed under cover and well protected during our rainy season.

The patriotic Hollanders of this city combined to have a book of photographs of California scenes made, to be presented to the King of the Netherlands on the occasion of the twenty-fifth anniversary of his coronation. The photographs are by different artists and have been selected with much care. The binding was put in the hands of Bartling & Kimball, and is superb. Panels of ornamental woods and specimens of gold quartz adorn the covers, and the photographs within are mounted in the most durable manner. The book is prefaced with an address to the King on the part of his countrymen and late subjects. The whole work shows great taste and skill, and is highly creditable to the binders.

This year there have been planted in the Wilmington district 100,000 trees of different varieties, chiefly eucalyptus and almond.

Department of Agriculture Reports.

There has been considerable fault finding of late, on the part of some of our agricultural cotemporaries, in regard to the monthly reports of the Department of Agriculture. It is objected that whereas the crops of a given county or State are announced in figures representing single bushels, these announcements fall short of, or are in excess of the truth, by perhaps thousands of bushels.

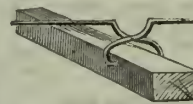
The complaint arises mainly from a natural misunderstanding of the state of the case, and would be equally applicable to all kinds of statistical information. It is certainly and unfortunately true that the figures of the Department are not absolutely infallible, and that they have a tendency to cause the reader to presume they are microscopically exact. But the numerals represent the sum total of fragmentary reports from different sections and observers, and though each set of figures may be out of the way, it is plain that to lump them all together in round sums would not be any nearer approach to the truth, though this latter course would seem to some a more honest confession of an unavoidable inability to obtain absolutely correct estimates. The more care there is taken in compiling separate returns, the more accurate, of course, will be the totals. And there is no question as to the care bestowed upon the subject by the persons in charge.

It would certainly be unfair to require of these agricultural reports that they alone, of all statistics, should be perfect. There is a parallel example in the case of the reported amounts of gold and silver bullion annually produced on this coast. These are stated each year, in apparently exact figures, and no complaint is made, though no one believes them to be, after all, more than approximately correct. Many undetected sources of production are necessarily overlooked and much of the precious metals is turned upon the financial markets of the world without having passed through the ordinary channels of trade, and so is undetected.

It is so with farming statistics. If it is difficult to gather reliable information as to the gold and silver production, it is tenfold more so to number and place the amount of live stock, the crops, the improvements and the acreage under cultivation for particular crops. The wonder is that in spite of the disheartening obstacles which oppose the statistician, so much is attained. The reports have been of immense service as well as interest during the short time during which they have been published. They are fully up to and exceed the expectations of those who originated the plan. To the farmer and produce merchant they are of great utility, and to the government, in fixing values, are becoming indispensable. They fill the sphere for which they planned, and accomplish all that is promised. If, in spite of this, they are not appreciated by some, it is because the latter have too exalted a conception of human ability. In time there will no doubt be an improvement. At the present the reports are all that can be expected, and it is not just that the Department should be opposed and obstructed in that which is being done for the good of the most important, as well as the greatest number, of citizens. Agricultural papers, especially, are deeply indebted, and should not show, to use a mild expression, the bad taste of ingratitude.

A Useful Implement.

Our esteemed cotemporary, the American Agriculturist, suggests that a pair or two of tongs, such as we represent herewith, will be found very serviceable for many uses on the ranch, as well as in country sawmills, where we believe they are already generally introduced. If heavy timbers are to be handled, or fence posts carried, or large stones lifted, there is no implement at once so cheap, simple and convenient. The tongs applied at the base of an old post to be taken out of the ground, would aid greatly in this frequently tedious work, and there are many other occasions, self-suggesting,



where they would repeatedly pay their cost in one season. They should be made of three-quarter inch iron bar, flattened at the pivotal point; the extremities of the jaws should be steamed and brought to a sharp, flat edge, beveled on the lower side to insure a good grip and prevent slipping. When these tongs are intended to be used exclusively for removing stones, a slight modification in the shape of the jaws might be an improvement; the ends need not be sharpened, but should rather be made as wide and hollow as possible. This plan would give a better hold on the smooth, hard surface or rounded stones. It will be seen that the act of raising the handles, when a log or large stone is to be lifted, creates a powerful lateral pressure of the jaws, proportional to the leverage secured by the construction, thus firmly grasping the object. The many applications of this simple and serviceable device are obvious.

NARROW-GAUGE.—The preliminary survey of the Monterey and Salinas narrow-gauge railroad has been completed, and the report is highly favorable. The road will be about 18 miles long; but little heavy grading and few deep cuts.

Agricultural Progress.

Farming is acknowledged to be progressive, even by farmers. Whatever changes come about are made usually by insensible gradations; but in the course of a few years we are often surprised to see that some innovation, which at the start had perhaps been ridiculed, has wholly ousted the old modes. Never before the present have farmers been so willing to concede that there was any room for improvement. Says the *Western Rural*: The progress in agricultural art within the last fifty years, although not as marked as that made in the mechanic and other arts, is nevertheless fully indicative of the increasing intelligence among the agricultural masses. When we look back upon the improvements in plows, harrows, reaping, mowing and threshing machines, and then to the old-time forks for handling hay and grain, and the many other tools that have been consigned to the tooth of time or utterly forgotten, we may well feel proud of the improvements that now enable the farmer to plow, sow, reap and garner away, enabling one or two individuals to do the work that heretofore required the work of many laborers to accomplish.

The farmer, if so disposed, may now take his riding plow and turn the soil. He may harrow by a machine suspended on wheels, roll, sow, plant, cultivate, reap, bind, stack, thresh and sack his grain by the use of mechanical power. Steam carries the grain from the warehouse or the railway car into the immense bins, from whence it is again distributed, by the same power, to the railway or the ship for transportation to the consumer at home and abroad. All this has been made possible by improvements within the last thirty years.

In live stock, the improvement has been particularly marked, as an examination of our favorite breeds of horses, cattle, sheep, swine and poultry will amply attest. In fact the question is now often asked where is the limit beyond which improvement cannot go.

One of the important questions in this connection is, how has it come about? The only answer is, principally through the education of individuals to the profession in life which they are to follow. An important factor in this connection, however, is the habit of independent thought that has become prevalent among the masses, through the system of universal and free education inaugurated, not only in the United States, but in other enlightened countries, imperfect though it be as yet. A notable fact in this connection is also worthy of mention; that is, the mass of the more important inventions of the day is the result of the brain work of the three nations where education is most advanced, viz: the United States, Germany and Great Britain.

Besides the improvement of farm machinery, agricultural art itself, as connected with the management of the soil, has made no less rapid strides than has been shown in the invention of agricultural implements and machines. We understand far more now about the nature and proper conditions of the soil, and this knowledge is every day becoming intensified. We have done with much that was purely theoretical, and are working upon true principles founded upon experiment, bringing out facts, the foundation of all science.

We should realize the importance of practical experiments, as presenting and substantiating the truth or falsity of theory continually. Our agricultural colleges are, some of them, doing something in this direction now; so are our agricultural and horticultural societies. Their efforts should be supplemented in every direction by practical workers on the farm, and the result should be made known through the press, that agricultural art may make equal progress with the improvement of agricultural machinery. Many important facts are lost to the public every day, from the feeling among practical men that their discoveries may not be entirely correct, or at least that subsequent experiment may modify the proofs so far as collected. This is certainly true, but the result of one experiment, or one set of experiments, almost always gives rise to others, carried forward in parallel lines. Therefore give us facts, even if they be simple ones only, for it is through these made public that we must expect the greatest progress in the improvement of agricultural art.

One of the principal reasons for the rapid advance in the industrial arts, as distinguished from agriculture, is that no sooner is a result arrived at by practical experiment than it is chronicled in the technical journal, devoted to the trade. Farmers should see to it that their own technical journals, the agricultural papers, are made the means of preserving from oblivion any fact arrived at in the exercise of their daily labor.

PEECH TREES.—Scott Sherwood, a young man at Gold Run, Placer county, is growing some heech-nut trees, in order to try their adaptability to the soil and climate of that mountain region. There are many thousands of acres of good mountain lands adjacent to towns along the railroad, from which (owing to their convenient location) nearly all the timber has been cleared off. Cannot such grounds—costing from \$1 to \$5 an acre, be made profitable by planting some kinds of valuable nut or timber-trees? Will some one experiment and report to us what trees can, and what cannot, be raised at different altitudes in California? Don't wait for the University.

A Novel Wire Fence.

Wire fences have many points of advantage. They are cheap, where lumber is expensive, and are light, portable and easily put up; and, besides, are of attractive appearance when carefully constructed. The great drawback has been the liability of the wires to sag when expanded by heat, tighten when contracted by cold, and to sag when strained by the efforts of animals to pass through. When attached to rigid supports, such strain stretches the wires so that they remain taut.

In the fence herewith illustrated, known as the Wakefield wire fence, invented by Mr. Chas. A. Wakefield, of Pittsfield, Mass., means are provided whereby, when the wire expands by heat, the increase in length thus occasioned is taken up. When the wires contract by cold, or when tension is put upon them by the efforts of an animal to pass through them, they yield without stretching, at the same time that they afford sufficient resistance to stop animals from passing. A very brief examination of the engravings will show how this is accomplished.

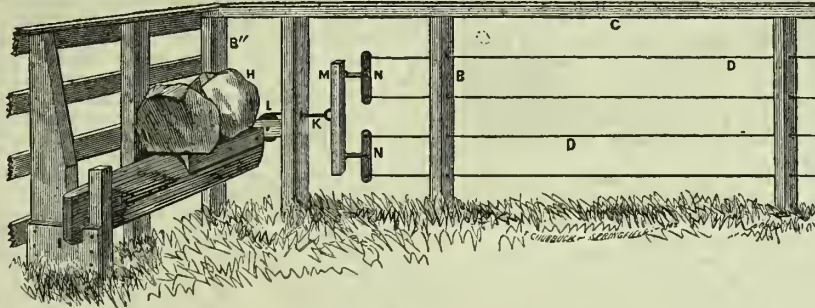


Fig. 1.

The wires are made fast only to the end post at one end of a section of fence. They are then passed loosely through all the intermediate posts to the other end, and are there attached to a set of whiffletrees and an evenner. These are attached to a chain and pulley which suspend a weight of sufficient magnitude to prevent the wires from yielding when strained by cattle, and yet allow them to yield before that amount of tension is exerted which will permanently stretch them. This fence has been tested thoroughly for four years on the inventor's farm, and has proved to be not only cheap, but durable and efficient.

Figures 1 and 2 represent a longitudinal

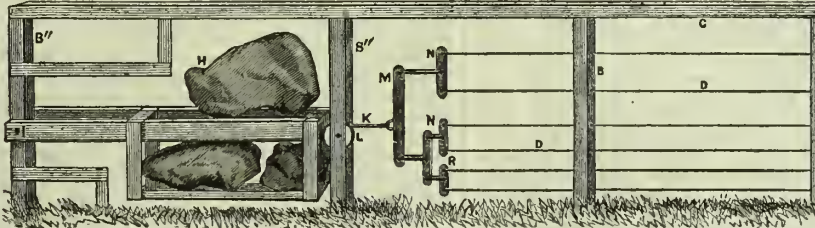


Fig. 2.

elevation of one end of a section of fence constructed in accordance with this invention. Figure 3 represents a transverse elevation of the opposite end, showing only the end posts, the equalizing pins, and the wires coiled around said pins. Pieces of the posts are represented as broken out, uncovering the upper pin.

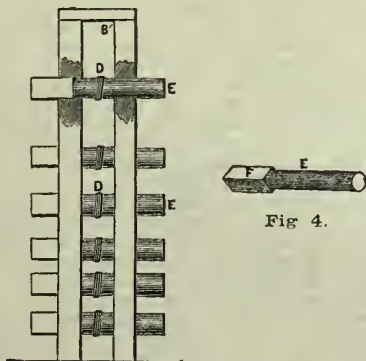


Fig. 3.

B, B, represent the posts; C, C, a continuous rail of wood forming the top of the fence; D, D, the wires; E, the round, and F, the square section of the pin; H, H, the weights; I, I, the hoard in Fig. 1, and the pin in Fig. 2, supporting one end of the frame and timber on which the weights are placed; K, K, the chain on which the other end of the weight frames are suspended; L, L, the pulleys; M, M, the evenner; N, N, an ordinary, and R, in Fig. 2, a secondary, or short pair of whiffletrees. Fig. 4 shows one of the equalizing pins.

The set in Fig. 2 is arranged like a three-horse, and in Fig. 1 a two-horse evenner. An evenner may be arranged for a fence of any given number of wires, and have the strain equal on each. The fence may be made with, or without, a rail of wood on top. The advantage of the rail is, that cattle will see it sooner, and be less liable to run into it.

PROLIFIC.—Paradise valley, Nevada, boasts of a cow whose offspring numbers seventy-two.

Killing Weeds.

Some highly ingenious and scientific methods of disposing of these great annoyances, weeds, have been suggested. One indefatigable gardener, who must be an amateur, carefully cuts off the stems of the most obstinate ones close to the roots, and then goes the rounds with sulphuric acid bottle and stick in hand, neatly depositing a single drop of the acid. The plan ought to be successful; any one who is patient enough to try it deserves to find it working well. It would answer perfectly in clearing a lawn, where it is an object not to disturb the grass which surrounds the weed, and would rid a plot of obnoxious settlers as effectually as a Kansas committee.

Some one who has been afflicted with that most troublesome plant, burdock, says he kills it by cutting off the roots a few inches under the ground with a spade, and then throwing in the hole a handful of salt or quicklime. The time he chooses to operate is after the flower buds appear on the stalks. Simply severing the

roots would probably have killed them, but he wanted to make sure work. Singularly enough, the salt and quicklime are two of the new favorite universal dressings. If they possess the nice discrimination necessary to feed a friend and kill a foe, they combine the qualities of the good Samaritan and a Malay, a rather astonishing mixture. It would be so dreadfully out of fashion to even name the forgotten hoe, that we approach the subject with misgivings. But we think that if any one is so retrograde in ideas as to condescend to apply the neglected implement vigorously, or a spade where deep roots are to be attacked, the result will be success.

It is thought that in the same manner in which grasshoppers, ground squirrels and other pests are to be exterminated—by concerted, simultaneous warfare—we may rid ourselves of weeds, at least over considerable tracts of country. The Canada thistle has been subjected to such a course of treatment with a resulting mortality which must be highly flattering to the practitioners; but it is hardly likely that land will be thoroughly clean before the millennium, and then, perhaps, all weeds will have found their sphere, and be made into paper, textile fabrics or patent medicines.

JUTE.—EDITORS PRESS:—Can you inform me where jute seed is to be obtained, the season for planting, how it is to be planted, the soil suitable, etc., and oblige an old subscriber? [Most of our seedsmen keep jute seed on hand. If those who advertise with us would furnish reasonably complete lists of their stock, it would be a great convenience to buyers, and save us the possible imputation of partiality, in directing to one and not another. Jute is not sown in this State early because of the desire to avoid the frosts which threaten it in the fall, but because it is desirable to let the young plants get a fair start before the moisture is out of the surface. And yet jute will grow well on very dry soil, without rain from the date of planting; this is one of the peculiarities which adapt it to our climate. In India jute is sown during March and April. Now is a good time to put it in. For experiment the seed may be planted in drills six inches apart, but for the market it is usually sown broadcast. In selecting a soil preference should be given to a moist high ground, if that is at hand, though we have good reports from jute on overflowed lands.—EDS. PRESS.]

The last rain was a golden shower to all parts of Sonoma county, and, indeed, to all parts of the State. Those who had planted late are now insured a crop, and those who had their grain well advanced are made sure of a bountiful yield.

SIXTY-THREE bales of pressed wool from the San Fernando sheep company, have already arrived at the San Pedro depot.

Coal Ashes.

Fertilizers are becoming nearly as numerous in kind as they are rare in quantity. Farmers are apt, and with reason, to distrust the different substances and compounds which are so vigorously supported by their special advocates and have little faith in new and experimental modes of increasing the fertility of soil. As a rule, too much is claimed, at the outset, for a particular agent; too much is expected of it and its application is assumed to be too general; hence, when it is tried for purposes which it cannot possibly influence, failure and disappointment ensue, and it is denounced as altogether worthless.

The idea of utilizing coal ashes as manure is not a new one. Such a dressing has been successfully applied in many cases for years, and we have previously called attention to its value. After all, actual trial is the only way to determine the real merits of anything; no amount of theorizing is so convincing as a single, fairly conducted test.

Last year a Pennsylvania farmer, who had always believed that coal ashes had a value for agricultural purposes, and had advocated the free use of them, particularly on limestone soil, determined to get closer to the root of the matter, and test their value fully. He had a plot of ground on which he had been unsuccessful for several years in raising good potatoes. The soil was in the best condition always. The tops did well. In the spring he had a plot of ground scored about six inches deep, placed the cut potatoes in the bottom, and filled up with coal ashes. The plants grew finely, notwithstanding the dry weather. The tops did not fall over even after the weather changed, and he stated that he secured a crop of the very best potatoes for the table he ever raised.

The second experiment was with onion seed and coal ashes. He put out five good sized beds in seeds. In four the seed was covered with soil; the fifth he covered with sifted coal ashes. The result surprised every person who knew of the experiment and watched its progress.

A third experiment was started on seed which promised utter failure to those who looked on; but the result proved quite as successful. He says: "I have abiding faith in coal ashes and am ready to use all I can purchase." The *Rural Home* cites a case in point, which, if it does not prove too much, is at least a severe strain upon ordinary imagination, as follows:

"In 1857, a man went to Palermo, N.Y., and bought sixty acres of light, sandy land, with here and there a little pertaining to gravel. He paid \$1,800 for it. He knew nothing about farming, being a machinist by trade, and never held a plow. After paying for his land, he had \$200 left. He began, and found his land was worn out. His first crops were—wheat, five bushels per acre; rye, eight bushels; potatoes, seventy-five; corn, mere nothing. The second year was even worse. He had to hire part of his sheep pastured out; he could not hold his own. But being a man of excellent judgment, and a great reader, his good judgment, aided by theories, carried him through. He began by buying ashes and plaster; would draw potatoes fourteen miles to Oswego, and load his team hack with manure from the livery stables. His crops increased. His ashes were spread correspondingly thick. He raised, principally, potatoes and wheat. Now, 2,000 bushels of ashes per year is about what he buys. His potatoes, for several years past, average 250 bushels per acre; his winter wheat, 30 bushels and over; and he has saved, from his farm alone, till he now holds \$12,000 in bank stock, and would not sell his farm for \$100 per acre. He sold, in 1869, of potatoes and wheat, over \$2,300 worth. He is known as the best farmer in this county. Yet when he began buying ashes, old farmers shook their heads and said: 'He will know better when he has farmed it as much as we have.'"

The moral to this nice little story is that a light, sandy loam and an abiding faith in the hooks will carry a man anywhere.

When similar experiments are made with any fertilizer, let the information gained be published, with verification, for the good of others. After the results, there is time to look for a theory. With ashes the explanation is simple: besides the mechanical effect in loosening heavy soil, they supply valuable mineral salts, which enter into the composition of plants.

FARMING IN SACRAMENTO COUNTY.—From the letter of a correspondent at Sacramento we glean the following news: The long winter rains have delayed spring work, and the disadvantage becomes more apparent toward the close of the planting season, as it requires double exertion to finish putting in the crops. The occasional warm spring showers keep the ground moist, and are beneficial to late sown grain as well as early. Our correspondent anticipates a good grape yield, as the late pruning of vines does not allow a sufficient start to be injured by frost. Summer-fallowing is the rule. Extensive arrangements are being made for irrigation by wind-power, which is constant, owing to the regular trade-winds. Fruit promises well, and a larger area will this year be devoted to fruit culture. The apricot crop will not be so large as usual. Frost has done no harm to fruit, and the general prospects are most encouraging.

USEFUL INFORMATION.

Preservation of Wood.

In attempting to protect wood from the action of the weather, or of the moisture of the soil in which it is buried, two points have to be taken into consideration. First, to find a suitable preservative material; and secondly, to invent a simple and practical method of introducing this material into the wood to a sufficient depth. The latter has been accomplished by Boucherie by the weight of a considerable column of liquid, while Breat, Fleury, Personnet and others preferred to exert a pressure in closed vessels. But, so far, less success has attended all attempts to find a suitable preserving fluid. Some, who ascribed the decay of wood to the action of animal and vegetable parasites, have sought to impregnate it with poisons, such as the chloride of zinc and sulphate of copper. The latter substance is still used by a few corporations in France; but all such soluble salts can act only for a short time, since resin and the moisture of air and soil necessarily dissolve them out after a while. Others have taken patents for impregnating them with insoluble substances precipitated in the wood by the successive action of two soluble substances. Among the latter are phosphate of iron, sulphate of baryta, silicate of iron and the like. These methods have in general one common disadvantage—that the acids set free by this mutual decomposition and precipitation attack the fiber of the wood, and hence none of these have remained in use. More recently the saturation of wood with creosote was adopted and practiced in England. This does, indeed, prevent decay, but does not harden the wood. The process is expensive, the operation difficult, the apparatus costly, much time is required, and the liquid requires to be analyzed frequently to ascertain whether it is still in good condition; and besides all this there is great danger of fire.

A manufacturer of Nancy, France, named Hatzfeld, had long been considering why it was that oak lasted longer than other wood. In 1830 some oak piles which had been buried since 1150 were dug up in Rouen; they were not only as black as ebony, but wonderfully hard. Hatzfeld referred this property of oak wood to the large quantity of tannic and gallic acid contained in it, and is of the opinion that the abundance of tannic acid produces an effect upon the fibers of the wood analogous to that of tanning on animal hide, forming a hard, insoluble and impenetrable compound, which can resist, without change, the influence of heat and moisture. Chemistry had long before referred this dark color to a union of the gallic acid of the wood with iron, of which there is more or less present in all soils. This tannate and gallate of iron Hatzfeld considers the best preservative against decay. He therefore proposes to impregnate the wood with tannin, and afterward with acetate of iron, and thus to place the wood in the ground at once, in the same condition, to some extent, as that which had been taken out of the earth after the lapse of three centuries. The method has the advantage of being cheap, while the acid used does not attack the fiber of the wood. At the present time a French telegraphic company are testing the new process on a large scale, on the Nancy-Vezelize line, the poles being prepared at Nancy under the direction of Hatzfeld himself.—*Jour. of Ap. Chem.*

A CAR-LOAD.—What constitutes a car-load? As a general rule, 20,000 lbs. or 70 barrels of salt, 70 of lime, 90 of flour, 60 of whisky, 200 sacks of flour, 6 cords of hard wood, 18 to 20 head of cattle, 50 to 60 head of hogs, 80 to 100 head of sheep, 9,000 feet of solid boards, 17,000 feet of siding, 13,000 feet of flooring, 40,000 shingles, one-half less of hard lumber, one-fourth less of joists, scantling and all other large timber, 340 bushels of wheat, 360 of corn, 680 of oats, 400 of barley, 360 of flax seed, 360 of apples, 430 of Irish potatoes, 360 of sweet potatoes, 1,000 bushels of bran. The foregoing table, which we find in the *St. Louis Times*, may not be exactly correct, for the reason that railroads do not exactly agree in their rules and estimates, but it approximates so closely to the general average that shippers will find it a great convenience as a matter of reference.

GOOD IDEA.—The new army boot, introduced into the English service by Sir William Palliser, a distinguished English soldier, gives general satisfaction after undergoing a severe trial by several regiments, both at home and abroad. One feature of the boot consists in placing two thin slabs of cork, reaching from toe to heel, underneath the inner sole of the boot, which renders the sole quite impervious to wet. The object of employing two slabs is in order that the cork in one slab may cover any flaw which may exist in the other.

VARNISH FOR WOOD CARVINGS.—The following is recommended for this purpose by a foreign authority. One part of gum-shellac is dissolved in three to four parts of alcohol of 92 per cent. mixed with one part of water, filtered, pressed, and the solution distilled until all the alcohol is evaporated. The gum which is precipitated from this solution is dried on a water bath and dissolved in double its weight of alcohol of 96 to 98 per cent.

THERE are eighty-seven students studying practical and theoretical metallurgy at the Missouri School of Mines, Rolla.

Leather Cardboard for Roofing Purposes.

A French writer, discussing the respective advantages of the several varieties of paper roofing lately introduced on the continent, says:

Although the advantages of bitumen cardboard for covering slight or temporary structures are generally known, many inconveniences arise from its use. Its rapid decomposition and want of solidity when the oily parts of the bitumen evaporated, necessitated such frequent re-coating that the system became expensive rather than economical. A new substance has, however, been lately discovered, known as leather cardboard, which from its solidity, suppleness and durability, seems likely to supplant the old method of roofing. It is composed of solid and tough materials, cemented together by an oily and durable plastering, with which they are thoroughly impregnated, thus producing a substance entirely water-proof and far more lasting than bitumen cardboard, which, formed as it is of a spongy, compressible matter, and only covered with a thin layer of pitch, obviously possesses neither of the qualities essential to any material for roofing—that is, absolute impenetrability added to great powers of resistance.

The leather cardboard, on the contrary, is so waterproof and tenacious in its composition that atmospheric changes have no effect upon it; it can bear the most intense heat and cold without injury, and is capable of resisting not only the heaviest rain, but also the effects of continuous snow.

Being of light weight and easily fixed, the leather cardboard has the advantage of being far more economical than ordinary methods of roofing with zinc, tiles or slate.

Employed, as it has been for several years, as much in private structures as for camps and public edifices, its advantages have been proved by experience, and ten medals awarded to the inventor at different exhibitions have justly recompensed the improvements he has effected. The cardboard should be laid on planks of wood, touching each other, and at an inclination of about five inches. The bands of cardboard should be unrolled lengthwise on the roof, commencing at the gutter, and going gradually up to the top.

Care must be taken to stretch the cardboard well, and to make each sheet lap over the other above two inches, securing them by nails at intervals. The whole is ultimately fixed from the top to the bottom of the roof by little wooden lintels, less than an inch wide, nailed at a distance of about 18 inches from one another. A coating of hot pitch should then be applied.

The sheets of leather cardboard being sanded only on one side, care must be taken to fix the smooth side to the planks. The price varies according to the thickness of the sheets, but is much the same as that of ordinary cardboard.

MAKING FAT PERSONS LEAN.—Drink only water, or for a change, water with a little vinegar; no beer, or any malt liquors; no wine, soup, broth, milk, and especially no sugar or starchy preparations; no fine flour, no fat meat, no butter, no cheese, no sweetmeats. Now we expect you will ask, what is left for them to eat? We answer, plenty of fresh fruit and green vegetables, especially salads, bread and unbolted flour without yeast, and no animal food except lean meat, smoked beef, tongue, etc. As carnivorous animals are never fat, it proves that starchy food is the main enemy to be avoided.

SLUGS AND SNAILS.—A correspondent of the *London Field* suggests an easy and, he says, most effectual way of getting rid of these garden pests, namely: Put small heaps of bran (about two handfuls) close to the plants which they destroy most, and then, about 10 or 11 o'clock at night, go round and put a handful of quicklime on each heap; the number of slugs found killed in the morning will be almost incredible. Slugs prefer bran to any fruit or vegetable, and will congregate on these heaps from all parts of the garden.

BLEACHING BY MEANS OF OZONE.—A French chemical journal states that M. David, in bleaching with ozone, employs for the generation of the gas a mixture of potassic permanganate, manganic dioxide (binoxide of manganese), and sulphuric acid contained in carboys; air is passed over the mixture, and after becoming impregnated with ozone is led into a brick tank containing the substances to be bleached; after several hours' exposure to the air, cotton, flax, rags for paper-making, etc., are sufficiently bleached.

COAL SHAFTS.—The deepest coal shaft in England is the Dunkenfield, 2,060 feet, took ten years time to sink, cost \$500,000, and this to reach a bed of coal only 4 ft. 8½ inches thick. The deepest in America is said to be the Hickory shaft, 666 feet, sunk in 428 working days, cost \$100,000. In Virginia the coal lies 60 feet above water level. It costs but a few thousand to open up, it being merely necessary to remove the debris.—*Coal Trade Jour.*

DETECTION OF ACETIC ACID IN WINES.—M. Kissel says that, in separating acetic acid from wines by distillation, the acid may escape undetected, because it forms acetic ether with the alcohol. This inconvenience may be avoided by saturating the wine with baryta. The alcohol is then distilled off, and phosphoric acid added to the residue. On distilling again, the acetic acid is found in the distillate, and may be determined.

Some of the Uses of Leather.

A voluminous and most interesting article might be written on the subject which heads these lines. It is a fallacy to believe that leather is used for boots and shoes, harness, carriage-tops, belting, hose, and the like only—these are only a few of the multifarious duties which leather, in one shape or another, has been made to perform. Let us see. Besides for the uses enumerated, which may properly be called the leading ones, leather is now coming largely into use in the manufacture of jewelry. A late number of the *Bazaar*, published in Boston, has an interesting illustrated article on this subject, and *Die Gartenlaube*, a short time since, gave a detailed account of a new branch of industry which has recently sprung up in Vienna (since the Exhibition), viz., the manufacture of leather jewelry, on a large scale. Leather flowers and imitations of fruits, especially clusters of grapes, have long been popular, and the manufacture of them has long been a favorite and pleasant occupation with many of our ladies, who use their handiwork in the embellishment of picture-frames, brackets, work-boxes, and a hundred other articles of *bijouterie*. In the manufacture of clothing, leather enters to a great extent into the domestic necessities of the populations of Northern Europe, especially Russia and the upper part of Sweden; and how far leather enters into the manufacture of trunks, valises, and other traveling requisites, Newark, in America, and Vienna and Barcelona, in Europe, can furnish suitable examples. In the manufacture of fancy articles, leather of the finer qualities is extensively used, and the Vienna and Paris goods of this class are world-renowned. Leather tapestry, which was, a century ago, very fashionable in Europe, is again coming into vogue. It is, without exception, the most durable tapestry in existence, the famous *Gobelins* not excepted. All who have visited Versailles and St. Cloud (before the latter place was destroyed) must have admired the handsome leather tapestry which covers some of the rooms, although, on account of its age and peculiar graining, and the gilt figures with which it is partly covered, it is often mistaken for wood. For the coverings of furniture, leather was formerly much more extensively used than is at present the case. It was both handsome, durable, and did not, as silk and costly velvet covering do, "wear out." In the "thirty" war the soldiers from the Duchy of Hesse wore cuirasses made of leather, lined with a thin steel plate; and there is at least one authentic instance on record of a ship having been "plated" with leather, viz., the French gunboat "Provence," which was used in the Crimean war. But she was not a success, and besides, this mode of plating (it was rubber sheets and leather, placed in layers, alternately,) was found to be very expensive. In Greenland, the *cayaks*, or boats, of the native Esquimaux are made of tanned hides of the seal and walrus, which are stuffed or impervious to water, and there are in the United States Patent Office upward of a dozen patents for "portable boats." Of late years, however, rubber is used almost exclusively for this purpose, and the leather boats are obsolete, the patents, with one or two exceptions, have expired long ago.

But perhaps the most curious use to which leather was ever put is in the manufacture of cannon. How often and with what success it has been employed for this specific purpose, we are not prepared to say, but that it has been so used is an historical fact. There is in the Royal Arsenal in Copenhagen, a leather gun—the only one now left of a battery of twelve, which Charles XII brought over from Sweden, to use in his attack against Copenhagen. The idea is said to have originated with the king himself, who wanted light guns for use in the mountains, and easy of transportation during his numerous campaigns. The gun we refer to has the appearance of an ordinary field-gun or howitzer, and is mounted in the same manner. It consists of a smooth steel tube, closed at the bottom, and tightly wound round, up and down, spirally, with tough leather straps or bands, about two inches in width. This accumulation of bands is covered with a piece of leather which, through use and age, has become black and shiny, and the gun looks at a short distance like an ordinary old-fashioned bronze six-pounder. About midway, slightly nearer the rear end, is placed a stout iron or steel ring, which carries the trunnions. The whole weight of the gun is less than one-third of what an iron cannon of the same calibre would weigh, and it was therefore admirably adapted for the use to which the fighting king of Sweden put his battery of leather guns on the particular occasion when he carried them across on the ice, from the seaport of Malino, in Sweden, to Copenhagen, a distance of sixteen miles. What has become of the other eleven guns we do not know. But this one remains, at least, as evidence that the manufacture of guns of leather has been attempted far back in history, although with what degree of success history fails to inform us. For all that we know, the other eleven which made up this strange battery of "light artillery" may have, one by one, or all in a heap, exploded!—*St. Crispin.*

Few people are aware of the extent of the work done on the North Pacific Railroad, over in Marin county. The company expect to have the cars running from Sausalito to San Rafael in six weeks. They have enough iron on hand for seventy miles of road, and expect to run their cars to Tomales before the season closes.

The Agassiz Memorial.

In removing Louis Agassiz, death has deprived us of one, who, for the last quarter of a century, has done more than any other person to stimulate in this country the study of Nature and a spirit of scientific investigation. Twenty-eight years ago he left Switzerland, his native land, for the United States, and became an American citizen. Those twenty-eight years he gave to unremitting labor in behalf of that higher education, which, by the public at large, was little understood. His interest was confined to no town or State, to no individual or class. He journeyed much; and, wherever he went, there his pupils were. He might have rested on the reputation he brought from Europe, and by lecturing and writing have made a fortune. Such a life, however, he would not, or perhaps could not live. At the age of 67 his brain gave way, and he died, leaving no wealth but his name, his example, and his works. It would not be grateful for the country, nor would it be for the country's interest, that Agassiz should pass away without a fitting memorial. Such a memorial can be made out of the great museum which he began and partially built, and for the completion of which he has left full directions. Completed, it would be a perpetual fountain of knowledge and a monument quick with his spirit. "Museum," a word that commonly suggests little more than a collection of curious objects, is scarcely an appropriate name for the memorial Agassiz ought to have. The museum he labored for is a presentation of the animal kingdom—fossil and living—arranged so as to picture the creative thought. The study of such a subject is the highest to which the human mind can aspire.

The Museum of Comparative Zoölogy at Cambridge is an independent establishment, governed by a faculty of its own. It was founded fifteen years ago by Agassiz, and has grown to its present large proportions under his hand. In connection with it is the newly established School of Experimental Zoölogy on the island of Penikese, endowed by Mr. Anderson, of New York. The system of instruction has the broadest character, and includes elementary teaching, as well as the highest investigations. The exhibition rooms are free to the public. Large sums have already been expended in bringing this National museum to its present condition. Its collections in several branches are superior to the British museum or the Garden of Plants. To make such an establishment useful, it must have a large building and a considerable annual income for the payment of professors and assistants. To perfect the grand plans conceived by Agassiz will require at least \$300,000, of which about one third would be used in enlarging the building, and two-thirds would be funded.

It is proposed to raise the money to complete this work, and a committee composed of scientific men has taken the matter in hand, with this view. The friends of Agassiz—the friends of education—propose to raise a memorial to him, by placing upon a strong and enduring basis the museum, which is at once a collection of natural objects, rivaling the most celebrated collections of the Old World, and a school open to all the teachers and pupils in the land. It is to be hoped that the people of America, among whom Agassiz unselfishly labored and among whom he spent the last portion of his life, will not hesitate to carry on the work he has begun. His example and his teaching have benefited every section of the country, even to our out-of-the-way California. The museum he planned and founded will, if suitably endowed, become an ever increasing source of scientific and practical usefulness to the nation and the world. We cannot doubt, therefore, that the appeal made by the committee will be answered by the public in the same generous spirit in which Agassiz devoted his genius to the furtherance of science and the advancement of education among us. Subscriptions may be sent to Sebastian B. Schlesinger, Esq., Treasurer of the Agassiz Memorial Committee, 5 Oliver street, Boston. Teachers and pupils desiring to subscribe to the "Teachers and Pupils Fund" of the "Agassiz Memorial" can address J. M. Barnard, No. 13 Exchange street, Boston.

AN IMPROVEMENT IN INSIDE WINDOW BLINDS was suggested to us the other day by one of our subscribers. He proposes to place the slats in a vertical rather than in a horizontal position. The effect in large halls, churches, etc., is to effectually screen the eyes from the direct glare of the external light, at the same time that the light may be freely admitted to the room. If the slats are made sufficiently wide and adjusted to stand at right angles with the sash, the room may be well lighted without any disagreeable effect either to the speaker or the audience. The gentleman referred to states that this experiment has been tried in the church at which he is an attendant, and that the result is entirely satisfactory. We regard the suggestion as a good one.—*Artisan.*

A NEW textile fiber, resembling ramie, covers a large area of the State of Guatemala. Mr. Comstock brings specimens eight feet long, gathered after being overried by ripening. It is the worst weed known there. It is only used for ropes and twine. The Indians make it up. For paper stock it is evidently superior to any vegetable now in use; and, if gathered in season, it is presumed that it would make goods like ramie cloth.

Reports on the Alden Process.

Mr. Frank Pyle, Secretary of the Alden Fruit Preserving Company, has recently made a report to the inventor of the process, Mr. Charles Alden, upon the operations of the San Lorenzo factory during the past year, from which we extract the following:

The machinery came to hand in perfect order and has worked to our entire satisfaction. The capacity of the evaporators is fully up to our expectations. The new vaporizer gives a steady and regular heat which is easily controlled and is moreover much cheaper than the old plan of heating by means of steam coil; in fact, the apparatus is all that could be desired. With coal at \$11 per ton the expense of fuel for each evaporator was only \$2.50 per day of 24 hours. This factory has five evaporators, and the capacity of each per day is, of apples, 60 boxes (or bushels); of pears, 60 boxes; of peaches, 120 boxes; of apricots, 120 boxes. Very few grapes are raised in this section, but I purchased in San Francisco a small quantity of the common Mission and Muscat of Alexandria varieties for experiment, and am happy to say that the result was highly satisfactory. I find the raisins made from the Mission grapes excellent for cooking purposes, while those made from the Muscat are quite equal, in my judgment, to the best imported raisins, and superior in taste and flavor. They can be prepared by this process with less labor and expense than by sun-drying or by any other known method. I will venture the prediction that, in a few years, California will receive a larger income from her raisins than from her wines. There is, in my opinion, no business in California that promises such certain and large returns, for the expenditure required, as the raising (in connection with this process) of the raisin grape, Zante currant, prunes, plums and apricots.

Our success with vegetables was equally gratifying, and shows better results than in the Eastern States in quality and quantity produced per 100 lbs., owing to our peculiar climate; and all of our products have found a ready sale at remunerative prices, and we have large orders from Chicago and other points which we are unable to fill. I have no doubt the demand for California Alden products will be very large for the coming season, more than can be produced by one dozen such factories; and that the present prices can be maintained and upon some articles advanced, when the public are made acquainted with their superior qualities. The amount of evaporated articles, of all kinds, shipped from the factory was, in round figures, 100,000 lbs. which is very good, indeed, when we consider that this was the first season and that we labored under many disadvantages which will be obviated in the future; and I am convinced that with proper management, in the light of past experience, this factory can show a gain of from 50 to 100 per cent. greater than the first season.

The direct profits from the sale of the manufactured articles will pay over 2 per cent. per month on the entire investment, while the indirect profits are much greater.

This factory has enabled the fruit growers of this locality to utilize their unmarketable fruits, which have heretofore been a dead loss; and as they found a market for a very large proportion of all their fruits at the factory, the city price for green fruits advanced, so that, in this way, and in the saving on boxes and transportation, the San Lorenzo fruit growers have increased their net income, it is estimated, about \$25,000 over and above their direct profits on the work of the factory.

I have had, as you are aware, several years' experience with similar factories in the Eastern States with uniformly good success, but am satisfied that the California fruits and vegetables prepared by your process are better and will always command a higher price than the eastern products, the California green fruits and vegetables being larger, of more regular form, free from worms and rot, and containing less water and a larger amount of nutritive qualities, and in all instances can be grown at less expense, important considerations for the manufacturers, as well as for the consumers of the Alden goods.

Agents' Report.

The agents for the sale of the Alden products, Messrs. Littlefield, Webb & Co., of this city, have also reported within a few days to Mr. Pyle, Secretary of the company, and we obtain from their report the following excerpts: Some six months only have elapsed since the first shipment of these goods was made to this market. The goods and mode of preparing were almost entirely unknown to the trade here, and like all new things, time and labor must be expended in making known their merits and properly bringing them to the attention of the trading community.

The difficulties will be understood by you which surrounded us in our first endeavors to place these fruits—the process was unknown, and prices were much higher than the ordinary dried fruits which consumers had been using for years. Dealers, and in their turn consumers, must be made clearly to see the economy which is obtained by this mode of preparation. In some instances prejudices had to be overcome, and so on.

Being satisfied ourselves, after a careful examination, of the great value of the process, we set earnestly to work to bring the goods to the attention of traders and merchants throughout this State and adjacent Territories; and that

we have met with gratifying success, considering the time at our command, you are already aware.

We have carefully watched the out-turn of each shipment, and we are pleased to inform you that, in nearly every instance, orders for the goods have been duplicated. While we have not overlooked the importance of the trade in these products on this coast, we have also borne in mind the fact that we must look to eastern and foreign markets for an outlet to our future surplus; and to that end we have not only formed relations and entered into correspondence with all of the principal centers of trade in the Eastern, Southern and Western States of this country, but we have extended our connections to reliable houses in the principal markets of England, Germany, Central America and China, Japan, Sandwich Islands, British Columbia and New Zealand. Some of these markets we have yet to hear from, but the general tenor of the advices we have received so far is favorable to the products.

Of last season's product, the whole of the fruits is already sold—a few apples only remaining on hand. Ere the commencement of another season for the sale of these products, our arrangements and connections will have become so perfected that we shall enjoy the greatest facilities for the prompt placing of the Alden products in all the great markets of this and foreign countries.

Value of Silver and Gold.

The basis upon which the value of silver is computed in the U. S. mint and its branches, is as follows: 99 ounces of pure silver is worth \$128.00; or 11 ounces of standard silver (900 fine) is worth \$12.80; hence one ounce of pure silver is worth \$1.20.29, and one ounce of standard silver is worth \$1.16.36. The premium or discount on silver varies with the supply and demand. One grain of pure silver is worth \$0.0026936; one ounce Troy of pure silver is worth \$1.292929; one pound avoirdupois of pure silver is worth \$18.8547; one ton (2,000 pounds) = 29,166.6 ounces Troy equals \$37,709.50; one cubic inch is worth \$7.15; one cubic foot is worth \$12,355.20.

It is presumed that many people do not understand the expression of "fineness" in connection with gold and silver. In speaking of bullion, what we usually call "fineness" is simply the weight of fine metal contained in a given quantity of mixed metals and alloys. For instance, in a gold or silver bar, which is expected to be 850 fine, it is simply meant that in 1,000 parts by weight, 850 are fine gold or fine silver, as the case may be. In our mints the value of gold is computed from standard weight; that is, gold which is 900 fine, that being the fineness of our gold coin as required by law. Of pure gold (1,000 fine) 387 ounces are worth \$8,000. Hence one ounce is worth \$20.67183-34625, and the one-thousandth part of an ounce, decimally expressed as .001 fine, is worth \$0.020671834625.

WHILE America leads the world in the boldness of her suspension and arched bridges, it is, strange to say, in conservative Holland that we must look for the largest span of girder-bridge yet constructed, namely, the Moerdijk bridge, of 493 feet span, while the largest English span, the Britannia, is 460 feet, and the largest American, that at Cincinnati, is 420 feet. Even in swing bridges there appears to be nothing in this country that equals the span of the bridge at Brest, in France, of 388 feet opening, or 191½ feet from the center of turn table to the outer end. It is not unlikely that in a few years these several comparisons will all be reversed in favor of America, for in no other country at present are greater engineering structures of this description in progress or projected.—Ex.

SCHNEIDER found in barley straw an average of .78 per cent. of nitrogen; in rye straw an average of 1.65 per cent., smaller quantities than have usually been supposed. The cause of this he ascribes to the removal of parasites.

ALUMINUM is now being used quite extensively for gas burners.

DAIRY PRODUCE DEPARTMENT
OF THE
CALIFORNIA STATE GRANGE,
P. OF H.,
414 & 416 Sansome St., Cor. Commercial,
SAN FRANCISCO, CALIFORNIA.
J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry. This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business. In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of
Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of
Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

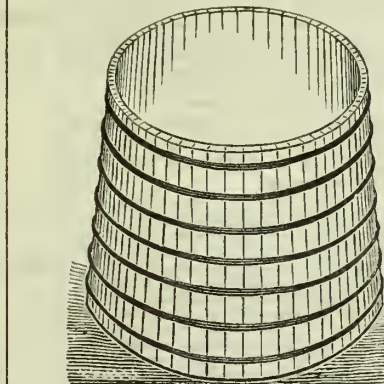
Davis & Sutton, Commission Merchants,
For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warre 1 street, New York. Refer to Anthony Halsey, Cashier, Tradecmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

HEALD'S BUSINESS COLLEGE
BRYANT & STRATTON
24 POST ST. SAN FRANCISCO
OPEN TO ALL
GOOD INSTRUCTION
SEND FOR CIRCULARS

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,
24 Post street, President Business College, San Francisco.

SANTA BARBARA COLLEGE,
SANTA BARBARA, CAL.
A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to
ELWOOD COOPER,
226-17 President Board of Directors.



WATER TANKS of any capacity, made entirely by machinery. Material the best in use; construction not excelled. Attention, dispatch, satisfaction. Cost less than elsewhere.

WELLS, RUSSELL & CO.,
Mechanics' Mills, Cor. Mission & Fremont Streets, 3v23-3m-sa

The New Wilson SEWING MACHINE
Has points of superiority over all others. A reliable warranty is given with each machine for
FIVE YEARS.
It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market.
G. A. NORTON, Gen. Ag't
for the Pacific Coast,
337 Kearny St., S. F.
2v27eow-bp-ly
PRICE, \$50.

CO-OPERATIVE MARBLE WORKS.
JOHN DANIEL & CO.,
Manufacturers of and Dealers in
Monuments, Headstones, Tombs,
MANTEL PIECES, ETC.,
421 Pine street, between Montgomery and Kearny, SAN FRANCISCO.
21v2-1v

FOR SALE.
ONE HOADLEY STEAM ENGINE, 8x12.
ONE SEPARATOR, 36-inch cylinder; one SAW FRAME, STRAW STACKER, BELTS, TOOLS, WATER BARRELS, Etc., in fair order. Price, \$1,200, if applied for before May 1st. Apply to
A. R. WOODHAMS,
Santa Clara, Cal.
11v7-6t

OUR SPECIALTY: "BEYOND THE MISSISSIPPI."
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required: Nerve and Honest Industry.
THE FAR WEST.
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFUT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chromo, "AMERICAN PROGRESS," free to each subscriber.
Two sample Worlds sent for 10 cents. Agents wanted.

LANDS & HOMES FOR SALE

RANCHOS FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,709 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,
542 MARKET STREET,
ap4-3t N. E. Cor. Montgomery.

FOR SALE OR EXCHANGE.

For San Francisco, Oakland or Alameda property—200 acres in Napa Valley, adjoining Yountville, enclosed and cross fenced with substantial board fence; small Vineyard and Orchard of selected Vines and Fruit; a large amount of Live and Red Oak Timber; accessible at all seasons, being within a stone's throw of railroad and county roads on two sides; 130 acres within a mile and a half of Vallejo; well watered by running stream and living springs; desirable place for many purposes. A Cottage in South Vallejo near the railroad terminus and steamboat landing; has fine view of San Pablo Bay; it is provided with outbuildings, barn, well, cistern and city water; the lots are covered with Shrubbery, Vines, Fruit and Shade Trees. A span of mares, (Morgan and Patchen), good stappers; drive single or double; perfectly gentle. A Concord built Buggy—shitting seats and top, pole and shafts. A new 3½-inch thinble skein Wagon, patent brass bearings, hanging brake; Clapp & Bro. makers, Michigan. Harness, Saddles, etc. The above mentioned, as well as that not included, will be sold or disposed of in part or as a whole, as may be required or desired. Apply or address, at South Vallejo,
ap11-4t-12p **G. C. PEARSON.**

STOCK AND GRAIN FARM FOR SALE.

IN SUISUN VALLEY, SOLANO COUNTY, within one mile of a railroad station and one mile and a half of a landing for vessels, comprising 140 acres good grain land; 100 acres now seeded to wheat and looking well, and 40 acres of barley, also very promising. Also, 300 acres of good tule land, excellent pasture and hay land. A good house, barn, corrals and fences, and full assortment of agricultural implements, etc. Price moderate. Terms easy. Apply to
BERRY & CAPP, 418 Montgomery St.,
14v7-1m Real Estate Agents and House Brokers

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,
311 Montgomery street, San Francisco,
Or Pacific Rural Press Office.

FOR SALE.
100 Acres of Good Land,
ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.
14v7-tf **P. H. SUMNER.**

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,
On Gift Map 4,
Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The A 1 Iron Ship

DAVID CROCKETT.....BURGES, Master

Is intended to sail with dispatch. To be followed by other vessels.

Freight taken in lots to suit shippers.

Apply to **E. E. MORGAN'S SONS,**
320 California Street,
San Francisco.

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m **304 California Street.**

FOR THE GIRLS.

A PAPER DOLL BOOK, 7x3½ inches, sent Free for 4 letter stamps. Address, **NOVELTY, 513 Hsyne street,**
San Francisco, Cal. ap11-4t

AGRICULTURAL NOTES.

CALIFORNIA.

MADON.

Crops.—*Ledger*, April 11: Since the late copious rains the weather has been warm, pleasant and invigorating. Crops of all kinds are looking remarkably well; the hay yield will exceed any former year and the fruit crop is fair to be very abundant.

MARIN.

Journal, April 9: Mr. Maillaird has ten of those beautiful thoroughbred Alderney calves, doing well. They are wonderfully popular. He sold a cow "to come in" lately for \$350.

MERCED.

Growing Weather.—*Tribune*, April 11: We are having at present what might not be intently termed growing weather. Refreshing rains at night, and warm, sunny days, are causing vegetation to grow with marvelous rapidity, and our farmers and stock men are happy in consequence.

SAN DIEGO.

Little Shasta.—*Union*, April 4: The farmers of Little Shasta have been busy for some time past putting in their crops, and the larger portion of them have now finished. The rain in last Saturday put some of them back, but all the crop will soon be in.

SANTA CRUZ.

Farming.—*Sentinel*, April 8: A substantial farmer from Curran creek informs us that the farmers of that section have already commenced operations for the season's planting. He also tells us that a much larger number of acres will be tilled this year than usual.

Mercury, April 11: Most of the grain of this valley is now positively out of danger. The crop is beyond all contingency of failure.

SANISLAUS.

Summer Fallowing.—*News*, April 10: We understand that farmers along the foothills, west of this place, are busily engaged in summer-fallowing their lands. That system of cultivation has been tried in that locality for a number of years, and has universally been attended with favorable results.

UTTER.

New Hay.—*Banner*, April 11: John Williams, near North Butte, cut the first new hay the season on April first.

VALARE.

Bur Clover.—*Delta*, April 9: This plant is among the most important of California grasses, and, in many of the coast counties, stock feed on it almost exclusively. It is by far the most valuable of all the native California clovers. Its introduction into this valley of very recent date, but it is spreading so rapidly that we may soon expect it to become thoroughly diffused as filaree. We notice at the court-house yard is covered by a very thick growth of it.

T. BACIGALUPI and other Italians are experimenting with a vegetable garden, on Elk ayon. They have peas, potatoes, onions, c., in a very forward condition. They have two wells, and horse power pumps.

YOLO.

Shearing.—*Mail*, April 9: It is indeed very cheering to hear the farmers, one and all, exult themselves so confident with regard to the prospects in this county. As respects the growing crops, there is but one sentiment—everything is lovely. The extent of land sown in wheat is not only greater, but the prospects are much brighter for a good crop than was ever before known in Yolo county.

NEVADA.

Reveille, April 9: The farmers are all busy plowing and putting in crops, and are sanguine of a large yield.

The losses of stock have not been as great as was expected from the severe winter just passed. THE APPLE TRADE.—*Republican*, April 11: William George, the enterprising merchant and fruit man of Grass Valley, has been quite successful in his fruit shipments the past season. He has purchased in Grass Valley since last October 2,000 boxes of winter apples and pears. Nearly all of these he has sent abroad, to places along the line of the railroad from Colfax to Virginia City.

OREGON.

Oregonian, April 4: A gentleman writing from Ukiah Lake, Jackson county, March 15th, says: "Cattle are dying in great numbers, and so cheap. Feed is about exhausted, many ranchmen being entirely out." Another from Linkville, March 22d, says: "Our winter has been unusually severe; loss of stock heavy; weather clear and slowly moderating, with the snow going off very slowly."

THE *Statesman* says: Cattle owners in this valley are disposing of them at very low rates, in instances where the extent of plow land does not leave them sufficient pasturage.

As elsewhere indicated in an item from the *Signal*, cattle in some parts of Idaho Territory seem to have come through the winter all right, while in others the loss of sheep has been quite heavy. The *Statesman* says Mr. Price, of Salem, has just received a letter from his brother at Pine Creek, Nez Perce county, Idaho, under date of March 15th, which contains very discouraging news of the stock in that section of country.

THE *Walla Walla Spirit* says the farmers are taking advantage of the present weather, as might be expected, and are putting in their spring crops with all possible dispatch.

THE *Pendleton Tribune* says: In the year 1869, 38,931 pounds of wool were shipped from Umatilla Landing to markets below. In 1870, 92,422 pounds were shipped; in the next year, 114,415; the next, 136,328; and in 1873 there were 217,047 pounds shipped below.

THE *Lewiston (Idaho) Signal* says: From Emmet Miller, Esq., who has spent most of the winter in different localities north of here, we learn that the mortality of stock has not been serious.

THE *Pendleton Tribune* says: While hundreds of cattle have died during the past winter, because of the unusual severity of the weather, sheep not only have not died to any great extent, but are actually in a thriving condition.

The following item is from the *Bellingham Bay Mail*: "Dr. Cunningham this week showed us two pinkey potatoes from his ranch at Semiahmoo which weighed over five pounds. Rather large indeed."

THE *Baker City Herald*, of March 25th, says: Stock are still dying in different localities in this county.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., April 14, 1874.

FOR WEEK ENDING MAY 31, 1874.

NEEDLE.—Ella N. Gaillard, S. F., Cal.

INSECT-DESTROYING COMPOUND.—Henry Clay Miller, S. F., Cal.

SEWER PIPES.—Henry M. Stow, S. F., Cal.

AMALGAMATOR.—Ezra Hinckley, S. F., Cal.

COMBINED WATCH AND SUN DIAL.—Lawrence Miller, Pioneer, Montana.

LATHES.—Hezekiah Lombard, S. F., Cal.

TRADE-MARK.

AXLE GREASE.—John J. and J. G. Hucks, S. F., Cal.

*The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

THE END-SHAKE THRESHER.—The following letter is from Wm. P. Harkey, Esq., Sheriff of Sutter county, referring to the value of the Lanfenberg End-Shake Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.

MESSES. TREADWELL & Co., San Francisco.—Gentlemen: In regard to the Lanfenberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I used it throughout the season on a Russell Separator, which I had run previously with a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain. I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thresher. WM. P. HARKEY.

13v7-3m

ALVARADO, April 7th, 1874.

MESSES. DEWEY & Co.—Gentlemen: I am much gratified to receive my Letters Patent on permanent faucet for beer barrels. This is the third application which has been allowed to me through your agency, and it gives me satisfaction to say that in no case in which you have been employed by me have you failed to obtain a favorable decision from the Commissioners of Patents, without subjecting me to any additional expense beyond the usual government fees and your original charges for preparing the application. Respectfully yours, J. BRIZLE.

OFFICE OF AGENT CALIFORNIA STATE GRANGE, }
SAN FRANCISCO, February 12, 1874.

MESSES. TREADWELL & Co.—Gentlemen: Referring to my purchases of your house, as agent for the State Grange, it gives me pleasure to add, that of the large number of agricultural machines and implements bought, our friends are well satisfied with both your prices and goods. Your terms have shown us that you are disposed to offer liberal and substantial inducements to farmers to deal direct through the agency in purchasing implements of you. Very truly yours, I. G. GARDNER, Agent California State Grange.

THE names of victories may be erased from our battle flags; but SILVER TIPPED Shoes will never become obsolete. They are a national institution. ap4

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.
San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,
Subscribed, \$3,000,000. Paid in, \$1,500,000.
Remainder subject to call.

DIRECTORS IN LONDON.—Hon. Hugh McCulloch, Renben D. Sassoon, William F. Schellfield, Isaac Seligman, Julius Sington.

MANAGERS:

R. G. SNEATH and IGNATZ STEINHART,
SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper security. 2v7-6wbp

U. S. LIVE STOCK EXCHANGE,

S. E. Cor. Fifth & Bryant Sts.,

SAN FRANCISCO.

Cattle, Sheep, Milch Cows and Horses sold on commission or bought on farm for cash. Our accommodation for Live Stock are the most convenient, complete and extensive in the city or State. WANTED—Milch Cows, Cattle and Work Horses. ap18-1f Address: DAWSON & CO., 449 5th St., S. F.

FARMING AND GRAZING LANDS

FOR SALE BY YOUNG & PAXSON.

Solano County—4,000 acres highly improved, having the Sacramento river for one of its boundaries; \$23.00 per acre.

Napa County—3,500 acres rich valley land, \$10 per acre.

Santa Clara County—Fruit orchard of 92 acres in full bearing; including all the buildings and machinery for carrying on a large business. Price, \$80,000; one-half cash.

Monterey County—10,000 acres bottom land on the Salinas river, well watered. Price, \$12.50 per acre.

Stanislaus County—2,000 acres wheat land, improved; \$12.50 per acre.

Contra Costa County—160 acres farming lands; \$20 per acre.

Santa Clara County—3,000 acres farm and grazing land, ten miles from San Jose, well watered; \$10 per acre.

Merced County—6,320 acres wheat land; \$11 per acre.

Fresno County—3,200 acres wheat land; \$5.00 per acre.

Also, large ranches in San Diego and Los Angeles counties. Full particulars on application at our office, No. 424 Montgomery street, San Francisco. ap18-1m

GRANGERS,

TAKE NOTICE.

WE ARE SELLING

FRENCH CHINA, GLASSWARE,

PLATED WARE, ETC.,

CHEAPER THAN ANY OTHER HOUSE

ON THE PACIFIC COAST.

O. LAWTON & CO.,

MARKET STREET,

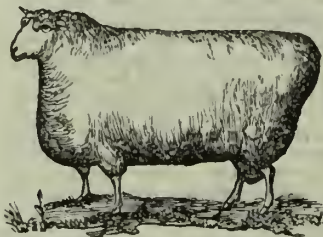
Under the Grand Hotel, SAN FRANCISCO.

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID AND ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot-Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best Disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

THE STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kane's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Blueing, Harness Soap, Thomas' Cool Water Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Cologne, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street,

v7-16-3m

SAN FRANCISCO, CAL.

San Francisco Employment Office,

NO. 606 CLAY STREET,

Crosett & Co., Proprietors.

(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.

Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant train distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. ap18-1f

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,

ap18-1f

311 Montgomery street, San Francisco.

Ryder's American Fruit Drier.



This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent,
306 California street, San Francisco

THE CELEBRATED

SLUTHOUR PUMP.



Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING AND THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from 1/4 to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.

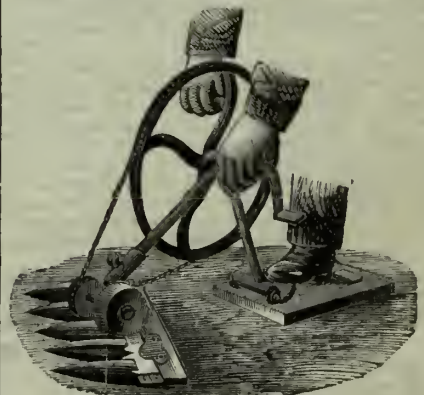
Agents for Eastern Manufacturers, 306 California street, San Francisco.

McLAREN, PILCHER & BELL,

MANUFACTURERS, DEALERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.

MANUFACTURERS OF

CURREN'S PATENT HARVEST SHARPENERS,



[PATENTED JANUARY 30th, 1872.]

The only successful Grinding Machine in existence for Harvesting Machines. No farmer who has a Reaping and Mowing Machine can afford to be without it. It is simple, cheap, quick, durable and portable GRINDING INSTRUMENT, which is adjustable to any kind of knives, so that it will sharpen the section immediately, without removing the cutter or unhitching. For particulars call on or address,

McLAREN, PILCHER & BELL,

605 Clay street, San Francisco.

Agents wanted.

18v7-6w

FARM FOR SALE.

147 Acres 1/2 mile from the town of Windsor; 1 mile from depot; 2 1/2 miles from the famous Russian river. The place is beautifully situated; land all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and outhouses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2,500 cords of black oak timber; and wood brings \$5 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to JOSEPH DEMMICH, P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap18-1f

AGENTS WANTED—LADIES OR GENTLEMEN, in every town on the Pacific Coast. Business new, honorable and pleasant. Address, with stamp, CHAS. P. KIMBALL, ap18-1f 513 Hayes street, San Francisco, Cal.

PURCHASERS please say advertised in Rural Press.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

(By our own Reporter.)

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, April 15, 1874.

Prices of Produce have been in most cases reduced during the week. While there is much more activity throughout the whole line, sales are made at considerably lower figures, as the rule, and only in Provisione, Wool, etc., has there been shown the least tendency to rise.

The tone of the prophecies is more moderate, on both sides. While the usual, excited promises of the early Spring have been qualified, there has been also a diminution in the reported damage done by the protracted rains and the tardiness of the season.

Prices are not up to the rates reached a few weeks ago, although they are at present quite remunerative. The course taken by the market is the usual one. Before fresh vegetables are obtainable and when stocks of dry vegetables are known to be running low, it is quite natural that an appreciation in values should happen, to be lost later in the year.

Dairy Produce.

Butter is still lower. The best samples now only bring 25c. Firkin holds its own, as there is a constant demand for shipping. Cheese is selling at the same rate, but is weak.

Eggs.

There are no Oregon Eggs in market at present and, no additions to ordinary sources of supply are needed as the prices obtainable are very low.

Feed.

Hay has not declined from its lately acquired position, and is in good demand. Other Feed is steady and quiet.

Flour.

\$6.00 may be placed as the extreme for Extra. Superfine is selling better, in comparison, owing to continued demand for export.

Hops.

Hops are a trifle weaker. Californians are selling at 35¢ and 37¢, and New York at 45¢ and 47¢. There are no Eastern, other than New York, moving, and quotations are nominal.

Nuts.

California Walnuts have been advanced to 14¢ and 15¢. Other kinds are steady.

Potatoes.

The few new Potatoes in first hands are quoted at 4¢ and 5¢. Prices for old crop Potatoes are stationary, and will not be affected until more of the new are placed on the market than is now possible.

Provisions.

There has been a slight upward movement in State Bacon. Heavy has advanced ½¢ and sales of other weights will perhaps follow this lead. Lard is ½¢ higher.

Seeds.

The spring trade is not yet over, by any means, and business is fair. Prices are unchanged. Latest mail information from New York contained the following: Clover is in moderate jobbing demand at firm prices; we note a sale of old Western at 10c. Timothy is very dull and about nominal; large lots cannot be placed above \$3. Rough Flaxseed is in light supply and firm.

Wheat.

A material advance in the Liverpool telegraphic quotation gives greater firmness to the local market, but no advance upon last week's prices has yet occurred. In New York the holders of Wheat are confident and hold at advanced rates.

Wool.

Wool has been moderately active of late. The spring clip is coming forward freely, at the rate of some 300 bales per day, and is taken up on favorable terms to the producer. New York telegraphic advices are: The Wool market has been quite active for all descriptions, but more particularly so for Fall California, Pulled and Fleeced, and prices have in all cases been well maintained, owing generally to light supplies. Hopes are entertained that by the time the new spring crop of California arrives, which will be about the first of May, trade will be quite active. Sales include 366,000 pounds and 314 bales of California, at 31 cents for Spring, 24 to 28 for Fall, 16¢ to 22 for Spring, 58 to 70 for Scoured.

At Boston the transactions during the past three days have been quite large. Notwithstanding the sale the market has been free from excitement. There is no speculative demand, and holders are anxious to close up. Were it not for the comparatively small stocks in dealers' hands, there would be a decided break in prices. California Wools are selling fairly, and with the exception of an occasional lot of old Spring or choice Fall, prices rule low. Sales are 167,000 lbs. at 20¢ for Fall, 31¢ for Spring, and 75¢ for 70¢. for Second.

LUMBER MARKET.

WEDNESDAY M., April 15, 1874.

We quote the following: Cargo prices for Oregon Pine are \$16½ for rough and \$20½ for dressed; Lath \$30½, Sugar Pine is quiet at \$25½; Cedar, \$12.50, \$32.50 and \$22.50 for the three qualities.

CARGO PRICES OF PUGET SOUND PINE

—Retail Price.

Rough, 3/4 M.	\$20.00	Fencing and Stepping, M.	\$7.00
Rough refuse, 3/4 M.	16.00	Fencing, 2d quality, 3/4 M.	30.00
Rough clear, 3/4 M.	32.50	Fencing, 1d lineal foot.	30.00
Rough clear refuse, M.	22.50	Flooring and Stepping, M.	30.00
Rustic, 3/4 M.	25.00	Flooring, 1d quality, 3/4 M.	25.00
Rustic, refuse, 3/4 M.	24.00	Flooring, 2d quality, M.	25.00
Surfaced, 3/4 M.	32.50	Laths, 3/4 M.	3.00
Surfaced refuse, 3/4 M.	22.50	Furring, 1d lineal ft.	3.00
Flooring, 3/4 M.	30.00	REDWOOD—Retail	
Flooring, refuse, 3/4 M.	22.50	Rough refuse, 3/4 M.	16.00
Beaded flooring, 3/4 M.	32.50	Rough Pickets, 3/4 M.	18.00
Beaded floor, refuse, M.	22.50	Rough Pickets, p/d, M.	24.00
Half-inch Siding, M.	22.50	Fancy Pickets, 3/4 M.	30.00
Half-inch siding, ref. M.	16.00	Siding, 3/4 M.	30.00
Half-inch Siding, S. ref. M.	13.00	Hand and ad. grooved	3.00
Half-inch Battens, M.	22.50	surfaced, 3/4 M.	3.00
Pickets, rough, 3/4 M.	14.00	Do do refuse, 3/4 M.	2.00
Pickets, rough, p/d, M.	16.00	Half-inch surfaced, M.	4.00
Pickets, fancy, p/d, M.	25.00	Rustic, 3/4 M.	4.00
Shingles, 3/4 M.	3.00	Laths, 3/4 M.	3.00
		Shingles, 3/4 M.	3.00

Stock Notices.



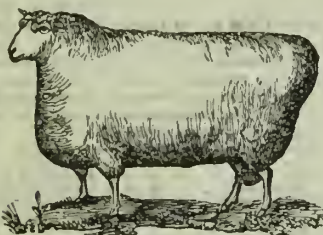
Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado county,
California.

11v6-eow

"Pure Blood Will Tell."

THE FAMOUS

Imported Short-Horned Durham Prize Bull,
"DANDY JIM,"

Of the world renowned BATES BLOOD (combining milk and beef qualities) arrived in California, September, 1872, and the same Fall took the First Prize at the State Fair, Sacramento, as a two-year-old; Sweepstakes and Special Premium at San Joaquin Valley Fair; First Prize at Santa Clara Valley as a two-year-old. This Fall, awarded the First Prize at State Fair as a three-year-old; Sweepstakes, First Prize and Special Premium at San Joaquin Valley, Stockton. He is pronounced by the best judges the finest Young Bull ever imported to this Coast. He will be shown and information given to parties having fine cows and wishing to improve their stock by

VERNON & FLINT, Oakland, Cal.

N. E.—Several of his calves for sale at reasonable figures. Any cows sent to Oakland will receive the best care, and calves insured. 4v7-3m

FOR SALE.

TWO HUNDRED & FIFTY YEARLING HIGH GRADE SPANISH MERINO BUCKS.

Also 150 Thoroughbred Spanish Merino, imported last year, and bought of Hammond.

J. H. DODGE.

Residence one mile north of Waterloo, Waterloo, San Joaquin County, Cal. 14v24-1f

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,

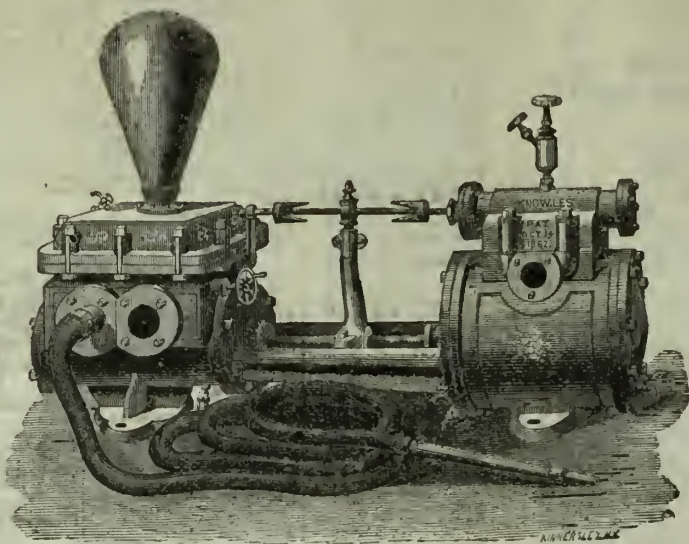
Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

Angora Goats at Auction.

ON WEDNESDAY, MAY 6TH, AT 2 O'CLOCK P. M., I will sell to the highest bidder Seventy Head of Thoroughbred Angora Goats, imported by their owner, Mr. A. Euytchedes, from Asia Minor. Sale Positive. Terms cash, in U. S. Gold Coin. ROBT. BECK.

I have also the best imported Alderney, Jersey and Ayshire Cattle; Spanish and Silesian Merino Sheep at private sale. R. B. Sacramento, March 10, 1874. 11v7-6t

KNOWLES' PATENT STEAM PUMP.



It has no Cranks or Fly-Wheel, and has no dead points where it will stop, consequently it is always ready to start without using a starting-bar, and does not require hand-work to get it past the center. Will always start when the steam cylinder is filled with cold water of condensation.

CENTRAL PACIFIC R. R., OFFICE OF THE GEN'L MASTER MECHANIC, SACRAMENTO, Cal., January 14, 1874.

A. L. FISH, Esq., Agent of the Knowles Steam Pump, San Francisco—Dear Sir: In reply to your inquiry as to the merits of the Knowles Steam Pump, in use upon this road, I will say that it gives me great pleasure to report that they have performed their work well whenever called upon. In no instance have they failed. We have now over 30 of them in use on this road as fire engines, and pumping water for shop and station use. I consider the Knowles Steam Pump the best in use, and prefer it to any other. Yours truly, A. J. STEVENS, General Master Mechanic.

A. L. FISH, Agent Knowles' Steam Pump—Dear Sir: In answer to your inquiries, we state that the highest award for Steam Pumps at the Eighth or last Mechanics' Fair in San Francisco, was a FIRST PREMIUM and Diploma, awarded to the Knowles Patent Steam Pump, as published in the Official List September 23d, 1871.

A. S. HALLADIE, President Board of Managers.

W. H. WILLIAMS, Sec'y Board of Managers Eighth Industrial Exhibition, M. I.

WE BUILD AND HAVE CONSTANTLY ON HAND

The Largest Stock of Pumps in the World,

And for Every Conceivable Purpose.

SOLE AGENT ON THE PACIFIC COAST FOR THE

CLAPP & JONES SUPERIOR STEAM FIRE ENGINE,
Challenging the World!

THE CELEBRATED BOOMER PRES,

For Wine, Cider, Lard, Paper, Wool, Hops, Hides, Tobacco, Rags, etc.—the Most Powerful in Use.

A. L. FISH, Agent,

Nos. 9 and 11 First Street, San Francisco, Cal.

P. S.—All kinds of new and second-hand Machines on hand.

10v26-1ambp

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m



The attention of Wool Growers is continually invited to the
Thoroughbred Stock Bred and Kept upon the
MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the



THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to handle parties. City Office—315 California Street, San Francisco.

10v7-eow

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

CALVERT'S



CARBOLIC

SHEEP WASH.

Sole Agency on the Pacific Coast at

T. W. JACKSON'S,

Feb 14

416 Sacramento Street, San Francisco.

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it. WILLIAMS & MOORE, Prop'rs. 3v7-8m Stockton, Cal.

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,

36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7

JOSEPH SEYMOUR & SON,

12v7-3m Syracuse, N. Y.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants. PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F. 11v7-8m

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,

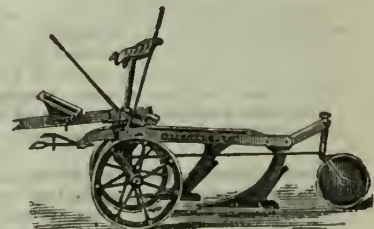


Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with Dropper.
World Reapers, and Mowers with Dropper and Hand Rakes—side delivery.
Clipper Mowers and Reapers, with Dropper.
Cayuga Chief Mowers and Reapers.
Sulky Rakes—Furst & Bradley's, and Bay State.
Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps;
Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators,
Mortise Head Hay Rake, Scythes and Snaths,

Soule, Ketsinger & Co.'s First-Class Farming Tools,
Gold Medal Forks, Hoes and Rakes,
Batchelor's Forks,
Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,
Road Scrapers,
Canal and Garden Barrows,
Hay Cutters—Burdick's
National, Belcher & Taylor's
Self Sharpening and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Headley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & CO., San Francisco.

C. CREGO. S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkeys, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship. We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles B. Coffey, Camden, New Jersey; Helfeld & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers: C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, 24v6-3m San Francisco.

MATTESON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knobs without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m MATTESON & WILLIAMSON, Stockton, Cal.

THE CELEBRATED MITCHELL WAGON



15v7-3m

H. C. SHAW, STOCKTON, CAL.

Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros." General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Gear Headers.

The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW, 14v7-2m Box 95, Stockton, Cal.

WM. ZARTMAN & CO., CARRIAGE AND WAGON MAKERS, COR. ENGLISH & HOWARD STS., PETALUMA. Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate. SPECIAL RATES TO GRANGERS. 12v7-3m

NURSERY NOTICES.

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices. Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care. Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE

100,000 Ramie Plants for Sale Very Low.

Address THOMAS MEHERIN,

516 Battery Street, SAN FRANCISCO. 24v6-3m

Superior Fruit Trees

TRUE TO NAME.

Shade and Ornamental Trees, Cypress Seedlings, Gum and Pine Trees,

NURSERY STOCK,

At the Lowest Rates.

Trees and Plants securely packed to send any Distance.

T. CORLEY, Nurseryman, No. 315 Washington St., SAN FRANCISCO. 5v11f

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees. Send for priced Catalogue. 24v6-6m

SUPERIOR FRUIT TREES,

TRUE TO NAME.

The undersigned has constantly on hand a large assortment of finest FRUIT, SHADE AND ORNAMENTAL TREES, FLOWERS, SHRUBS, POT PLANTS, etc., of the most varied and choice description, which he sells at lowest rates. Trees and Plants securely packed to travel any distance. The undersigned is a PRACTICAL NURSEYMAN.

T. CORLEY, 4v7-3m No. 315 Washington st., S. F.

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to B. F. CLAYTON, San Jose. Or C. J. CLAYTON, Clayton, Contra Costa Co., Cal. 10v7-6m

Oakland Nurseries.

HAMPTON & TURNBULL,

Nurserymen and Florists, Cor. of Telegraph Avenue and 22d Street, Oakland.

On hand a large and choice collection of Evergreens, Shade, Fruit & Ornamental Trees, Shrubs, Roses, GREEN HOUSE PLANTS, ETC.

We are constantly adding to our varied stock the NEW-EST AND RAREST PLANTS on this Coast, and invite all who are laying out grounds and planting to give us a call. LANDSCAPE GARDENING attended to. 12v4tf

THE FINEST COLLECTION OF PINES,

Cypress, Australian Eucalyptus, EVERGREEN AND DECIDUOUS TREES AND SHRUBS

Ever offered in this State at very low prices. Send for priced Catalogue to

8v7-3m A. D. PRYAL, Oakland, Cal.

FRUIT TREES.

ALSO, SHADE, ORNAMENTAL AND EVERGREEN Trees, Shrubs and Plants, with all other general productions of the Nursery and Garden. First-class two year old Apple Trees at \$20 per 100, and all other Trees and Plants at corresponding low rates. Fine Evergreens grown in boxes and pots, warranted in any locality. All Trees and Plants warranted true to name. Cash or good reference must accompany all orders. Lombardy Poplars, 1 1/2 to 2 inch trees, 25 cts. each.

E. PARSONS & CO., Nurserymen and Florists, K street, between 8th and 9th, SACRAMENTO, CAL. 4v7-3m

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER, 21v6-1y Petaluma, Sonoma Co., Cal.

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrus Deodare, or Dea-vine Cedar Seeds.

L. M. NEWSOM, East Oakland, 12th St., near Tubb's Hotel. Send for Catalogue. 12v10

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Tinley Peach, Georgia Freestone Seedling, the first offered in the State, its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

4v7-2m BRYAN & DOMINGOS, P. O. Box 157, Sacramento, Cal.

THE ALDEN

Fruit Preserving Company

OF CALIFORNIA.

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President. W. M. WHEAT, Vice President. FRANK PYLE, Sec'y and Supt. BANK OF CALIFORNIA, Treasurer. 11v7-6m

H. K. CUMMINGS, 1858. H. H. RALSTON, 1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1y

WAKELEE'S

Granulated Squirrel Exterminator.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is scented so that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco,

Who may also be addressed. 3v7-3m

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,

OIL Cakes and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works. Office, 3 and 5 Front street. Works, King street, bet. Second and Third. 12v5-eow

OUR SEEDSMEN.

1874. (Established in 1857.) 1874.

W. R. STRONG'S SEED WAREHOUSE,

SACRAMENTO.

SEEDS! (All Grown in 1873.) SEEDS!

THE PUREST, THE FINEST AND BEST OF EVERY VARIETY,

And raised by the most experienced and reliable growers of Europe, Eastern States and California. My stock is complete; quality unsurpassed; prices as low as from the best Eastern houses; embracing Vegetable, Flower and Agricultural, Fruit, Shade, Ornamental and Fruit Tree

SEEDS.

BULBS, Flower and Bulb CHROMOS from Vick, (Rochester) and Monnicke & Co., (France.)

NOW READY FOR THE TRADE, 100,000 POUNDS EXTRA QUALITY

California Alfalfa, Kentucky Blue Grass, Red Clover, White Clover, Musquit Grass, Timothy, Redtop Grass, Orchard Grass, Rye Grass, Vernal Grass,

And all other Grasses adapted to the climate of the Pacific States and the interior.

All the better grades forwarded by mail (post-paid), at catalogue rates. Money forwarded in postal orders, registered letters or express, at my risk.

My Agricultural Almanac and Price Catalogue is ready for distribution—free on application.

W. R. STRONG,

8 and 10 J Street, SACRAMENTO.

1v7-3m

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 21v6-1f

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco. 19v6-1f

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, at \$5.00 per dozen; White Leghorns, Game Bantams, Creve Coeur, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, (first premium at Buffalo, 1873), Silver Spangled Barded Poland, Golden Bearded Poland, Black Poland, White Cresta, Brown Leghorns, White Sultans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland, At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 41 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C. O. D. 6v7-1f

IMPROVED POULTRY.

Brahmas, Cochins, Leghorns, Hamburgs and Houdans. Bronze Turkeys, Aylesbury and Rouen Ducks. Fowls and Eggs for Sale.

I have without doubt the largest and finest birds of their respective kinds to be found on the coast. For price list and circular send to

C. W. WILSON, P. O. Box 1874. 14v7-1m San Francisco, Cal.

J. Y. BICKNELL,

WESTMORELAND, ONEIDA COUNTY, N. Y.

40 Varieties Land & Water Fowls.

I have shipped fowls to California annually for many years past and they have given entire satisfaction. Circulars with prices and practical hints free. Reference—Editor PACIFIC RURAL PRESS. 12v1-4t

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO., Union Box Factory, No. 114 and 116 Spear street, Agents for the Pacific Coast. 11v7-3m

PURCHASERS please say advertised in Rural Press.

HARDMAN PIANO. CALIFORNIA DEEP-WELL PUMP.



Messrs. A. L. Bancroft & Company have secured the Pacific Coast Agency for

THE IMPROVED HARDMAN PIANO.

WHICH IS THE MOST SUCCESSFUL MEDIUM-PRICED INSTRUMENT NOW MANUFACTURED. IT IS A MAGNIFICENT SQUARE GRAND, FULL-SIZED, AND OF ORNAMENTAL FINISH.

The HARDMAN PIANOS are made with the Improved French Grand Action, the best in use; the keys and ivory are also of the best quality, and the Pianos are heavily strung with the best imported wire, the cases being made strong to bear the strain.

The cases are first-class, both in solidity and durability of construction and beauty of finish. They are double veneered with the finest rosewood that can be procured, and have solid rosewood mouldings, solid blockings and solid bottoms.

The Pianos of this new scale combine every improvement that has been recognized of practical utility by people of cultivated musical taste, and the tone is equal in power and quality to that of any other piano manufactured.

Each instrument will be fully warranted for five years.

Mr Hugh Hardman's Factories in New York are turning out THIRTY PIANOS a week, and the leading piano dealers in the Eastern cities are acting as his agents.

Our Music Warerooms contain a large assortment of Pianos, square and upright, by popular makers; also, a fine stock of the celebrated

PRINCE CABINET ORGANS,

Sheet Music, Music Books, and Musical Merchandise. For circulars and price lists, address

A. L. BANCROFT & CO.,

Music Department—721 Market St., San Francisco.

ARE YOU GOING TO PAINT?
THEN USE THE BEST.

THE AVERILL CHEMICAL PAINT WILL LAST THREE TIMES AS LONG as the best lead and oil, without CHALKING; is of any desired color. It is prepared for immediate application, requiring no Oil, Thinner or Drier, and does not spoil by standing any length of time. It is equally as good for inside as outside work; over old work as well as new; in fact, where any paint can be used the AVERILL CHEMICAL PAINT will be found superior to any other. Any one can apply it who can use a brush, which truly makes it the FARMER'S FRIEND.

IT IS JUST THE PAINT FOR THE AGE.

IT IS SOLD BY THE GALLON ONLY.

One gallon covers 20 square yards 2 coats.

For further information send for sample card and price list.

HEALY & JEWELL, Agents.

Office—Corner Fourth and Townsend streets, San Francisco. 16v7-cow-bp-3m

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; ones of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS. 7v6-1f-16p2

EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz; Buff Cochins, \$3 per doz; White Faced Black Spanish, \$4 per doz; White Leghorn, \$5 per doz. Buff Cochins and Light Brahma Fowls for sale. Address: G. A. DEAN, Pacific Straw Works, 12v7-3m-16p 335 Bush St., San Francisco.

JERSEY CATTLE.

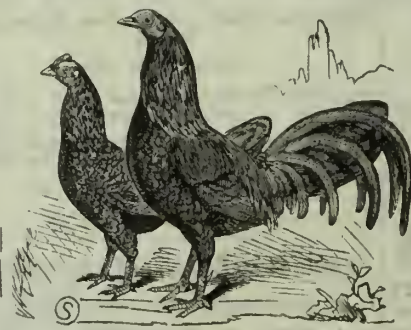
A few head of very choice Jersey Cows—Heifers and and Bull Calves—for sale. Apply to 15v7-3m R. G. SNEATH, Menlo Park.

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than Poor Ones!

OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.



GAME FOWLS!

Warranted to Stand Steel.

Prize winning strains of the following varieties, just received from the East: Earl Derby Games, Red Pile Games, Blue Pile Games, Heathwood Games, White Georgian Games, Black Breasted Red Games and Silver Duckwing Games. Eggs, \$12 per doz; guaranteed to reach the purchaser safely.

For further information send stamp for illustrated Circular, containing a full description of all the best known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed

Swift

W. M. BRANDON, JACOB W. ROGERS

BRANDON & ROGERS,

California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO,

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges. 20v6-1y-16p

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdans, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILIPS, 11v7-3m 608 Clay street, S. F.

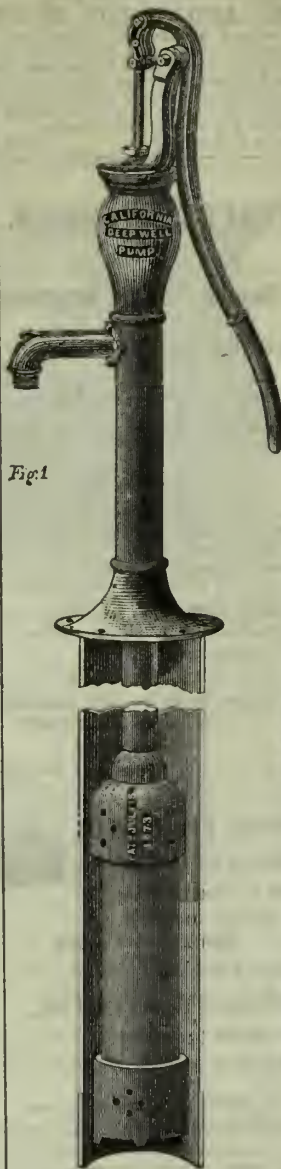


Fig 1

Fig 2



(DOUBLE-ACTING)

This Pump, as its name indicates, is a CALIFORNIA INVENTION, patented July 15th, 1873.

It is well known to farmers and others who use BORED WELLS, that a single-action submerged pump, the only one heretofore adapted to bored wells, was run by horse, steam or wind power, owing to the burden of the work being thrown upon one stroke, gives an uneven strain on the machinery, and causes a thumping or jerking action injurious to it. Various devices have been used to remedy this evil, but none with entire success.

WITH THE

CALIFORNIA DEEP-WELL PUMP

This difficulty does not exist; being DOUBLE-ACTING AND SUBMERGED, it fills on every stroke at any practical speed, thus keeping the strain on the machinery equal and constant; and the weight of the water raised increasing with the speed, operates as a brake and prevents the windmill from "running away." This pump

CAN BE USED IN ANY POSITION

In which a pump is needed, and its construction is such that its inside diameter or bore need be but one inch less than the diameter of the well casing. This pump is admirably adapted to situations exposed to freezing; for by having a small hole in the conducting pipe below the freezing point, the water will recede to this point when the pump is at rest. The pump is constructed of brass and iron, so that no corrosion can occur from contact of iron with iron.

Fig. 1, represents the pump suspended in a bored well; and Fig. 2, represents a transverse-vertical section of it.

No. 2. Inside diameter 3 inches. Conducting pipe 1 1/2 inches. Will raise 950 gallons per hour. Price, \$25.

No. 3. Inside diameter 4 inches. Conducting pipe 2 inches. Will raise 2,100 gallons per hour. Price, \$35.

BRITTAN, HOLBROOK & CO.,

111 & 113 California St., San Francisco.

16v7-1am-3m-16p

GENERAL AGENTS.

[ESTABLISHED IN 1852.]

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street, San Francisco, WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE. BUREAU CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th.

R. J. TRUMBULL, 15v6-6m-16p 427 Sansome st., San Francisco.

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GESE,

58 pounds to the pair, at maturity.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best.

Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address: M. EYRE, Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.

3v7-3m-16p-ep

DR. ABRN, Oculist, Aurist,

Catarrh, Throat and Lung Physician.

The Most Difficult Cases are invited to call.

Offices and Laboratory, 213 Geary street.

Office Hours—10 1/2 A. M. to 3 P. M.; 6 to 7 1/2 P. M. 15v7-1m-16p

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,

ENGLISH RYE GRASS,

RED TOP,

ORCHARD GRASS,

TIMOTHY,

MESQUIT,

RED CLOVER,

WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p SAN FRANCISCO.

BEST SHADE IN USE.

—THE—

RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture IS FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE

Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS

Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the Bottom,

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are simple, work to perfection, and never get out of order.

Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.

6v7-16p-3m

For the very best Photographs go to BRAD-

LEY & RULOFSON'S GALLERY, with an "Elevator"

429 Montgomery street, San Francisco. 2v7-6m



Volume VII.]

SAN FRANCISCO, SATURDAY, APRIL 25, 1874.

[Number 17.]

A Contrast.

Two portraits are here presented, illustrating the prominent features of two widely different classes of swine. The prominent features, it is true, are rather more conspicuous in one case than in the other. Still there are points of resemblance sufficiently close to lead a person of unusually wild imagination to fancy that both might possibly belong to the same species. There would not be the same doubt in the mind of a student of comparative anatomy, for the skeletons would no doubt exhibit marked traces of relationship. But the outlines, as represented in the cuts, are anything but similar.

Our first portrait, the typical rail-splitter, might be taken for that celebrated hog which was so carefully trained by an English nobleman for hunting. "Slug," for so the hog was called, was very fond of the chase, and was ever on the alert when the huntsmen were preparing to start, but the dogs could not endure its company, and their owner was never able to make use of both at the same time. "Slug" could scent a bird from a great distance, and would dig in the earth to show where it had been. When the bird hopped, it followed like a dog.

It might even be supposed that our first specimen of hog-breeding had been carefully brought up to win running matches or steeplechases, in such "fine" condition is he. But this is not the case. Any toughness of sinew, absence of superfluous fat and game spirit are owing solely to the animal's own intelligent self-education, for his owner has evidently allowed him to take his own course. Judicious exercise daily, in leaping moderately high fences and other similar diversions, combined with a rigorous abstinence from all unhealthy, flesh-producing foods, have made him what he is, the pride of the race course, but entirely too noble an animal for such base purposes as to be turned into ham, bacon, lard, etc., to be degraded by being eaten.

Below is what may more properly be termed a domestic animal. The principles of breeding applied to the latter have been somewhat different, to be sure; but, however we may admire the agile movements and graceful outlines of the famous rail-splitter, it must be confessed that for the ordinary uses of swinish existence the heavier beast is superior. The ability to trot in 2:40, to jump five-barred gates and to climb redwood trees is indeed absent, but these may well be spared; for to counterbalance what might be thought disadvantages there is a commonplace, vulgar sort of thing, known as a market value, which is entirely wanting in the more athletic hog.

The comparison will teach a good lesson, if it is appreciated that the two extreme examples are not drawn from imagination, but are actual delineations of forms which may frequently be seen. Treating hogs as wild animals will soon have the effect of reproducing all the unpleasant characteristics of the original grunter of the forest; while a little care in selection of food and shelter, given to animals of good blood, will amply repay the expense and trouble expended. It is said that with the genuine rail-splitters it makes no difference how much corn or other food is placed before them; they utterly refuse to become fit for butchers' meat, and will no more assimilate than fly. We will have to come, in time, to the system of confining and caring for swine, if we would expect any profit from them. It is now too often the case that they are turned loose upon the ranch to provide for themselves as best they may; and a wholesome dread of the lasso, combined with a most satisfactory low diet, invariably show the only result which could be expected—lankness.

HOUSEKEEPERS who have been deluded into thinking whiting or soap and water satisfactory for cleaning silverware, glass, etc., will be interested in learning that some one has patented a mixture of Paris white, red lead, glycerine, borax and a few other things for the purpose.

SOME POTATOES, STILL. — Great Britain planted in 1873, 49,000 acres of potatoes less than in the previous year, and the decrease in Ireland was 88,000 acres—the direct consequence of the failure of the crop of 1872.

The Unprofitableness of Farming.

At last year's State Fair in New Hampshire, General Butler well expressed the difference between farming and business, as money-getting pursuits, when he said:

It is complained that farming is unprofitable. Men are leaving the farm and seeking employment in manufactures and the trade of the city. The New England States have gone back in population and in productive agricultural wealth in the last ten years. Without seeking to touch all the reasons for it, may we

ties for farming, in enriching the soil, adding to his stock, or draining his land? On the contrary, is he not much more likely to invest in railroad shares, or bonds, or some manufacturing enterprise, or loan it to some neighbor? Having taken away from the farm what the farm has brought to him, and ought to be returned to it again, to make it productive, he leaves it impoverished, and then complains that gains do not increase.

Is it not the difficulty that he is continually taking away the increase of his capital and leaving it only what it was at the beginning? The merchant, as we have seen, in-



THE RAIL-SPLITTER.

not find it largely in this, that we ask too much of the farm? Having a capital of \$2,000 or \$3,000, or \$5,000 invested in it, we ask that the farm shall support our families, educate our children and give us comparative wealth for old age beside.

And yet, do we treat it as other men do their

business, in increasing his capital year by year; but the farmer too frequently takes his and invests it in other enterprises, and then complains that the farm does not succeed. No farmer that I ever heard of ever mortgaged his farm to buy manure to put on it; yet men frequently do mortgage their farms for the purpose of build-



THE RESULT OF GOOD BREEDING.

business by which they succeed? If we fail in getting all this from it, we say at once that farming is unprofitable! We are unmindful of the fact that in mercantile business only one in a hundred is fairly successful, and only one in a thousand eminently so. Does not farming do as well as that, and better? Does only one in a hundred farmers succeed to a competence, and only one in a thousand succeed to affluence? And yet do we not deal with our farms in the same way that we have seen that the nation does with its producers? Do we not take everything off and put comparatively nothing on the land?

In every other business of life all the gains a man gets he immediately puts back into his business. The merchant increases his capital year by year, from gains of the preceding year, if he is a prudent man, until it becomes as large as he can profitably manage. But if the farmer makes any surplus on his farm, as a rule, does he return it to his land, either in increased facili-

ties for farming, in enriching the soil, adding to his stock, or draining his land? On the contrary, is he not much more likely to invest in railroad shares, or bonds, or some manufacturing enterprise, or loan it to some neighbor? Having taken away from the farm what the farm has brought to him, and ought to be returned to it again, to make it productive, he leaves it impoverished, and then complains that gains do not increase.

REMARKABLE VOLUNTEER CROP.—We are told by Mr. John Baker that Benj. Ely, at Buckeye, Yolo county, has about 100 acres out of a tract of grain land which has yielded from 28 to 42 bushels a year per acre of volunteer wheat for four years. It was about two inches deep and seeded late in the winter of 1864-5. The smallest crop came the third year of volunteering. Loose stock ranged over the tract annually, using this volunteer patch as extra and favorite feeding ground, seemingly.

SHERMAN ISLAND, which embraces 14,000 acres, will this year produce not less than 200,000 sacks of grain.

Is It True?

On another page of this issue is a very suggestive letter concerning the relations of farm help and farm ownership. We have previously received communications on this matter, and only recently published the article which seems to have called out the one to which reference is made.

The topic is an exceedingly delicate one to handle, and in touching upon it at present we are aware that there is a possibility, and indeed likelihood, that we shall be treading upon some one's corns. The very farmers complained of by our correspondents are probably subscribers of the RURAL; though most of our readers, we hopefully believe, will be as surprised as we, at the revelations made. Some time ago there was a continued discussion, in our correspondence columns, of the purely social relation existing between farmers and farm hands; but now specific charges of wilful neglect and ill treatment are presented, which can not be overlooked nor slurred over.

Is it true that such statements are well founded, and applicable to any considerable number of our farmers? The almost invariable feeling which obtains in the mind of employed against employer cannot account for the direct accusations which have been brought forward; and, besides, the letters which come to us do not appear to be written from any spiteful or retaliatory motive, but in good faith and with a definiteness which carries with it conviction.

Of all places in the world California should certainly be the last in which to find such disgraceful facts common. As a class, farmers here are richer, hold more land, harvest larger crops, receive higher returns and are better off in every way than farmers in any other State or country. There is also a recognized reputation for liberality and kindness, a last remaining vestige of "flush times," which clings to the typical Californian. If, in spite of all the advantages, the wrong is present, it is so much the greater wrong. While everything tends to make the life of the farmer easier than it usually is elsewhere, the shame is greater if the hands are not well treated. There is no doubt that farm labor commands very good wages in this State; it is not of small pay that complaint is made. And if we go to the bottom of the matter it becomes evident that the trouble is in the absence of the very foundation of good feeling, a trust in the disposition and intention of the employer to do well by his men. It is hard to listen to the complaint of poor food, insufficient shelter and overwork; but it is harder to hear that piteous protest, founded on the claim of a common humanity, "we are men," which arises from a consciousness of neglect. As one correspondent observes, the men who seek employment on farms in this State are very often of a higher grade in ability and intelligence than their position would indicate. We are all of us, more or less, liable to sudden shifts of fortune, especially in this land of unexpected ups and downs; and no blame attaches to a man because he happens to be poor. So allowance must be made for a sensitiveness which undoubtedly appears to many as misplaced. The fault is certainly in carelessness, rather than a determination to be oppressive; and probably many a farmer, of precisely the type of which the unpleasant reports are made, would be utterly amazed to learn that any fault could be found with his method of dealing with those under him.

Most of the difficulties could be very easily remedied. A little attention, backed by an honest desire to do the right thing, will accomplish wonders. A polite word, now and then, which even the hardest of men are willing to acknowledge costs nothing, might also be recommended as a most effective lubricator, to make everything go on smoothly and to relieve the friction resulting from the intercourse of opposing elements.

THE beet sugar company at Soquel are driving their business. Their men are at work in all directions, preparing the ground and putting in the seed. The excavation for the works is completed, and some lumber is already on the ground for the mill, and work will be commenced on the same immediately.

CORRESPONDENCE.

Silkworm Raising.

[Written for the Press by FELIX GILLET.]

A certain number of your subscribers who availed themselves of the offer I made through your paper, to send some silkworm eggs of the races I introduced in this State to anybody writing for it, asked me for some directions on the manner of rearing worms, confessing themselves completely strangers to the business; so that I promised them to give the desired information through the RURAL. Such is the subject of the present article.

Hatching.

As soon as buds commence to get green or ready to open, and the weather becomes warm, the eggs should be taken out of the cellar to a room looking north, but never a bedroom. After several days they are removed to the kitchen and set upon a table or shelf, far enough from the stove. In the course of twelve days, if the temperature is kept between 68° and 80°, the worms will commence to hatch. The hatching is generally completed in three days; that is, if the eggs have been well preserved. Worms of the first day's hatching are rejected for being too few, the great bulk hatching on the second and third days. The worms have to be kept separate and raised so all through.

Silkworms will hatch just after sunrise, between six and seven o'clock; those which are found on the eggs, ready to hatch in the evening, have to be swept off, so as not to have them mixed with those which will hatch the next morning.

Feeding.

Spread small leaves upon the worms, and after a while remove the latter to the shelf or table upon which it is intended to raise the worms. Give a second meal at 11 o'clock, another one at 3 o'clock, and a fourth and last one a little before dark. Have the leaves cut fine, and be careful not to spread them too thickly over the worms. On the second and following days, the meals, always to the number of four, should be given at equal intervals, so that the first one will be served at sunrise and the last one at sunset. Cut the leaves coarser from the first age to the second, and so on to the fifth. However, if the leaves are not too large, they might be given entire to the worms in the fourth and fifth age. Rose-leaved japonica and multi-caulis leaves are so large that they have to be cut, from fine to coarse, from the first to the last age; the litter under the worms must be removed quite frequently during the whole rearing, more particularly for the two last ages, cleanliness being an indispensable condition of success. Raise the worms, as much as possible, in a well ventilated room; they must be also thinned out and spread over a larger place as long as they grow larger.

Moulting Time.

This I consider the most critical period of the whole education, and it has to be closely watched by silk-growers, it being of the first importance that the worms accomplish their moulting simultaneously. A little practice will enable any person raising silkworms to decide when the latter are ready to change their skins; first a change of color of the body, then the spreading of silk thread over the latter, to ensure the worms getting a good standing preparatory to casting off the old skin, and finally the appearance of the new head above the old one under the form of a crescent. Cease then to feed the worms. Never mind whether they are all ready or not for moulting. Do not feed them before they have all accomplished their transformation, or at least the greater bulk of them, as there are always some stragglers which have to be thrown away. There are four moultings in number, and they last from twenty-four to thirty-six hours.

Ages.

In a room where the temperature does not go below 68° and not over 80° in day time, and 64° to 68° during the night, the education will last from thirty-two to thirty-six days; first age, from five to six days; second age, one day less than the first one; third age, six days; moulting lasting thirty-six hours; fourth age, seven to nine days; fifth age, nine to ten days; from the fifth to the seventh day of this age the worms are very hungry, so much so that one or two meals may be served to them.

Spinning Time.

As soon as some worms commence to run around or climb along the scaffold supporting the shelves, it is time to set up the cocooning ladders, or bushes of oak with leaves on and dried beforehand in the shade, or common wild mustard, or willow or twigs of any trees, according to localities, for cocooning time has at last arrived.

It takes the worms three to five days to spin their cocoons, and five days more to change themselves into the chrysalis state. During all this time they love to be left alone. Do not gather the cocoons then before eight days, and even if you want to turn them into eggs, do it only two or three days before the time has come for the moths to emerge, which is done about 16 to 18 days after commencing to spin their cocoons.

Laying Eggs.

Moths will hatch in the morning, mostly between six and seven o'clock, and immediately

the moths will commence reproducing. When they are paired they have to be taken gently by both wings to a table or shelf and left so till six o'clock in the evening, at which time they have to be parted, laying the female temporarily on a paper, to allow her to exude a yellowish matter, which otherwise would stain the cloth or paper upon which the eggs are to be laid. After a few minutes place them on the said cloth or paper, which must hang on the wall, or anywhere in the room, in a vertical position, and they will soon commence to lay.

Keep the eggs for a month at least in the room where they have been laid, and do not mind if some of them will hatch; then you may have them removed to a room, with a northern exposure, and in which fire is never made. Do not take them to the cellar before it gets too warm in that room, or when spring is coming; and see all the time that they are out of reach of rats and mice and other vermin. Once in a while, too, they have to be set out in the cool air for an hour or two, but not in the sunlight.

Immigration.

In thinking over the causes of the growth and decay of nations, it has often been a matter of conjecture with me whether enough weight was given by our public men and rulers to the matter of immigration.

Who are the most benefited, the comers, or those who are "to the manor born?" There was a time in the history of Carthage when the slaves who had grown up in their masters' employ obtained control of the most of the industrial and trading occupations, thus making effeminate her sturdy sons. Their ever vigilant foe, taking advantage of this condition, leveled her proud monuments and humbled her in the dust. Does it ever occur to Americans that there is any analogy between those once pure, proud Carthaginians and the Mr. Peter Oleums and Mr. Gunny Bags, and the Mr. Railway Magnate and the Mr. Bullion? Instead of training their sons and daughters to useful occupations, to enable them to be masters of the situation, when old Bullion's hard-earned coin is squandered, the education they do receive hardly deserves the name. It is not in the nature of the best regulated communities that any large proportion can be governors, senators, judges, lawgivers, or any other species of barnacle; therefore, it would be the part of wisdom if every one's education was of that thoroughly practical nature which would enable him to subsist upon the work of his hands if Peter Oleum's oil well should happen to fail, or Bullion's balance be found on the wrong side of the ledger some day.

Now, this inordinate desire for servants to do everything is the very bane which poisoned the blood of the Carthaginians, and rendered them unable to cope with their hereditary enemies. In other words, the compulsory or meagerly rewarded servitor is an objectionable element in any nation that expects to retain its freedom. What follows? In order to keep our birthright, the class of immigrants by which our commonwealth is augmented should be as nearly as possible of that congenial blood which would not be obnoxious.

There is a surplus of white females in the Eastern States and Europe. Is it a pleasant matter to contemplate the influx of a population that may compel our sisters and cousins to choose an Oriental mate or go husbandless?

In answer to the question, Who are they who want immigrants most—the large landed proprietors, or the middle class?—we should say that the interests of the former, viewed from their own stand-point, were in the ascendant, from the fact that they want both buyers and laborers to purchase and till the soil. Now, from which direction does that class come—the class that both buy and till? From East or West? From the Orient or the Occident? A child can answer.

To have our action augmented by desirable elements, it appears that a little discriminating legislation is required. It is not necessary that any prohibitory or stultifying enactments be passed, but simply that some decided step be taken to facilitate the influx of the better classes of farmers, tradespeople and artisans from Europe and the Eastern States—especially the females.

To do this in such a thorough and effectual manner as to benefit our country as a whole, and ourselves as a commonwealth and individuals, a sum of money should be appropriated by both State and national statute, as a permanent immigration fund, with certain revenues set apart for its especial behoof and use, to be apportioned to each State fairly, as the school fund is, permitting those States which need no accessions of population to make such use of the fund as may be deemed judicious.

There are two classes of persons in this State who could well and economically expend a million of dollars per annum in some form of discriminating encouragement to Eastern and European immigrants. In no way can the growth and the prosperity of the country be better promoted than by such State and national legislation as indicated. At the same time the very ships that are bought or built to bring people to our shores, cheaply could return laden with grain, ore or timber, giving efficient outlet for the surplus produce of our farmers, to repay them for any stock they might take in the "People's Ocean Steam Transit Company," or the land and railway magnates for the investment in "Sanitary Hotel and Industrial College."

F. M. SHAW.

San Francisco, April 14, 1874.

The Seed Question.

EDITORS PRESS:—Mr. Trumbull's reply to my communication upon the great importance of getting good seed, and the many complaints from various quarters in this respect, is all very nice so far as his knowledge of the matter goes in regard to the seed sown by himself, etc. But he cannot deny the fact that the seed sold me by him a year since was not good, nor that sown purchased early in this year. Having grown carrots in this valley for the past ten years, I have had sufficient experience as to the time and manner of sowing to be sure of their coming provided the seed is good. I have sown early and late, and never failed before last year. My greatest objection to sowing early is, that the weeds get too much growth before the carrots are large enough to thin and cultivate. A few years since I raised several hundred pounds of seed from the long Belgian carrot and sold it to seedmen in your city, besides distributing it generally to neighbors in the valley. I never heard of one instance of their not succeeding. I do not think birds trouble carrot seed, or that they rot in the ground from cold and rainy seasons. If the seed is good they are sure to come.

My manner of putting in carrots is this: I plow as soon after the first rain as I can, in rich soil well adapted to them, and just before I am ready to put them in I harrow and cross plow until my ground is thoroughly pulverized, then ridge some three and one-half feet apart, carefully rake off the comings, making them level and entirely free from lumps, then use my seed sower and cover lightly. I have raised carrots in this manner three and one-half feet long, of delicious flavor. I thin them during the summer for my milch cows, and during the winter and spring feed them to my horses in place of oats or barley, regarding them as infinitely superior to either. As food for work horses in the spring I know of nothing so cheap or so good. They will eat them in preference to anything else. Thus you see I rely much upon my carrot crops and was sorely disappointed when it failed last year by my not getting good seed.

Of the six varieties I got from Mr. Trumbull last year, I gave small quantities to many of my neighbors, none of which came up; and independently of my field, I sowed two rows among my garden vegetables, which were irrigated, but wary a carrot. Yet Trumbull says, from this same seed his sil came, and wonders why, if I deemed his seed bad, I ordered again. For this reason: By reference to my order and letter of the 21st ult., he will see that I refer to my failure of last season, and state that those of this had been in the ground some two months and no signs of their coming; that I thought the seed was not good, and that if he had any that he "knew to be good," to send me some, which he did. I at once repurchased my ground and put them in, and am pleased to say they are up nicely. Query: Why did those which were in the same ground two months fail to make an appearance, and the last lot come in eleven days? Permit me to say that I have no ill feeling against Mr. Trumbull, and desire not to "reflect upon his wares or his honor," but simply to call the attention of all interested to the great importance of pure and good seed.

Very respectfully, "SONOMA."

Sonoma, April 12, 1874.

Don't Believe that Melons and Squashes Mix.

EDITORS RURAL PRESS:—"Pucker," in the Press of Feb. 28th, says: that his melons and squashes do mix, but he did not always think they would. I would like to know if he has had experience sufficient to know, and will be so kind as to give us facts through the RURAL.

I think sometimes that we are apt to jump at conclusions. I have raised melons and squashes for several years, and I thought once that they did mix, but now I doubt it. If I want a good melon, I do not look among a heavy, dense growth of either melon or squash vines to get it. I have learned one thing—that too much shade will spoil a melon. I have grown splendid melons in the vicinity of squashes for years in succession, and I fail to find a melon half squash, or a squash half melon. Squashes would put on a melon appearance if they mixed.

I find that in planting several varieties of melons, as water melons, they mix if grown near together. So with musk melons. You are bound to have hybrids if grown in varieties near each other.

Now if melons and squashes mix, we should be able to detect it in the seeds, and the outward appearance would also show it. Who ever found squash seeds growing in a water melon, or anything resembling a melon seed growing in a squash?

I raise some curious looking water melons and of many shades of color, the results of planting and growing together varieties of dark and lighter shades of surface and interior. I raise melons of good size and quality, as the editors of RURAL PRESS will acknowledge; and I do not believe water melons and squashes mix, or that musk melons mix with water melons or squashes. I will await further evidence, that such is the fact, before I change my mind.

O. N. CARWELL.

Carpinteria, April 4th, 1874.

The Origin of Man.

EDITORS PRESS:—Adamite has written a long letter of comment on my article, and one which is easily disposed of. He asks, "Does Erigena believe that all beasts, birds, the whale, the minnow, the devil-fish and the trout, all come from a single pair?" I answer that I do not, but that the scientists he quotes do believe this. It is not fact that the authority that derives all man from a single pair derives the whole animal creation from a single pair. Adamite has got things mixed. No scientist teaches that there are 250 different species of man. Science does tell that human blood is the same in all the different species. What father of the church denied that Adam and Eve, etc., were the only people on the globe when they were created? Let Adamite give the name, the name of the work in which said denial is contained, and where said work is to be found? The attempt to twist the text of Genesis in favor of this view has been made long ago, but with ill-success. It is only a device to reconcile Huxley, Darwin, etc., with the Bible, and one that these gentlemen and their supporters only laugh at. It is almost needless to argue with this class of people, but I will notice a couple of points. "Every one that findeth me shall kill me." This expression was probably used 130 years after man had begun to multiply on the earth, when the original pair had probably increased very largely. Adam and Eve being adults when created, would have a family of a dozen in 20 years, and these increasing at a not unusual rate, would number several hundred. And Cain lived many hundreds of years, long enough to allow millions of avengers of Abel to be born. "And called the city after the name of his son Enoch." The Jews called a village a city, and Cain could have descendants enough at the time of the birth of Enoch to have inhabited a village as populous as many of those dignified by the Jews with the title of city.

It is not fact that the type of man found by the Spaniards in America was distinct from that found in the old world. The Indian has all the characteristics of the Mongols—high cheek bones, long dark hair, almost beardless, sallow-yellow, reddish, or brownish color. Any one who has ever seen an Indian can bear witness to this. The instances given by Adamite prove nothing. I again assert that if white people lived in Africa without clothing they would, in three generations, be as black as the negro. But clothing and houses preserve the skin from the sun. He doubts "Erigena's ability to prove a single instance of a negro becoming a Caucasian in form and color," etc. There are negroes in San Francisco Caucasian in form. If Adamite comes down here he can be shown them. And there are hundreds of instances of white negroes. In the English expedition to Coomassie they brought back a white negro boy. (Vide Stanley's correspondence to the New York Herald). Every race in the world produces *Albinos* or white skinned people. When negro babies are born they are light colored. Does not this prove a white ancestry in remote times? But it is one thing to burn a white stick till its charred surface becomes black, and another to make that charred black surface white again. The former can be done, the latter cannot. Races remain unchanged in their original seats, not when they emigrate. The descendants of the robust Englishman, in America, unmixed with European blood, is said to show many characteristics of the Indian. The Adamite race as a separate one is a myth and a fable. And as to the point of Adamite's letter about difference of intellect and of information, I will only say that true negroes, Mongols, and Australians in form of head, and numbering hundreds of thousands, can be found with white skins in all parts of Europe and America. The reverse is also true. What about black Arabs with Caucasian features? And what about the regular gradation of color from the equator to the arctic circle?

ERIGENA.

Treatment of Farm Hands.

EDITORS RURAL:—Having seen the article of "Farm Hand" in your valuable paper (of which I am a constant reader), I felt moved to take up my pen in support of what he says. I have been in the same place and know of what I write. There is more truth in "Farm Hand's" statement than many would admit. Many a man, especially in our State, who is working by the month on a farm or elsewhere, was not always so compelled to labor; and even the common ranch hands, as they are called, are men, and have tastes and feelings as well as their employers.

I have seen them worse treated and cared for than the very animals they use; having no bed, except what they can furnish themselves, sleeping in a building used as a store room for rubbish, without fire all winter long, obliged to work in the rain all day, following the plow through the mud, compelled at night to go to bed in order to keep warm, and in the morning to put on the same wet garments—and for what reason?

Because the man of money is too niggardly to furnish decent quarters and treatment for men whom God has made his equals, but who suffer the disgrace of being poor. The half has hardly been told about the matter; but these are facts to which a score of men here will testify, if necessary. With the RURAL, I hope that "such cases are the exception and not the rule," but my experience has been altogether to the contrary. In defense of right.

G. E. H.

Santa Barbara, April 12, 1874.

Destroying Ants.

EDITORS PRESS:—Do you know of any method of exterminating large black ants—they are getting to be quite a nuisance in this locality. We think there was something on the subject in one of your back numbers, but cannot find it in the index. Yours truly, RIVERSIDE.
March 12th, 1874.

[There are a number of plans suggested for this purpose, and several proposed remedies have been already published in these columns. We repeat one: A writer says that he has found a very effectual remedy for the annoyance of ants resting in the garden paths and borders. A strong solution of carbolic acid in water poured into the holes kills all the ants it touches, and the survivors immediately take themselves off.

Carbolic soap is also applicable, to be used in the proportion of one-quarter of a pound of the soap to a gallon of water, and applied as a wash; or sawdust may be saturated with the soap-water and placed about the stems of plants. In paths, where there is no danger of injuring plants, the proportion of soap may be increased and the mixture will be more effective.

Wormwood is said to drive away the large garden ant, but we are not informed of the manner in which it is to be used.

Doré's compound consists of bisulphide of carbon, eight parts; petroleum essence, one part.

The following hints we borrow from the *Scientific American*: Hot alum water is a recent suggestion as an insecticide. It will destroy red and black ants, cockroaches, spiders, chintz bugs, and all the crawling pests which infest our houses. Take two pounds of alum and dissolve it in three or four quarts of boiling water; let it stand on the fire until the alum disappears; then apply it with a brush, while nearly boiling hot, to every joint and crevice in your closets, bedsteads, pantry shelves, and the like. Brush the crevices in the floor of the skirting or mop boards, if you suspect that they harbor vermin. If, in whitewashing a ceiling, plenty of alum is added to the lime, it will also serve to keep insects at a distance. Cockroaches will flee the paint which has been washed in cool alum water. Sugar barrels and boxes can be freed from ants by drawing a wide chalk mark just round the edge of the top of them. The mark must be unbroken or they will creep over it, but a continuous chalk line half an inch in width will set their depredations at naught.—Eds. Press.]

Diversified Agriculture.

EDITORS PRESS:—Being a strong believer in a diversified agriculture, I was much interested in your article, "One Crop or Many," in issue of April 4th, but I believe you do a wrong to thousands of our farmers in saying it argues "a want of thrift" because farmers buy vegetables, fruits, etc. Will you explain how such things can be raised to a profit on our high lands, where water is 40 to 100 ft. from the surface? How can garden seeds be made to grow after the rains are over? To irrigate from wells the above depth, would make our vegetables, etc., more expensive than to buy them from persons having suitable lands for their cultivation, with the exception of a few early vegetables that can be grown before the rains are over. I consider it impracticable; and if it were not, how can we do without fences on a farm of 100 acres when the farmer has a few head of sheep, cattle, horses, or hogs? As pasturing a portion of our farms is now conceded to be one of the best ways of giving new life to the soil, how can it be done without a fence? or how can we derive any benefit from 50 acres of stubble if there is corn, potatoes, or squash in the same field? If some of your many correspondents can answer the above satisfactorily, it will please many a farmer in this portion of California. A. R. W.

Santa Clara, April 13th, 1874.

[Our correspondent has misunderstood our position, from reading carelessly the paragraph to which he refers. What we did say was: "For a farmer to buy fresh vegetables, fruits, eggs, etc., which he could as well raise himself, simply argues a want of thrift." By this we can hardly be supposed to mean that everyone should grow vegetables, etc., no matter how much they might cost, for the mere sake of raising them. But it is too often the case that farmers neglect home comforts and the lesser gains of farming, when these are quite within their reach.

Fences need not be so close as to divide each plot, producing a special crop, into a field. On pasture lands, some form of the many light, movable fences now in use might be advantageously employed. But all crops are not suitable to pasture stock upon, and it is to these we referred, when speaking of dispensing with unnecessary fences.—Eds. Press.]

SACKING GRAIN.—Our correspondent, "W. H. R." will find the subject matter of his communication fully discussed in our editorial columns this week, which article was in type previous to the reception of his favor. We fully agree with our correspondent, that so long as we must have sacks, they should either be made at home or imported under the immediate direction of wheat-growers themselves, wherby exorbitant prices may be avoided, and speculative "corners" escaped.

Tobacco in Washington Territory.

EDITORS PRESS:—The RURAL comes regularly and is a splendid paper. Each number is worth to me the price of a year's subscription. You may count on me for a life-long subscriber. I want your advice, and will state the case.

I am on a timbered farm and have to clear a little at a time. I wish to raise the crop which will pay me the best returns. Will tobacco pay? Can I sell it in San Francisco? Will you take it on commission, or recommend some reliable firm who will do so, and on what terms? If I ship will they pay the freight, and take the amount out of the proceeds?

I intend to raise Connecticut seed-leaf, and cure it by the Culp patent process. This is a splendid country for tobacco, fruit, vegetables, or almost anything except tropical fruit. I dug up ground in the woods last year to try tobacco, and raised leaves, nine to the stalk, which measured three feet in length by one and one-half across. I set out June 10th, and cut on September 1st. Your answer will oblige

A SUBSCRIBER.

Tehome, Watcom Co., W.T., March 30, 1874.

[As our correspondent speaks so highly of the success of tobacco in his locality, it would probably pay. The latitude is not too high, and if the land is really suitable, there is no doubt of success. Of course he will know much better than we possibly can, of the capacities of his own soil. The difficulty is in disposing of the crop. Unless it is large, dealers in this city are backward about making terms, and none will make any arrangements in advance. If "Subscriber" harvests and cures a crop, let him send samples and a statement of how much he has to sell, to any of our large tobacco houses in this city—say, to Mayrich & Co., corner Clay and Battery streets. The RURAL PRESS is a newspaper, not a commission house. Probably there would be no difficulty about freight charges. No quotations can be given for tobacco, without samples, as the quality varies immensely. The Gilroy company claim that their produce is worth \$1.20 per pound, wholesale.—Eds. Press.]

SQUIRREL POISON.—EDITORS PRESS:—In your issue of the RURAL, April 4th, your correspondent, Mr. J. E. Arnold, of Yuma, Arizona, asks for a method of dissolving strychnine—you give the materials but not the proportions. If he will take $\frac{1}{2}$ oz. cryst. strychnia and 1 oz. of acetic acid, not diluted, and stir them thoroughly, he will find the strychnine will dissolve easily. Perhaps the following squirrel poison, which I find very effectual, will be of use to some of your readers: 3-16 oz. (a bottle and a half) strychnia cryst.; $\frac{1}{2}$ oz. acetic acid, not diluted; stir until the strychnine is dissolved; add 1 oz. arsenic, $\frac{2}{3}$ quarts water, 5 quarts wheat; stir occasionally, and after twenty-four hours add 1 pound sugar and a few drops of oil of rhodium. A teaspoonful of the wheat at each squirrel hole is sufficient. Truly yours, JOHN T. WARD.

Napa, April 13, 1874.

UNITED STATES OF COLOMBIA.—EDITORS PRESS.—I saw in a late number of your valuable paper an article describing the Cauca valley, in the State of the same name, in the United States of Colombia. Will you be so kind as to inform me where the United States of Colombia are? And can you inform me of some person who can give full particulars of that country in every respect? W. G.

Florence, Los Angeles Co., April 11, 1874.

[The United States of Colombia compose the country known at one time as New Granada, in the northwestern part of South America, adjoining the isthmus. It is bounded by Venezuela on the east, Brazil and Ecuador on the south. The proper person to whom to apply for information is the Colombian consul at this port, Mr. Ricardo Morales, 710 Washington street.—Eds. Press.]

AN EVENTFUL HISTORY.—English exchanges give accounts of a much enduring 18-ton gun, with which the Committee on Explosives at the Royal Arsenal, Woolwich, are about to make some experiments, for the purpose of testing the advantages to be gained by various lengths of bore. The gun prepared for these experiments has a rather eventful history. It was first of all fired as a 10-in. gun, re-rifled, and drilled through and through in various parts, for the insertion of pressure gauges to ascertain the force of the explosion, and the gun in this state sustained some very heavy strains. It was afterwards rifled, and again underwent some extraordinary pressures, and it was subsequently bored up to 11-in., firing a number of rounds with heavy charges, until at length the tube cracked while firing 1,200-lb. shot with 85 lbs. of powder. A new tube has since been put in, and a considerable piece added to the muzzle, so that the gun is at the present a little over 20 feet long, with a bore of 11 in. still. The most advantageous length for land service guns will, no doubt, be ascertained by experiments with this piece of ordnance. Naval guns are of necessity short. The advantage of length of bore is that slower burning, and consequently less dangerous powder, can be used, as the guns have a longer space in which to act upon the shot, which thus acquires its velocity at less expense to the gun.

POULTRY YARD.

Parasitic Vermin.

The poultry raiser who keeps a large number in a small space, if even in the best arranged poultry house and yard, finds much trouble from parasitic vermin. These vermin are found in every crack and joint of the henery and upon the fowls themselves, often proving so troublesome as to break up sitting hens. Chickens are often destroyed by these pests of the hen house. They accumulate fearfully in the winter season, if the proper precaution is not taken to prevent it.

But the whole premises may be kept free from these small pests during all seasons by using the proper remedy. Now that petroleum is so cheap, every one can use it to wash the inside of the hen house, taking care that every crack is saturated with it. Put it on with a paint or whitewash brush; the cost is but small, and it is sure destruction to all sorts of small vermin. And if you wish to make a neat and lasting job of it, put on a good coat of whitewash over the petroleum, which will give a sweet smell to the premises. Whitewash will, itself, kill most of the vermin. Strong lye, from wood ashes, will do the same thing, or a solution of commercial potash. Some wet the wall thoroughly with water and then dust strong wood ashes over them, which will adhere, dissolve in the water, and form a lye strong enough to kill them.

Where the fowls themselves are covered with vermin, a weak solution of carbolic acid is no doubt best. Put an ounce of acid into a pint of boiling water, catch the fowls and apply it to old hens under the wings and under the body, where these parasites gather, and apply it to the heads of young chickens. Petroleum will answer the same purpose if carefully applied in small quantities, and none of it gets in the eyes or mouth. (You should only slightly moisten the feathers—a large quantity will kill the fowl. Carbolic soap is used also with good effect. This is made by dissolving two pounds of bar soap in hot water and then stirring in three ounces of acid; when the mixture is cool it is ready for use. Rub this upon the fowl where the parasites are found. To keep vermin away from the nests, whitewash the boxes and then dust sulphur in the nest, freely. You may cover the eggs of sitting hens and dust the hen all over with sulphur. This costs so little that you can afford it. Always keep a box of dry dust in the poultry house for hens to roll in. You must be thorough in all this and you will be rid of these parasites, which often destroy all profit of poultry keeping.—*Live Stock Journal*.

REARING DUCKS.—Ducks can be raised with only a tub of water, but to gratify their natural instinct they should have access to a pond or stream. The eggs should be set under a hen rather than a duck, as they are better sitters and not so liable to roam. A piece of sod four inches thick and hollowed in the middle to the form of a nest, and put in a box dirt side down, makes the best nest. After two or three weeks the eggs should be sprinkled two or three times a week to prevent the membrane inside the shell from becoming dry and hard like paper, which hinders the young duck from opening the shell. The young ducks should never be allowed to go near a pond or creek, nor in wet grass, until from ten to fourteen days old. previous to that age they should be kept in a warm, dry place, and he allowed no more than enough water to dip their bills in. Soft food is indispensable to young ducks. For the first few days after hatching, hard-boiled eggs and cooked meat, chopped fine, should be given occasionally; but the chief supply should be Indian meal, thoroughly scalded. Use this until the ducklings are one-third grown, afterwards alternate occasionally with grain. Angle-worms are evidently titbits with young ducks, and as they thrive well on them they ought not to be denied them. Ordinarily if they have an unlimited range they will find plenty of such food, but some summers when worms are scarce they should be given meat as a substitute, as ducks require more animal food than chickens.—*Germantown Telegraph*.

MEAT TO MAKE FOWLS LAY.—One subscriber asks what food will induce fowls to lay, another asks about scrap cake; another about hogs' lights and similar offal. To those we would say: It is the nature of fowls in good health to lay, and they cannot help it—the eggs will come. Scanty fare will reduce their laying propensity, and on very short commons, eggs cease altogether. Rich food promotes the tendency; certain seeds, like buckwheat, sunflower and hemp seeds increase it, and meat of any kind does the same. All this, however, forces the fowl into an unnatural state, and ordinarily shortens her life. The eggs, besides, have often a poor flavor. Occasional feedings of fresh meat, like the lights of hogs chopped fine, are very good in winter when the fowls find no insect food. They need, besides, hearty food in cold weather, especially if they are not kept in warm houses. In very cold weather, hens running about and roosting in exposed places, will not lay, though richly fed; their food goes to keeping them warm.—*Southern Farmer*.

Prices of Choice Fowls and Eggs.

Having received from parties wishing to purchase choice fowls, enquiries as to present prices, we have procured from M. Fallon his price list for 1874. Those marked "in season" are not at present matured, but will be delivered in October at \$15 per trio. For the benefit of those wishing to procure Eastern stock, we have added the price list of J. Y. Bicknell, who also advertises with us, and whom also we can recommend to our readers, being personally acquainted with both the owner and the stock:

M. Fallon.

	FOWLS.	EGGS.
	per trio.	per doz.
Dark Brahmas.....	\$15 00 to \$25 00	\$ 5 00
Light Brahmas.....	15 00 to 20 00	4 00
Buff Cochins.....	15 00 to 20 00	5 00
White Cochins.....	20 00	5 00
Partridge Cochins.....	20 00	6 00
Houdans.....	20 00	5 00
Silver Grey Dorkings.....	20 00	6 00
Spangled Gold Polish.....	20 00	6 00
Spangled Silver Polish.....	20 00	6 00
Spangled Gold Hamburgs.....	in season	6 00
Spangled Silver Hamburgs.....	in season	6 00
White Faced Black Spanish.....	20 00	6 00
White Leghorns.....	15 00	5 00
Brown Leghorns.....	in season	6 00
Silkes.....	in season	5 00
Black Red Game.....	in season	6 00
Bronze Turkeys.....	in season	12 00
Rouen Ducks.....	in season	6 00
Aylesbury Ducks.....	in season	6 00

J. Y. Bicknell.

	FOWLS.	EGGS.
	per trio.	per doz.
White Cochins.....	\$18 00	\$ 5 00
Partridge Cochins.....	18 00	5 00
Buff Cochins.....	18 00	5 00
Dark Brahmas.....	18 00	6 00
Light Brahmas.....	15 00	3 00
Houdans.....	15 00	3 00
Creve Coeur.....	15 00	3 00
La Fleche.....	15 00	3 00
Plymouth Rock.....	18 00	4 00
Dominique.....	15 00	3 00
Grey Dorking.....	15 00	2 00
White Dorking.....	15 00	2 00
Brown Leghorn.....	18 00	4 00
White Leghorn.....	15 00	3 00
Black Spanish.....	15 00	2 00
Black Hamburg.....	15 00	3 00
Spangled Golden Hamburg.....	15 00	2 00
Spangled Silver Hamburg.....	15 00	2 00
Penciled Golden Hamburg.....	15 00	2 00
Golden Polish.....	25 00	2 00
Black Breasted Red Game.....	15 00	3 00

Microscopic Crystals in Plants.

Besides the familiar bundles of needle-shaped crystals, called raphides, dispersed throughout the cellular structure of certain plants, there are in the seed covers and leaves of several orders of plants, and in the pods of the bean family, multitudes of prismatic crystals of extreme minuteness, which have hitherto escaped detection. In the horned poppy, these crystals are as small as the 8,000th of an inch in diameter. In the gooseberry and elm, they are 1-3,000 of an inch; in the black currant, about half as large; in the black bryony, they are about 1-1,500 of an inch in diameter, thickly set at regular distances throughout the seed covers. In the gooseberry, they are so distinctly and regularly placed in the outer skin—each crystal in a separate cell—that they present the appearance of crystalline tissues. In plants of the bean family, the size is variable, the average being about 1-3,000 of an inch. In the garden pea, they are much larger. These crystals appear to consist chiefly of oxalate of lime, sometimes carbonate. Raphides are mainly phosphate of lime.

Plants most relished by animals are found to be especially rich in these microscopic crystals. In a piece of the midrib of a clover leaflet, 1-70 of an inch in length, Mr. Gulliver, who has added more than any other to our knowledge of these minute but important products of vegetable action, has counted 10 chains of crystals with 25 in a chain, making 250 in all, or no less than 17,500 to the inch. In like manner 21,000 crystals were reckoned for one inch of the sutural margin of a single valve of a pea pod. The pod had four such margins, each three inches in length; so that in a single pod there must have been as many as 250,000 crystals. In view of the marvelous number of these crystals, as well as their regularity and constancy, Mr. Gulliver believes it no longer possible for physiologists to maintain that such structures are accidental freaks of nature, of no relation to or value in the life and use of the species.—*Scientific American*.

HIGH-PRESSURE FILTER.—Clemesha's self-cleansing filters are made for attachment to the ordinary water main, or the supply pipe from a cistern or reservoir. A regulator forms part of the filter, by which the character of the water can be controlled. This is in the form of a dial, the hand working a tap, which allows water to flow in various directions, so that unfiltered or filtered water may be obtained at pleasure, or the animal charcoal composing the filter may be cleaned. They are not troublesome to work, simply requiring to be fixed to a supply pipe and not to be interfered with, except for cleansing. Thus in large houses and public institutions the filter can be attached to the main where it enters the building, and filtered water can be drawn off at any place. The water runs through the filter quite as rapidly as though nothing had been interposed in its course, and it is singular to see peaty water running from one tap, and the same water after passing through the filter issuing perfectly colorless. It is claimed also that the scaling of steam boilers may be to some extent prevented by the use of these filters.—*Iron*.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

ORDERS FOR GRANGE MATERIAL.—We are constantly receiving orders from newly organized Granges for regalia, blank books, implements and other articles for Granges, mostly accompanied by remittances per P. O. order. In our issue of January 3d, we announced that Bro. W. H. Baxter would furnish such supplies from that date. The prices of the goods are payable in coin, and all orders should be addressed to W. H. Baxter, Secretary of State Grange, P. O. H., No. 320 California street, San Francisco, Cal.

We have been requested by Bro. Baxter, to state that prices affixed for all Grange supplies, furnished through his office, are upon a gold basis; and that gold instead of currency must in all cases be forwarded in payment.

List of Organizing Deputies.

COUNTY	DEPUTY	POST OFFICE
Alameda.	A. T. Dewey.	Oakland or San Francisco.
Butte.	Wm. M. Thorp.	Chico.
Butte.	G. W. Colby.	Nord.
Colusa.	J. J. Hickok.	Grand Island.
Contra Costa.	R. G. Dan.	Antioch.
Lake.	J. M. Hamilton.	Concord.
Los Angeles.	Thos. A. Garcey.	Los Angeles.
Merced.	H. B. Jolley.	Merced City.
Monterey.	J. D. Fowler.	Hollister.
Napa.	W. H. Baxter, Gen'l.	Dep. San Francisco.
Sacramento.	W. S. Manlove.	Sacramento.
San Francisco.	I. G. Gardner.	General Deputy.
San Francisco.	John Hegler.	Ellis.
San Joaquin.	E. B. Stiles.	Moro.
San Luis Obispo.	A. J. Motherhead.	Pescadero.
San Mateo.	B. V. Weeks.	San Jose.
Santa Clara.	W. G. Henning.	San Jose.
Solano.	R. C. Haile.	Suisun.
Solano.	J. C. Merryfield.	Dixon.
Sonoma.	Geo. W. Davis.	Santa Rosa.
Sonoma.	A. B. Nally.	Windsor.
Stanislaus.	J. D. Spencer.	Modesto.
Yolo.	Wm. M. Jackson.	Woodland.
Los Angeles.	Thos. A. Garcey.	Los Angeles.
Santa Barbara.	O. L. Abbott.	Santa Barbara.
Ventura.	Milton Wasson.	San Buenaventura.

Farmers desiring to organize Granges, can apply to J. M. Hamilton, (W. Master), Guenoc, Lake Co.; W. H. Baxter, (W. Sec'y), 320 California St., S. F.; J. W. A. Wright, (W. Lecturer), Borden, Fresno Co.; or to the nearest Deputy in their locality. Thos. H. Werry, (W. Ex-Lecturer) of Healdsburg, is also deputized to organize Granges.

One Thing the Patrons Have Done.

They have broken the power and combinations of the Western pork-packers, who started out last fall, as they did the fall before, to buy pork at about three dollars—expecting again to get double the price when they sold, as they did last year. But the Patrons were too sharp for them this time. They said: Rather than sell at these low figures, we will pack our own pork. So, all over the West the Patrons combined, determined to pack, unless they could get what their pork was honestly worth. Pork came in slowly, not fast enough to meet the demands of the packers. The Patrons went to putting up their own pork. The packers became alarmed, and thought they had better make smaller profits, and so commenced offering higher prices. The Patrons were firm, resolute, and insisted on fair prices, and the packers were compelled to pay them. The result is, pork to-day is worth from \$4.25 to \$5.75 per 100 pounds, instead of \$3.—*Western Rural.*

The farmers will thus ever triumph over combinations to wrong them, if they but keep united and remain true to themselves. Hundreds of thousands, if not millions of dollars, have already been saved by the Grange organizations in this State, and many millions have been thus saved to the farmers of the United States. The money thus saved from extortionists rightly belonged to them, and they have got only what was their due. The force of combination is now most emphatically on the side of the farmers, and they can combine more effectively than any other class of people, when it becomes necessary. Having the power, they will, of course, use it, but not, we trust, unwisely.

GRANGE FESTIVAL AT SAN LUIS OBISPO.—The Patrons of San Luis Obispo county had a grand turn out on the 7th inst. They were stirring early in the morning, as is the custom with all true farmers. They enjoyed a fine harvest feast at Little's hall in the afternoon, at which speeches were made by D. P. Mallagh, Mr. W. Motherhead and others. In the evening Hon. C. H. Johnson, Lecturer of the San Luis Obispo Grange, delivered an address upon the subject of Agriculture, to a large and select audience of the Patrons and their friends, which is very highly spoken of by the *Tribune*, which paper promises the speech entire in its next issue.

GRANGE PICNIC IN YOLO COUNTY.—There will be a grand picnic of the Patrons in Yolo, on the 6th of May, at the Big Orchard, near Cacheville. Arrangements have been made to insure an immense turn-out. An oration will be delivered, amusements of various kinds indulged in, and every thing done that can be for the comfort and enjoyment of guests. Everybody is invited to be there. It will, doubtless, be a monster gathering and a happy time.—*Yolo Dem.*

COTTONWOOD GRANGE, STANISLAUS CO., intends to celebrate the first of May by a picnic, with singing, feasting and speaking. Three or four of the neighboring Granges will unite with the Cottonwood Grange on this occasion.

GRANGE PICNIC AT HOLLISTER.—Hollister Grange, Monterey county, will celebrate its anniversary on the 14th of May, by a picnic and other appropriate ceremonies.

THE NAPA GRANGE has adopted the Local Option Law, and will give it a hearty support.

The Sovereigns of Industry.

This new Order seems to be coming prominently before people, especially in the Western States. The National organization is now completed, as well as that of the Order at large. The ritual and all the work has been prepared with the greatest care, and is pronounced of a high character. The Sovereigns of Industry, as is generally known, have been organized to accomplish for mechanics and producers in general, other than tillers of the soil, what the Patrons of Husbandry are doing for the farmers. The "Patrons of Industry," which began to attract some attention last fall, seem to have been gotten up in haste, to anticipate this new organization, and are now generally pronounced a failure—and by some a swindle.

The new movement seems to be very generally approved by the Patrons, although it is recommended that they should not, as a general thing, take hold of it—their own organization being all sufficient, and all that is needful for them to support. Still, important encouragement has been given to it by the members of the late National Grange, inasmuch as some 20 of the Masters of State Granges received the "work" at St. Louis, with the special purpose of introducing it into their respective States. Among that number was Bro. J. W. A. Wright, of this State, who will probably introduce it here immediately after his return, from the visit he is now making to his friends at the East.

The objects of the Order are briefly set forth in the following preamble to the constitution of the National Council:

"The industrial classes are the main producers of the material wealth of the world—that they are the real sustainers of the Government in peace and war," and that they are "deprived of the full measure of benefit from the wealth they produce and of that large measure of influence in the conduct of public affairs to which justice fairly entitles them; and recognizing that it is only by combined effort that great public wrongs are righted and great public benefits secured," the Order of the Sovereigns of Industry is instituted "for the suppression of these evils, the promotion of justice, and for the purpose of improving the material condition of the working classes and raising them to a higher level of social and intellectual life."

The question of membership is fixed by the following article in the Constitution:

"Any person engaged in industrial pursuits, not under 16 years of age, of good character, and having no interests in conflict with the purposes of this Order, shall be eligible to membership, and no distinctions in regard to rights and privileges of membership shall be made by this Council, or by a State or subordinate Council, on account of sex, creed, race or nationality."

Good Advice.

The duty of Patrons to sustain their peculiar organization—the Grange—and the importance of the social feature of the Order, is thus, and properly urged, by the *Kansas Courier*:

Do not forget, in the hurry and labor of your spring and summer work, that your Grange has claims upon your time. A Saturday afternoon spent with your family attending the Grange, and meeting your neighbors, where mentally and socially you may receive new stimulus, will help. Besides this, the business saving of the Grange, through their plans of co operation, is worth more than the Grange has ever cost. We know full well how hard it is during the time for planting, cultivating and harvesting of crops, for men to feel as if it was possible to spare an hour away from work. This is just what is the matter with us. We have by this neglect and constant hard work almost allowed our affairs to pass out of our hands. We have worked so constantly, neglected, not only our social relations, but the business of our economical management of our interests, that many men now consider it presumption for farmers to meet together for such purposes. We have worked too much. Let us meet and reason together oftener. Let families living neighbors become acquainted, and the young folks taught that farm life may be as social and cheerful as any other. Let the Grange meeting and feast be remembered.

STILL INCREASING.—The Order seems to be still on the rapid increase in every part of the Union—fifty new Granges were organized in Michigan during the first two weeks in March. It is becoming more and more apparent to intelligent and thinking farmers everywhere, that those engaged in agricultural pursuits, should have an organization devoted entirely to their interests. In no other way can that class of producers make headway or even hold their own against those who have heretofore lived and flourished at their expense—and with very meagre returns for such support and maintenance.

PROCEEDINGS OF THE NATIONAL GRANGE.—The *Western Rural* announces that the proceedings of the National Grange are passing through the press, and, as fast as possible, will be mailed direct to subordinate Granges from Washington. With the immense number required, a little time is necessary to get them distributed. The above furnishes an answer to the question frequently asked, as to whether any official report of the proceedings of the National Grange would be published.

From the Granges.

HOLLISTER GRANGE, MONTEREY COUNTY, under the Mastership of James D. Fowler, is in a flourishing condition. It now numbers 130 members. The society purpose to have a public celebration on the 14th of May, at some of the groves near town. The order of exercises has not been agreed upon as yet. It can safely be set down, however, that the Patrons will have a right good time. * * * The Order was originated for the purpose of improving the condition, protecting the interests and furthering the claims of honest agricultural industry, and men who do not practically know the difference between a steam thrasher and a patent mouse trap are not calculated to contribute much to the promotion of these ends. We are aware that many of those would-be "honest farmers" are looking with a hungry glare at the growing strength of the Patrons, as they contemplate the political prestige they might wield if they only had control of the institution. Keep these fellows out, Patrons, if you want peace and harmony in your camp. And should one of them powder his ambrosial locks with timothy seed, and thus effect an entrance in disguise, run him out at the point of a pitchfork.—*Hollister Enterprise.*

FAIRVIEW GRANGE, LOS ANGELES COUNTY.—Our Grange grows like unto that wonderful bean stalk told of in juvenile literature. We now number nearly one hundred members, and the cry is "still they come." At our last monthly meeting we conferred the fourth degree upon a class of seven. We begin at our next regular meeting with a class of about a dozen in the first degree. The prospects for hountiful crops in this county were never better than this year. The acreage sown is largely in excess of any former year. A large number of orange and other fruit trees have been planted. Irrigating ditches are being extended to cover a large extent of country hitherto unutilized. Take it all in all we are moving on, and expect to keep going. The *PACIFIC RURAL* finds its way into nearly every farm house, and is read and appreciated. G. M. GINN.

[By a series of resolutions which accompanied the above, we are informed that Fairview Grange has come into line on the sewing-machine question.—*Eds. Press.*]

DANVILLE GRANGE, CONTRA COSTA COUNTY.—This Grange, says the *Contra Costa Gazette*, which now numbers about 100 members, at its meeting on the 4th of April, advanced a class of eight to the fourth degree, and ten new applications for membership were received. The membership is already so large that the school house in which the meetings have been held is found altogether too small, and a committee composed of Wm. Lynch, Thos. Flournoy, Charles Wood, R. O. Baldwin, D. N. Sherburne, Col. Stone and Jonathan Hoag, was appointed to take into consideration, and report, a plan and cost of erecting a suitable hall for the Grange.

CHRISTMAS GRANGE, TULARE CO.—This Grange was organized by Bro. Wright, on last Christmas day—hence its name. This Grange is not making very rapid progress; but though moving slow it goes sure. It consists of 32 members of the fourth degree, with nine on their way up. It has thus far enjoyed but one harvest feast, but is expecting to realize many in the future. A year ago there were but two or three houses to be seen for miles around the vicinity of the location of this Grange—now they are to be seen on almost every quarter section.

SANTA CRUZ GRANGE, SOQUEL, SANTA CRUZ CO.—J. W. Morgan writes to the *Granger*, under date of April 19th, as follows: "We had a very nice meeting last Saturday, at which time our Grange was visited by a delegation of ladies belonging to what is called the Temperance Crusade. They read quite a lengthy petition before the Grange, in which they appealed to the sympathy of the Grangers in behalf of the cause of temperance."

WHO ARE THE SENSIBLE MIDDLEMEN?—Brother Haskins, of the Vermont Farmer, who is a Patron, we believe, asks:—Which is the most sensible man—the store-keeper who goes whining around that the Granges are ruining him, who curses the farmers' papers, and stops his advertisements, or he who has sense to recognize that the farmers have found out the advantage of buying for cash, and sets himself to meeting their demand and making money out of it?

The farmers are sensible that there must be middlemen. They have no hostility to middlemen, either as a body or as individuals. What they are hostile to is paying more for their goods in one place than they can buy them for in another. They have found out that under a cash system goods may be bought from ten to twenty-five per cent. cheaper than they have been getting them. They have also found out that store-keepers who sell on credit in the old way cannot, or will not give a proper reduction to cash customers. Usually they cannot buy any cheaper at such stores for cash than on time. Consequently they have to find other places to trade. Briefly, the Patrons do not portend ruin to middlemen, but on the contrary great success to the middlemen who are smart enough to see what is wanting and supply the want.

MAKING FACES AT US.—The *Gold Hill Daily News* makes faces at the Granges. Wait till the editor wants to go to Congress, and then see how he'll roll in the hay seed.—*Western World.*

New Granges.

BEN LOMMOND GRANGE, SANTA CRUZ CO., was organized by Deputy G. W. Henning on the 9th instant, with 24 charter members and the following list of officers: H. H. Buckles, M.; John Burns, Jr., O.; John Burns, Sen., L.; John Gray, S.; James Burns, A. S.; Benj. Wright, T.; Chas. Craghill, Sec'y; D. D. Tompkins, C.; Mrs. C. Buckles, Ceres; Miss Maggie Burns, Flora; Miss Susan Craghill, Pomona; Mrs. John Gray, L. A. S. Bro. Henning neglected to report the name of the G. K. The *Sentinel*, in reporting the organization of this Grange, says: "This Grange is made up principally of farmers resident on the ridge near Peter Peterson's, Burns', Craghill's, Buckles', and Comstock's, and other ranches on the ridge twelve miles northwest of this town. The new Grange was instituted in the Hall of Santa Cruz Grange No. 68. Another Grange is spoken of to be located in Scott's valley, but the movement has not yet assumed definite shape. Santa Cruz Grange is doing finely. At the Harvest Feast on Saturday, March 28th, six graduates were perfected in the work and as many new applications were received and appropriately referred."

RISEING STAR GRANGE, PANOCH VALLEY, MONTEREY COUNTY, was organized on Saturday last, by Deputy J. D. Fowler, with 22 charter members. The following persons were chosen to act as officers for the ensuing year: C. Valpy, M.; W. H. Thornburg, O.; W. Shaw, L.; W. W. Hager, S.; F. Bennett, A. S.; A. D. Smith, T.; R. Gardner, C.; J. W. Craycroft, Sec'y; Miss Julia Keith, Ceres; Mrs. E. Ransay, Pomona; O. S. Thoruburg, Flora; Mrs. M. A. Craycroft, L. A. S.

SEIPE GRANGE, VENTURA COUNTY, was organized March 14th, by Deputy Milton Wasson, with the following list of officers: S. A. Guiberson, M.; J. A. Conaway, O.; F. A. Sprague, L.; James Heney, S.; C. W. Edwards, A. S.; C. H. Decker, C.; T. Casnor, G. K.; Mrs. C. E. Sprague, T.; Mrs. M. E. Guiberson, Ceres; Mrs. E. M. Decker, Pomona; Mrs. T. J. Casnor, Flora; Mrs. J. Edwards, L. A. S.; Thos. Marple, Sec'y.

A Call from the Mountains.

The *Amador Ledger*, very properly, holds the P. of H. in high esteem, and is anxious for the establishment of the Order among the farmers of that mountain county. That paper says: "No question can arise as to the fact that the organization of the Patrons of Husbandry has accomplished much good to the tillers of the soil in the United States, and that it is destined to still further advance the great agricultural interests of the country. Taking its rise in the necessity of protecting the agricultural interests of the Union against moneyed rings, unprincipled speculators and unscrupulous middlemen, it is destined to become a power for good, that will in the end crush out all the combined causes that have heretofore made the agriculturist the slave of capital. In view of the beneficial results of the organization of the Order established, why should the farmers of this vicinity not apply for a charter and organize a Grange in this neighborhood? There can be no question that good results would spring from it. We have in this vicinity a large number of active, intelligent tillers of the soil, whose combined efforts would materially advance the farming interests of the county. As the Order has, wherever established, been the means of correcting existing evils—extending mutual aid and assistance to its members—and of advancing the interests of agriculture, we see no reason why Amador county would not be benefited by organizing one or more Granges within its boundaries. Will our farmers move in the matter?"

The farmers of Amador and other mountain counties in the State would no doubt find it much to their advantage to come into the Order. Let any one or more farmers in any locality write to the deputy residing nearest to them with regard to the matter, and they will be placed in possession of all the information necessary to secure his services for the proper organization of a Grange of the Patrons of Husbandry. The list of deputies will be found published at the head of the fourth page of the present issue.

PATRONS IN EASTERN MONTANA.—A number of Granges of the above Order, says the *New North-West*, have already been instituted in Eastern Montana, by Mr. Sutherland, Deputy of the National Grange, and are in efficient operation. Farmers of the West Side, impressed favorably with the purposes and workings of the Order, have communicated with Mr. Sutherland, asking the institution of a Grange in this vicinity, and he has responded favorably to their wishes. He will be over in a short time to establish a Grange. Some of our most active and intelligent farmers are in the movement.

SAN BERNARDINO GRANGE.—The *San Bernardino Argus* of March 23d says:—We are informed by one of the leading members of the Grange, that the meeting yesterday was very large. The Order is now composed of nearly 100 members, and is rapidly increasing. The working of the Order is very harmonious. We hope the evils this Order proposes to remove may be removed. By uniting the ladies with the Order it gains a power it would never have otherwise swayed.

Anniversary Picnic.

The anniversary picnic of Stanislaus Grange, at Modesto, came off according to programme and was a most successful and enjoyable affair. The Patrons, clothed in regalia, with friends and invited guests, marched from their hall, under escort of the Modesto brass band, in a procession over half a mile long, to the picnic grounds, where over one thousand persons assembled to enjoy the occasion. The location was a beautiful grove of young oaks about three-quarters of a mile distant from the hall. A speaker's stand had been erected, capacious enough for a large choir, and seats arranged in front for the accommodation of five hundred people, with tables for four hundred at a time, at a convenient distance. The company was called to order by Worthy Master J. D. Spencer, presiding officer of the day, who announced the order of exercises, which consisted of appropriate songs by a choir, whose sweet harmony added greatly to the interest of the occasion. Reading of Declaration of Purposes, by our Worthy Lecturer, C. C. Luther, and an address by Prof. E. S. Carr, of the State University. Bro. G. W. Henning, of the *California Granger*, was called upon and made a few remarks which were highly appreciated by those who could hear him. Prof. Carr's address, which gave a condensed history of English agriculturists, received many encomiums among his auditors.

The exercises at the stand were closed by a prayer from our Worthy Chaplain, A. J. Hart, after which, dinner was announced. The tables were laden with the best that the country (or town) could afford. After the feast, and during the same, many old friends from various parts were taken by the hand, and some new ones likewise. We spent several hours on the picnic grounds, then marched back in procession to the hall, where, after listening to a stirring appeal to Patrons, by Bro. C. J. Cressey, the large concourse was dismissed with the blessing of the Worthy Chaplain.

The success of this little undertaking, Messrs. Editors, is not due to the energies of any one, or even half a dozen persons, but rather to the combined efforts of many among us, who are entitled to credit for their commendable public spirit. Among those may be mentioned Wm. S. McHenry and Capt. H. G. James. Yours truly,

VITAL E. BANGS.

The Patrons After Corrupt Politicians.

The telegraph reports that the Indiana State Grange, lately in session at Indianapolis, has called a Convention to meet at that city on the 10th of June, to devise some way to bring about such reforms as will emancipate that State from the burdens heaped upon it by corrupt party politicians. An exchange in the interest of the Order speaks as follows in response to this action:

Many will claim that in this move the Patrons of Husbandry are parting from their avowed purpose of keeping unconnected with political factions. The Patrons have not called the Convention under the auspices of any political party, but simply in the capacity of Patrons will they assemble to consider of the remedies needful to correct evident abuses in the administration of the State Government. The Patrons will not take into consideration their standing as Democrats, Republicans or Independents, but will doubtless point out, as members of the body politic, the abuses that have been tolerated, and fostered by political organizations, until all parties, except the politicians, desire their removal.

Any declaration of facts which that Convention may prepare will form the basis and ground-work of the political organizations of the State, which desire to retain within their ranks the Patrons who, everything being equal, will naturally incline to favor that party to which, by political bias, he may be inclined. The wisdom of the policy and principles governing the Patrons is more apparent the closer we analyze the results to follow from their labors. Being non-political, and numerically very powerful, any reform in State or National Government, suggested by them as a body, will be but too readily recognized by the country, and in this way the Patrons will force all parties to adopt wholesome platforms, and forward beneficial reforms.

There are no reforms needed that every individual member of that organization is not interested in having brought about. And there is no good reason why that body collectively should abstain from proclaiming their intention to bring about such reforms. That party will act wisely that places itself in harmony with this powerful organization, whose numbers and influences seem destined to outweigh, in importance and wholesome results, the chief political parties of the country.

THE PATRONS OF FLORIDA have organized "The Florida Co-operative Stock Company of the P. of H.," with one Director from each Grange represented. This is a good movement in the right direction of co-operation.

THE ORDER IN OREGON.—We notice by our exchanges from the State of Oregon and Washington Territory, that the Patrons of Husbandry are flourishing in a most unprecedented manner in those localities.

A Grange Burial—How the Order Bury Their Dead.

The first burial of a member of the Patrons of Husbandry with the honors of the Order that has come to our notice, took place day before yesterday in Kickapoo, when the remains of Henry Bolin were consigned to their last resting place with all the pomp and funeral pageant of the Grange burial service. Mr. Bolin was a prominent member, and the attendance was very large, some 400 persons being present. The programme of the burial was about as follows:

On leaving the residence of the deceased the hearse which contained the remains was flanked on either side by three pall-bearers, who walked with uncovered heads and regalia, draped in mourning. Following the hearse came the relatives of the deceased, and next marched the sisters of the Order, clad in full regalia. The brothers came next, and following them the vast concourse of people, who had come from far and near to witness the ceremonies. The remains were first taken to the church, where a priest went through a service peculiar to the Catholic Church, of which the deceased was a member. When the exercises here had been concluded, the procession took up its march for the cemetery, where the Granger funeral rites were performed. The coffin was placed on supports directly over the open grave, and remained there till the impressive and interesting service was concluded. C. B. Coffin, Master of the Frankhu Grange, conducted the ceremonies.

When the brothers and sisters of the Grange, of which the deceased was a member, had assembled about the grave, the Master read a selection from the burial ritual, followed by a second selection by the Chaplain, and then the members repeated slowly and solemnly the Lord's Prayer, closing with a beautiful and appropriate hymn. The brothers of the order then stepped to the grave and threw into the opening several bouquets of flowers and evergreens. A short but powerful address was next delivered by the Chaplain. While the coffin was being lowered a beautiful and soul inspiring hymn was sung, and during the singing the sisters showered bouquets of flowers upon the descending coffin until it reached the wooden box at the bottom of the grave. The Master then sprinkled a portion of the dirt thrown from the grave over the coffin, and the service closed.

Taken throughout, the ceremonies were beautiful and impressive. This is the first burial of a Granger in the county, and, if we are correctly informed, in the State—that is, with the ceremonies of the Order.—*Leavenworth Times*.

ONE OF THE GOOD EFFECTS of farmers associating in Granges, is the bringing together, in intimate relations, Democrats, Republicans, etc., and teaching the prejudiced that men are men, after all, no matter if they don't happen to be of the same party or church. This intimate relation of men of diverse political sentiments, bound together by common sympathies and interests, will tend to break down partisan feeling, and purify the politics of the country generally. Farmers from the North and South, the East and West, are beginning to study their interests, free from partisan bias and the influence of shrewd and unscrupulous politicians, who have so long led them blindfold by cunning appeals to prejudice and passion. The good resulting therefrom is already apparent, and will eventually culminate in the total breaking up of the political as well as all other rings, devised for the gain and advantage of the few at the expense of the many.

GRANGE MEETING IN SAN FRANCISCO.—A meeting of delegates from the various Granges throughout the State assembled at Corinthian hall in this city, on Tuesday last, and is still in session at this present writing (Wednesday P. M.). Over 200 delegates are in attendance. Bro. J. C. Merrifield, of Sonoma, was elected temporary chairman, and upon the election of permanent officers Bro. G. W. Colby, of Butte, was chosen President, and J. W. Ward, Secretary. Business of much importance to the Order in this State is under consideration before the Convention, the result of which will be made known to the several Granges in the usual way.

GRANGES IN TEHAMA COUNTY.—There are at present only two Granges in this county, one being located in Red Bluff and the other at Farmington. We understand that one will be organized in this town in a few days, and it is quite probable that two or three others will be organized, in different portions of the county, during the summer.—*Tehama Independent*.

GRANGE CO-OPERATIVE STORE.—We learn that the Grange co-operative store at Stockton, which has now been in operation about a month, is doing a good business. This store is acting as agent for Baker & Hamilton, hardware and agricultural implement dealers, of this city, and it is in farm implements especially that the co-operative store is dealing.

THERE are 27,000 Patrons of Husbandry in Kansas.

TOMALES GRANGE, MARIN Co., numbers 98 members.

Sunol Grange—Grain Sacks.

EDITORS PRESS:—The following preamble and resolutions were passed, in Sunol Grange with the request that you would publish them in the RURAL PRESS:

Whereas, This Grange has been informed that two millions of grain sacks have been imported by Messrs. Morgan & Sons, of San Francisco, at the request of the Executive Committee of the State Grange; and assuming that the entire crop of this year will sum up ten millions of sacks—the two millions bought by Messrs. Morgan & Sons, constituting one-fifth of this whole amount.

Therefore be it RESOLVED, that every member of this Grange, will buy at least one-fifth of all the sacks he may need of Morgan & Sons, thereby securing them against loss so far as this Grange is concerned.

RESOLVED, That we deem it to be the duty of our Sister Granges throughout the State, to take their "pro rata" share of the sacks, bought in the interest of the Granges by Messrs. Morgan & Sons.

RESOLVED, That this Preamble and Resolutions be published in the RURAL PRESS. S. W. WILLARD, Sec'y. Sunol, Alameda Co., April 18.

Rabbit Culture.

Necessity is the mother of invention, and a hundred devices are now in vogue in England to meet the difficulties consequent on the high price of butcher's meat. Prominent among these is rabbit culture. A number of places have lately been started for this purpose in London, and they are said to be paying very well. At these places rabbits are being bred in large numbers, and if they increase at their present rate they will make an appreciable addition to the food of London.

Lately the first annual show of the Metropolitan Rabbit Association was held in the same city, when there was a numerous collection of rabbits exhibited. They were generally what is known as the long-eared breed, and the size and weight of nearly all the specimens exhibited were extraordinary. There was no rabbit in the show less than eight pounds in weight, and two of them weighed respectively eleven pounds four ounces and eleven pounds. The first prize was awarded for a rabbit five months old, and weighing ten pounds. This animal's ears were 26½ inches long, and 6½ inches wide; and it should here be stated that a few days before the show it was purchased for breeding purposes for the large sum of £20. The second prize was awarded for a rabbit eight months old, and weighing ten pounds ten ounces. Its ears were 23½ inches in length, and 5½ inches in width. During the exhibition the chairman of the association addressed the company assembled, and, referring to the present high price of meat, stated that the association had been mainly established to encourage the breed of rabbits, which could be largely and profitably produced and reared. He urged the desirability of a wider and more extended production of rabbits as an article of animal food at a time like the present, when beef and mutton were beyond the reach of large portions of the population.—*Poultry Bulletin*.

PAY AS YOU GO.—The farmer cannot succeed until he learns to live on what he makes after it is made, and not on what he expects to make before it is made. Many years ago, an economical, thrifty farmer, was asked by a large cotton planter why it was that, though he was called a poor farmer and made much less to the hand than many of his neighbors, he was prospering, while they, with all their broad acres and heavy crops, were constantly falling into debt and becoming embarrassed. He replied: "You begin at the wrong end, you buy your supplies at the beginning of the year on credit; I buy mine at the end for cash." This was the true secret of the difference. Mr. McDuffie, in an agricultural address, delivered 30 years ago, in the hall of the General Assembly at Columbia, introduced, in connection with this subject, the language of that remarkable man, John Randolph, who, in the midst of one of his brilliant rhapsodies in the United States Senate, suddenly paused and exclaimed with the utmost fervor of his squeaking voice: "Mr. President! 'I have discovered the philosopher's stone!' It consists in these four plain English monosyllables: 'Pay as you go!'" *Rural Carolinian*.

SALTPETER OR SALT.—Besides the saltpeter recommended by a RURAL correspondent, a great deal of attention is attracted to the application of salt to corn hills to prevent the attacks of cut-worms. The late Isaac Newton, Commissioner of Agriculture, said: Take one part of common salt and three parts of plaster or gypsum, and apply, when the plant first makes its appearance, about a tablespoonful around every cornhill. It will be found a sure protection. The mixture should not come in contact with the plants, as it may destroy them. This method has been tried over and over again, and when properly applied has never failed. Mr. Newton further said that he tried this in alternate rows, which completely proved its efficacy, as while those where it was not used suffered greatly from the grub, not a plant of the other rows was touched. Let it be tried, as can so easily be done by those who are troubled with cut-worms in the cornfield about these days.

SHORT-HORN SALE.—We have received the catalogue of short-horn cattle, to be sold by the Glen Flora Breeding Association, at Waukegan, Ill., May 20th. The list is a long one and represents fine strains of blood.

COTTON.—Several Colusa farmers will this season try the experiment of cotton raising.

Irrigation.

There are some localities in the State where surface and running water is obtainable, free, and sufficiently near to the lands to be irrigated to render a simple series of short ditches all that is needed to ensure proper distribution of moisture. Where the engineering difficulties are not large and the length of the ditches comparatively small, a plan recommended by a writer in the *Boston Journal of Chemistry* appears to be a simple one, and will be interesting to any who may have thought the construction of ditches beyond their power.

While it is very convenient to employ a skilled engineer to lay out levels and construct a system of ditches and dams, the expense is greater than most farmers are willing to invest in such works. But almost any farmer, by aid of a simple level which he can construct for himself, can lay out his own ditches, and a few days' labor will enable him to double his hay crop. To construct the level, two pieces of board, an inch and a half wide by three-fourths of an inch thick and ten feet long, are fastened together at one end by a rivet; the other ends are then placed so that they form an inverted V, the legs of which should be just 16½ feet apart. A cross-bar about ten feet long is then riveted on to these legs in such a manner as to form an A, out of a V. Place this upright on a level floor, and attach a string to the apex of the A, and hang a piece of lead weighing about a pound on the lower end of the string, in such a manner that it hangs within six inches of the ground; mark where the string crosses the bar, then reverse the A, placing one foot where the other was, and again mark the place where the string crosses the bar. These two marks should coincide; if they do not the floor is not level, and one end of the A must be raised by putting a thin piece of board under it.

When the floor has been so adjusted that the level can be reversed and the line always crosses the bar at the same point, place a block an inch thick under one leg of the level, and mark where the line crosses the bar; then place one two inches thick under the same leg, and so on until five or six have been thus placed and the position of the line marked. Perform the same operation with the other leg. You will then have a light and portable instrument with which you can lay out a ditch perfectly level, or give it an inclination of one, two, three or more inches to the roll. To use it, place one leg on a stake at the level to which you can raise the water in your dam, and then bringing the other to such a height that the string just crosses the mark which gives the right fall for the ditch, swing it around until it just strikes the ground; drive in a stake there and adjust it so that the top is just at the right level; then set the first leg on this stake, and proceed in the same manner until the ditch has been carried the required distance.

In order to open the ditch, run a plow so it just grazes the lower edge of these stakes; a very little work with a shovel will now finish the ditch. A very common mistake in such work is building the dam too large. It should be built as small as possible, putting it as near the source of the stream as it can be well done, as the only object of the dam is to divert the water from its natural channel. We have seen ditches in Colorado that were constructed in this manner, that were miles in length.

If the distance is too great between the ditch and the bed of the stream, or if the hill is too steep, one or more parallel ditches may be run at lower levels, these serving to redistribute the water. At any point it is desired to use the water, a temporary dam is placed across the ditch, thus overflowing it and allowing the water to run over the land. One inch fall in every rod will generally be found quite sufficient.

ONE HUNDRED BUSHELS OF CORN.—Mr. John Damon, of Gold Run, Cal., once raised 100 bushels of small eight-rowed corn per acre, in Canada. We will tell our readers how it was done. He was mowing only three-fourths of a ton per acre of hay on old grass land. 25 loads of manure were turned in 10 inches deep. Cropped to oats, which, yellow and slim in June, afterwards reached fertilization and turned green, and fruited plump and heavy, without a superabundance of straw. Result, a good crop. In August plowed 25 loads of manure in, eight inches deep. In spring, cross-plowed four to five inches. Planted hills two and one-half feet apart in four-foot rows. The plants had ordinary growth at first, then received stimulus from the five-inch coat of manure; coming in on the home-stretch, sustained by the first dressing, lying 10 inches deep, and well ripened. Result, over 100 bushels of first quality of corn from one acre of measured ground. And still better, 27 cart-loads of rich golden pumpkins. Who has, or will, beat that in our own Los Angeles or Sonoma?

Please send us your tallest California corn-stalk and amaze outside barbarians.

The best of Mr. Damon's farming experimenting resulted in two tons of hay the succeeding year, where three-fourths only had grown before. Even ten years afterwards the average yield was up to one ton per acre.

SAN JOSE FARMERS' CLUB.—The last meeting of the Club was principally devoted to the discussion of some of the financial questions of the day. The proceedings are therefore omitted, as being of no special interest to the readers of a strictly rural paper.



The Old Canoe.

[The following charming little literary foundling is from an old paper, now extinct, which was once published in Arkansas. No name or address for the writer is attached:]

Where the rocks are gray and the shore is steep,
And the waters below look dark and deep;
Where the rugged pine, in its lonely pride,
Leans gloomily over the murky tide;
Where the reeds and rushes are long and rank,
And the weeds grow thick on the winding bank;
Where the shadow is heavy the whole day through,
There lies at its moorings the old canoe.

The useless paddles are idly dropped,
Like a sea-bird's wings that the storm has lopped,
And crossed on the railing, one o'er one,
Like the folded hands when the work is done;
While husily hack and forth between
The spider stretches his silvery screen,
And the solemn owl, with his dull "too-hoo,"
Settles down on the side of the old canoe.

The stern half sunk in the slimy wave,
Rots slowly away in its living grave,
And the green moss creeps o'er its dull decay,
Hiding its moldering dust away;
Like a hand that plants o'er the tomb a flower,
Or the ivy that mantles the falling tower;
While many a blossom of loveliest hue
Springs up o'er the stern of the old canoe.

The currentless waters are dead and still—
But the light wind plays with the boat at will,
And lazily in and out again
It floats the length of the rusty chain,
Like the weary march of the hands of time,
That meet and part at the noontide chime;
And the shore is kissed at each turn anew,
By the dripping bow of the old canoe.

Oh, many a time, with a careless hand,
I have pushed it away from the pebbly strand;
And paddled it down where the stream runs quick,
Where the whirle are wide and the eddies are thick,
And laughed as I leaned o'er the rocking side,
And looked below in the broken tide,
To see that the faces and boats were two,
That were mirrored back from the old canoe.

But now, as I lean o'er the crumbling side,
And look below in the sluggish tide,
The face that I see there is graver grown,
And the laugh that I hear has a sorer tone,
And the hands that lent to the light skiff, wings,
Have grown familiar with sterner things.
But I love to think of the hours that sped
As I rocked where the whirle their white spray shed,
Ere the blossom waved, or the green grass grew,
O'er the moldering stern of the old canoe.

A Sermon on Sentiment and Romance.

Instead of the usual novelette to which this column of our paper is more especially appropriated, we propose to put in a general plea for the subjects of these interesting sketches, namely: Sentiment and Romance.

If a sermon on these subjects were announced from the pulpit, those who attended would, of course, expect to hear them "preached down," and would undoubtedly be surprised at any deviation from this, the beaten track. But, somehow, we do not anticipate any manifestations of surprise on the part of the readers of the RURAL PRESS, when they discover that in taking hold of these delicate subjects, sentiment and romance, we do so with the avowed intention to "write them up." Not that we suppose we are noted for singularity in this, or in anything, but we are conscious of having placed before our large, and still increasing, circle of readers, not only the necessary, substantial dishes of intellectual food, but the wholesome delicacies have also been supplied. And we are confident that our attention to the amenities, as well as to the realities of rural life, has been duly appreciated.

In putting in a plea for a more general and more open recognition of sentiment and romance, we have, we confess, a more serious task in view than to merely procure a proper gratification for these tastes, pure as they are; it is to impress upon the public mind a conviction that the deterioration of social life in this country is owing, in a large degree, to the absence, or perverted course of these finer feelings. From the most trivial of satirists, to the most solemn denouncers of vice and folly, sentiment and romance have been teased, worried and crucified. Feelings that are next to religion in their own purity and in their purifying influences, are ridiculed and denounced until people are ashamed, or afraid to confess that they possess them.

Still they are possessed by all; and by most to a greater extent than even themselves are aware of. A man cannot, even with all the extraneous aid which popular prejudice affords, entirely suppress within his own nature sentiment and romance. In attempting to be free from the former, he may so successfully assume the character as to effectually deceive others; and he may so divert the natural current of the latter as to almost deceive himself, and then seek in its defiled waters debased sensual gratification. Or, if he does not in reality become a sensualist, he had better affect sensuality than be suspected of sentimentalism; for filthy debauchery is tolerated far more than "sickly sentimentality."

And we are sorry to say woman has debased

herself quite as low as man in this matter; and her aim has been fully as effective in stripping human nature of its finer tints and shadows. We do not deny that woman is foremost in every good work; but we believe that the most candid of their own sex, even, will sustain us in the assertion that she is also foremost in many things that are evil.

In nothing that woman has ever done is her conduct more unaccountable than her efforts to crush out of the popular heart, sentiment and romance.

What has she gained, or rather what has she not lost, in this warfare against romantic love? (We are aware that this is a ridiculous and almost obsolete term; but we find it more available here than any that offers, so we shall use it, at the risk of incurring the keen ridicule of the ladies.) They would not have contracted her sphere of usefulness, or checked the flights of her genius. If she had fostered and encouraged the development of these gentle feelings among her own sex, she would have found in them deserving confidants, sympathising companions, both in joy and sorrow. And if she had manifested simple, romantic love toward man, and earnestly sought a return of the same feeling, the result would have been ardent and lasting attachments, happy unions and mutual sacrifices.

But how different are her present social relations. At any point in her life that is tinged in the least with romance she meets with heartless ridicule, from the youngest to the oldest of her own sex who are ever on the alert to hunt down such timid game. All along her course to the bridal altar she must run the gauntlet of feminine wit and sarcasm; and the impatient, evil prophets can scarcely wait until the close of the honeymoon to see a verification of their predictions concerning the brevity, or utter illisiveness of married bliss. And, with shame be it spoken, at the period when woman needs the tenderest care, and craves the most delicate sympathy, and when even man silences his satirical tongue, and modestly affects unconsciousness of her situation, the feminine world, almost universally, beset her with vulgar ridicule; and she timidly retreats from their gaze when she should be proud of her precious burden.

Such is the treatment that woman receives from woman; and we assert that it is owing largely to savagely crushing out what is contemptuously termed "sickly sentimentality" and "silly romance."

Our masculine friends occupy a far more ridiculous position in this anti-feeling movement; still there is an extremely serious phase accompanying it. Men have, apparently, not so thoroughly ignored everything of this kind as have women. A man will, for instance, visit a negro minstrel entertainment, to see sentiment and romance travestied, but mind you, no minstrel troupe can "draw" or can "hold an audience" without a copious filling in of sentiment. The audience may be more boisterous in their manifestations of mirth at the broad humor, but we venture the assertion that the pathos, and even the romantic touches, with which minstrel music abounds, is more enjoyed than the harmless, playful humor. Many a man, when he leaves the house at the close of such an entertainment, buttons his coat over a heart whose every beat is the throbbings of—well, we are really ashamed to use the old-fashioned word again. The spirit of romance will not be exorcised. The spring of sentiment will continue to flow, though we may by throwing dirt into it, and by trampling about it, defile its waters; but it will clear itself if we only let it alone.

As a nation we do ourselves great injustice in this matter; and especially in regard to rural life. For, as we have said, this appetite for romance and sentiment must find nutriment somewhere, and it naturally seeks it in poetry and romantic prose; and our poets and writers of romance, judging by what they see and hear, that everything of this nature is effectually killed out in this country, feel constrained to locate their scenes in some foreign country, and choose their characters accordingly. But if they could penetrate the superficial social surface, they would find, even here in California, material that could be wrought into songs as beautiful and as enduring as those of Burns or Moore; and which the writer of fiction might use to great advantage. There is everything here to promote sentiment and romance. Concerning our climate nothing need be said in this connection; and when we bear in mind that our population is largely made up of people from countries whose climates are as genial as ours, and that through every grade of society a marked individuality of character prevails, with an impulsiveness which must have vent somewhere, we may, we think, safely conclude that we have all available means. And further, that it is not even prudent to leave them unused; for if they are not converted into good purposes, they will be turned to evil.

This is not the first time that those who are somewhat advanced in life have been urged to consider that they were once young themselves. But we would further plead with them in their own behalf. We would have them do justice to their own characters. For in closing their natures against the feeling, for which we entered our defence, they shut out much that belongs to common social life, and is even a component part of religion. A little softening of their natures will not unfit them in the least for the stern realities of life. And we all know how unsatisfactory these are found; and how we turn for relief and support to gentler things; and when we give to the latter due consideration, we hardly know which most deserves our

attention; and we are not certain as to which is the substance and which the shadow.
Herc endeth our lesson.

Farm House Chat.

[Written for the Press by MARY MOUNTAIN.]

When S. W., of San Diego, pluckily confessed his lonely condition, gave us his method for cold water gems, and asked for information about the "good graham loaf," it seemed so sure that womanly sympathy would be stirred and responses come cheerily in from all directions. But what a barren, disappointing thing life is anyhow.

Probably all the good bread-makers are too busy with that never-ending "disappearance behind the vest pattern;" and so the mocking "friend Anne," pokes fun at his cooking, tells him to get a wife, and winds up with the unkindest cut of all in allusion to what "nature intended," and the Warning Voice to all benighted bachelors.

Doubtless many a lonely, hard-working bachelor would gladly welcome a good bread-making wife if he knew where to find her.

But he finds instead such difficulties, uncertainties and discouragements, as certainly

Nature Never Intended.

As no direct aid and comfort can be given in that direction, let me tell him how I sometimes make the impromptu graham loaf.

Take about three pints of graham meal, one-half cup syrup, teaspoon salt, same of soda finely powdered and mixed with the dry meal, or else dissolved in water and added the last thing. Mix with buttermilk or sour milk to a thickish batter about as stiff as for gems. I put my loaf (without kneading) in a two quart tin basin and bake two hours or more in a moderate oven, covering it the last hour. It might be put in a shallow pan and baked in half that time, but would hardly be as good.

Some of our bachelor neighbors here in the woods make all their bread by the sour-dough method, leaving a portion of dough each time to ferment for the next batch. A little soda must be always added in the make-up; and when this is skillfully done and the baking ditto, you will have bread that is not at all bad to take. Their gems and griddle cakes are also made in the same way, and they make great use of graham meal. I should think the fermenting dough would become too sour in warm weather, but their baking goes on pretty frequently, and lively work in the dough-dish will never come amiss. Yeast powder used continually is said to cost as much as the flour itself; but will always be a favorite article with careless housekeepers who do not like to take trouble, or to count the cost of food in the store-bill or the health bill.

Men living alone and cooking for themselves are almost forced upon a monotonous bill of fare, and, if engaged in out-door labor, will generally stand it very well. Talking with one recently who came into the mountains for his health, he said that as long as he staid at home and ate his own bread and meat he could bid defiance to dyspepsia, but when away at work and eating at the "average woman's" table, the old pang was sure to return. This may be partly accounted for by the fact that sociability and variety at table will often lead a man to eat a much larger quantity than he would in the seclusion of his bachelor den, where he only talks to himself or to the faithful dog and cat who watch for the falling crumbs.

Quite within what is called "our neighborhood," are about a dozen of these bachelor housekeepers, who live in solitary cabins and do their own cooking. Several of them, when eating at our table, have asked how to make the brown bread; but when I told them how long to bake it they are sure to say—"O, I can't fuss in that way; must make, and bake and eat in less than half that time."

When talking in the RURAL about the brown bread, I forgot to say that it may be much improved and the flavor somewhat changed by adding to the usual mixing a large cupful of nicely stewed squash or pumpkin. Such a loaf baked slowly four or five hours and served up while still a little warm, is almost as moist and delicious as the brown loaves that came forth smoking and appetite-provoking from the famous brick ovens of old Yankee land.

Of course our lonely San Diego bachelor cannot often undertake anything of that sort; but when he finds his wise and tidy bread-maker, I hope she will set before him just such ruddy loaves—"fit for a king." Mixing happiness with hygiene, he will provide that little woman with a long row of spice boxes, choicest extract of lemon, and especially a beautiful salt-box. Dipping her hand daintily therein she will laugh at him and say—"How could you be such a mnggins as to fancy your things were good made up without a speck of salt, or the least mite of anything nice?"

Thus she will gently eneroach upon his theories; and he—perceiving that he never felt so well in his life before—will yield a little to this saucy but rather pleasant embodiment of feminine wisdom. And she—earnestly willing to find truth and excellence in all directions—will also yield to him, and agree that "cold water gems are really very good without salt, but—think of the butter we eat with them!"

Ah, what quantities of good nature and forbearance are needed when two would rule where only one has ruled so long alone!

With my blessing and best wishes I leave

this happy couple to fud out for themselves all the sacred and beautiful uses of

Domestic Putty.

If any gentle reader thinks this is a puzzle it will do no harm to study it awhile; and let no bachelor or maid give themselves forever into each other's keeping until perfectly sure that they understand it. By the way, I believe there is more married happiness, or comfort, among those who can have the pleasing distractions of social enjoyment. In lonely homes where souls brood and become intense, how tedious sometimes is the trial of enduring each other's presence through all the varying moods and tempers.

Grammarians by Rote.

When Mr. Millard Fillmore died the other day, most of the notices which his death occasioned mentioned the fact that his early education was neglected, and that at the time when he began the study of the law, at the age of 19, he had never seen a grammar or geography. Yet Mr. Fillmore, both in writing and speech, used the English language with about the usual propriety; and, like most of our respectable public men, he never lapsed into any very glaring solecisms. Of his geography we are not so certain, but his knowledge was probably sufficient for all ordinary emergencies. It is the accuracy with which so many of our half-educated or self-educated men write and speak English which is surprising; and there is nothing like it, we suspect, anywhere else in the world. Yet this facility does not come from the study of grammar. There are not ten men in the House of Representatives who could parse ten lines of Milton according to the rules of Lindley Murray; yet these gentlemen are never guilty of two negatives employed to strengthen the negation, even when they are devious charges of fraud or corruption. These are facts which may well lead us to revise our notions of the necessity of studying grammar as it is usually taught in our schools. Our American accuracy does not come of early drilling. It is to be attributed to the general habit of reading. It is in this way that the majority become tolerable grammarians by rote, and speak correctly simply because they speak at all. The verbs are made to agree with their nominative cases instinctively and as a matter of good breeding. Small mistakes are made, as they are by the best writers; but nobody notices them except professional teachers, who, in their turn, make just as many.—N. Y. Tribune.

A NICE LITTLE TALE.—Nicholas the First was very fond of masquerade balls, and one night appeared at one in the character of the devil, with grinning face, horns and tail, and appeared to enjoy his character very much. About three o'clock in the morning he went out, and throwing over him some furs, called a coachman, and ordered him to take him to the Quay Anglais. As it was very cold, he fell asleep, and when he awoke he found that the man had taken him in a wrong direction, for the Quay Anglais is one of the most elegant portions of St. Petersburg, while before him were only some miserable houses. Nicholas began to remonstrate, but the coachman paid no heed to him, and presently passing through a stone gateway, brought him to the cemetery, and taking a large knife from his girdle, and pointing it at his employer's throat, said:

"Give me your money and your furs or I will kill you!"

"And do you give me your soul!" exclaimed Nicholas, as he threw off the furs and disclosed his personification of the devil.

The Russians are very superstitious, and the coachman was so terrified that he fell senseless on the ground, and the Emperor drove himself back to his palace.

The leading question in Wisconsin is "How's hops?"

In Pennsylvania: "How's your coal mine?"
In Michigan: "How's iron and wheat?"
In Iowa: "How's cheese?"
In Virginia: "How's terbacker?"
In Delaware: "How's peaches?"
In Indiana: "How's corn?"
In Kentucky: "How's hemp?"
In New York: "How's the canal?"
In Maine: "How's timber?"
In Minnesota: "How's Injuns?"
In Montana: "How's the snow?"

A not uncommon trick in Paris is for a person with a bad cigar to stop a gentleman having a good one, to solicit permission to light, and in the handing back manage to substitute the inferior weed. The other day two ingenious gentlemen with equally vile cigars tried this trick on each other with no very satisfactory result.

A young man having put a crown piece into "the plate" in an Edinburgh church by mistake, instead of a penny, asked to have it back, but was refused. In once, in forever. "Aweel, aweel, grunted he, 'I will get credit for it in heaven.' 'Na, na,' said Jeems, the door-keeper, 'ye'll get credit only for the penny ye meant to gie.'"

If a man bequeathed you a hundred pounds, would you pray for him?" said a Sunday school teacher to a pupil. "No," said he; "I would pray for another like him."

WHEN you see a woman winding her watch in a horse car, you may make up your mind that she has not had a watch very long.

The Best Sewing Machine.

There was Mr. Hubbard. He drove up to the door, unloaded a sewing machine, and said if we wanted a machine which could do all kinds of work, run easily, hem, tuck, ruffle, gather, braid and be a thing of joy forever and forty days more, we shouldn't fail to buy the "Lightning Slinger." I bought it, and when, after a week, he wanted a certificate, I cheerfully wrote this one:

"This is to certify that I have had the 'Lightning Slinger' in my house for some time past, and I wouldn't be without it for twice its cost. It hadn't been in my house half a day before my son recovered from the whooping-cough, and my wife found a ten-dollar bill on the sidewalk. I think it is the best machine ever made, I can't bear to go to bed and leave it."

He said he was ever so many times obliged, and he hadn't got out of sight before Kilroy drove up with the "Thunder & Blazes" machine. He began to snuff at the other machine; said we'd been humbugged, and that his machine was the only first-class machine in the market. My wife began to cry, and he soothed her by offering to trade his machine for the other, which he could sell for old iron, and \$30 to boot. We made the trade. He said the "Thunder & Blazes" would make any kind of a stitch, sew any kind of fabric, and outrun anything but a locomotive. He came around the next week, with a certificate all written out, and I signed it:

"This is to certify that I have gained ten pounds of flesh each day since purchasing your machine, and that my wife hadn't run it half an hour when her uncle died and left her two hundred thousand dollars. Not one of the children has had a cold since the day the 'Thunder & Blazes' came through the gate. It plays easily, the strings are not liable to snap, the stops are easy to manage; and it is the only machine in the world which can be operated by a red-headed woman with a cork leg. I can stay out until eleven o'clock every night now, and my wife hasn't a word to say. Formerly she used up four rolling-pins, costing two shillings each, per week."

Then McManus came. I told him that we had the best machine in the market, and he asked to look at it. He hadn't fairly got his eyes on the "Thunder & Blazes" before he commenced to laugh.

"Ho-ho-ho!" he shouted, as he dropped on a chair—"it will kill me—did you ever—oh! ho-ho!"

I sternly asked the cause of his hilarity, and he replied that Kilroy had swindled us—taken us in—cheated us stone blind. The "Thunder & Blazes" wasn't worth a darn, he said—was an old machine invented by a blind man and patented by a fool. My wife began to weep.

"But," said McManus, "that were his machine, the 'Chained Earthquake.' It was the machine, and all other machines were base imitations. We might try it, and if we didn't like it he would cut his throat with a brick-saw. We tried it, and when he came with his certificate, I signed it:

"This is to certify that your sewing machine has saved me ten per cent. in fuel and twenty per cent. in hay and corn since we purchased it. I licked an alderman, pulled a schoolmaster's nose and kicked a member of the legislature the second day after we got the machine, and we hadn't owned it a week when I found where I could get trusted for meat and wood, and discovered a flour shed unlocked. It will sew anything, from a leg of mutton to a New Hampshire mountain. There hasn't been a cloudy day since the machine first started, and the moon now rises two hours earlier and lasts all night. No one should be without it."

He took the certificate with a triumphant smile, and—

But I must leave off here. Mr. Farnsworth has just called with "The Five-Jeweled Duplex High Low" machine—the only leading machine in market, and he is telling my wife how we got swindled by McManus.

LOUIS NAPOLEAN first met his future Empress at the Elysee Gardens, in Paris. He had escaped from the Duke of La Moskowa, when he suddenly came upon a radiant, blushing girl, who was trying to do up her hair alone, opposite a glass in the conservatory. Her hair had come down during a waltz, and Louis Napoleon, seeing her in this strait, gallantly offered her his arm and led her around by the private apartments into the dressing-room. It was Mlle. Eugenie de Montijo, the future Empress of France and of fashion.

MANY of the men whom we set down as failures may have been doing as much as those who have made ten times as much noise in the world. A great deal of the best work in the world is anonymous, if we do not confine the term to writing.

A LITTLE boy, carrying home some eggs from the grocery, dropped them. "Did you break any?" asked his mother, when he told her of it. "No," said the little fellow, but the shells came off some of 'em."

SIMKINS playfully remarked to his wife that he had four fools: Beautiful, dutiful, youthful and delightful. "Poor me!" said she, "I have but one."

EMERSON says: "The way to make the world better is by reforming number one; then there is surely one less villain in the world."

A good floor manager—A broom.

Young Folks' Column.

A Sad Story.

A little boy having heard a beautiful story about a little boy and a hatchet, and how, because he wouldn't tell a lie, he, in time, got to be President of the United States, was very much impressed by it. Now it so happened that on the last day of March he was just ten years old, and his father asked him what he would like to have for a birthday present.

Very naturally the boy's answer was, "A little hatchet, if you please, papa."

The father bought him a little hatchet that very day, and the boy was so delighted that he actually took it to bed with him.

Early the next morning he took his little hatchet and went out into the garden. There, as luck would have it, the first thing that caught his eye was his father's favorite cherry tree. "My eyes!" exclaimed the little boy to himself, "what a time my father would make if a fellow were to cut that tree!" It was a wicked thought, for it led him into temptation. There was the tree—tall, straight and fair—standing invitingly before him, just the thing for a sharp little hatchet. And there was the hatchet, strong, sharp and shining, just the thing for a favorite cherry tree. In another instant the swift strokes of an axe were heard in the still morning air, and before long a small boy was seen running toward the house. His father met him at the door.

"My boy, what noise was that I heard just now? Surely you have not been at my favorite cherry tree!"

The boy stood proudly before him, but with downcast eyes and flushing cheeks.

"Father," he said, "I cannot tell a lie. That cherry tree is—"

"Say no more," said the father, extending his arms. "You have done wrong, my son; and that was my favorite cherry tree; but you have spoken the truth. I forgive you. Better to—"

This was too much. The boy rushed into his father's arms.

"Father!" he whispered, "April fool! I haven't touched the cherry tree; but I most chopped the old apple-stump to pieces."

"You young rascal, you!" cried the father, "do you mean to say you haven't chopped my cherry tree? April fool your old father! will you? Take off your coat, sir!"

With a suppressed sob, the little boy obeyed. Then shutting his eyes, he felt his father's hand descend upon his shrinking form.

"My son," said the father, solemnly, as he stroked the little shoulder, "it is the first of April. Go thy way."—*St. Nicholas for April.*

No Bureau for Blunders.

A first-rate story is told of a very prominent man, who lived in Detroit forty years ago, and who at that time owned more steamboats than any other man in the West. Like many of the pioneers who acquired great riches, he was very ignorant in all that books taught, but his learning was more like wisdom. He had, at the time of our story, just completed a splendid new warehouse at Buffalo, and wanting a suitable clerk to take charge of it, he advertised for one in the papers. The next morning early a candidate for the position presented himself, a rather too flashy young man in appearance, but the following conversation occurred:

"Young man, when you make a mistake in any of your books, how do you correct it?"

The young man explained, in a profuse manner, how he should make it all right.

"A good way, no doubt, to do it," replied the old man, "but I shan't want you."

Very soon another aspirant put in an appearance. A similar question was asked him, and in a long and eloquent manner he pointed out the remedy in all such cases.

All the reply was, "Young man, I shan't want you."

Some three or four others dropped in during the day, and to each one the same question was put, and they all had some smart way of covering up errors in their books.

The old gentleman was entirely ignorant himself of the art of book-keeping, but he had wisdom in all things, which is often more than a match for learning.

Just at the close of the day a plainly dressed man, with a bright eye and a brisk step, called for the situation.

"Take a seat, sir," said the old gentleman. "I want to ask you just one question. When you make a false entry on your books, how do you go to work to correct it?"

Turning upon his questioner a cold, sharp look, the young man replied:

"I don't make those kind of mistakes, sir!"

"Ah, my dear sir, you are just the man I have been looking for all day," and, in a few moments after, the man who corrected his blunders by not making them, was installed in the office.

DURING a reading lesson, the name JOHN—, Junior, occurring, the teacher asked what it meant. Only one hand was raised—a little boy whose eyes were beaming with the thought of being the only one who answered. The teacher asked what it meant; the answer came prompt and decisive:—"One who was born in June."

GOOD HEALTH.

Health from Shakespeare.

How quickly nature falls into revolt
When gold becomes her object;
For this the foolish over-careful fathers
Have broke their sleep with thoughts, their brains
With care,
Their bones with industry.—*Henry IV., 2nd part.*

Will fortune never come with both hands full,
But write her fair words still in foulest letters?
She either gives a stomach and no food—
Such are the poor in health—or else a feast
And takes away the stomach—such are the rich
That have abundance and enjoy it not.
I swear 'tis better to be lowly born,
And range with humble livers in content,
Than be perked up in a glistening grief,
And wear a golden sorrow.—*Henry VIII.*

Foul Air.

Dr. Brigham writes, in the *Herald of Health*: Why need we seek illustrations of bad ventilation when the complaint is so universal, and no place seems to be exempt? What dwelling-house has a perfectly satisfactory air, even where no nuisances can be detected on the premises, and no expense has been spared in enticing into it the breezes of heaven. Where is the workshop in which the pleasure of easy breathing moves the artisan to perpetual song in his toil? Where is the office in which the lawyer finds that the air makes dry briefs spirited, and turns to a pastime the search for authorities; or in which the doctor does not inhale a draught which is only less bitter than his powders and his pills? Where are the bed-chambers in which the dreams are naturally of Araby the blest, or in which the tired brain is left by the air to sleep in Elysium?

Perhaps this complaint about foul air is extravagant, and more ado is made about it than the facts will warrant. Our fathers were not so sensitive, and they kept health in houses where no direct provision was made for ventilation. Have we not grown morbid about a matter which is really of minor importance? Is it not really a misfortune that air is so readily analyzed, and that there is so much prying into its quality, to detect a few grains more or less of intrusive plague? Are we any happier or sounder in body because we know exactly the proportion of oxygen and nitrogen and carbon and water that ought to be in the normal air, and can test it and weigh it? Were not ignorance bliss, rather than this perpetual fret about what seems beyond help? Not a few impatient souls have come to hate this persistent alarm about an evil which seems to have become an excuse for greater evils, and to unsettle the foundations of morality. Are we not told that the sins of men come from the bad air which they breathe, and that crimes are the product of atmospheric impurities? Is not the carbon of the cellars and the attics made responsible for the larcenies and murders upon the highway? "For heaven's sake," they say, "stop this tirade about ventilation and bad air; submit to the inevitable, and let us have peace!"

But science is inexorable. We have discovered the mischief, and in spite of this plea of passive submission science will not be silent until the evil is corrected and the remedy is shown. We shall fight it out on this line, if it takes all the rest of the century to finish the fight. We shall agitate and agitate, until the foul vapors are shaken out and away from the abodes of Christian women and men. We shall try experiments, even if a hundred more shall fail, until "achieved is the glorious work." We shall work on, hoping against hope, it may be, until man becomes a successful ruler of the earth because he has fairly dethroned Satan, and become "Prince of the powers of the air." We shall expose the causes of bad air, and plead and threaten until they are set aside. We shall not let the world live in its delusion, or die in its sin; but shall cry aloud and spare not. There is no discharge in this war for any one who has sworn to protect the public health, and to watch in its behalf.

1. The first source of impurity in the air is the carbon given out in the process of breathing. Each breath that we draw helps to spoil the next breath that we shall draw, if we are held in a room where the air is confined. Of course this cause is more efficient as the number of those who breathe is greater. The air is ruined more rapidly in a room where a dozen are pouring out carbon from their lungs than where only a single pair of lungs are at work; more rapidly in a room where a thousand are crowded together than where there are only fifty or a hundred. The poison there is speedy in its working, and we feel it in nerve and vein. But it is not less real in the chamber where we sleep or the library where we read, because its influence is so silent and we take no heed of it. While we draw in the breath of life we are all the time throwing out the breath of death.

2. Exhalations from bodies are a second source from which poison comes into the air. The healthiest body, full of bounding life, sends continually into the atmosphere around it the seeds of disease. The emanations from any organized animal frame put into the air something foreign to its purity. Plants, indeed, purify the air by what they absorb and by what they give out; but no one pretends that animals purify the air by their bodies, whether they are men or swine. Caliban in his den, rolled in his unwashed rug, does not vitiate the air more surely than Brummel in his boudoir, anointed and perfumed. Perspiration assists respiration in the destruction of carbon, and the result of a perspiring crowd

in a ball-room or a church is not radically different from the result in a ginshop, or a hovel, where animal heat infuses the air with its microscopic deadly germs. Even the harmless, necessary cat, cleanest of all household pets, does evil to the air which can be appreciated. And the dear love of a spaniel or a poodle, washed and combed, and ringed with a pink ribbon, vitiates the air of the room while he lies upon his cushion.

3. Next to these two causes of impurity in the air, from which we never can get away, we may place the decomposition of waste and refuse, from the influence of which very few homes of men are free. From the store-room and the pantry, from the kitchen and the back yard, from vegetables and fruits in decay, from meats hung up economically, from garments rotting in dampness, from mould upon the walls, from the husks and parings and the ash-heaps, what foul aroma rises before they melt and crumble into common dust! The utmost diligence cannot quite remove this source of pollution. No scavenger comes so often, or does his work so thoroughly, that he carries off every kind of decaying fibre. Some fungus will stay in the most jealously cleansed habitation. Where there is life and moisture, the rock will have always its moss and its lichens. Is there not paste upon the plaster? Does not the steam of the roasting and broiling come charged with effluvia, which may be grateful to the nostrils yet baneful in the residue of corruption? Friendship may live while the pot boils, according to the Latin proverb: "*Fervet olla vivit amicitia*;" but when the pot has done boiling, the latter emanations are unfriendly to health and comfort.

4. Of course dust has a large share in loading the air with foreign substances dust in many kinds, room dust, street dust and field dust, dust which hides in carpets and curtains, dust which is on the hearth and the window-sill and the cornice, dust which is palpable and vexes the nostrils, and dust which we only detect as it floats in the rays of sunlight. We have not to wait for death in order to return to dust; we never get away from it, even if we dwell by the lake and remote from the highway. Very few of the human race breathe an air in which there is no dust. It can only be in the region of ice fields and polar snows. Even in mid-ocean dust flies in the air. Most of us live in an atmosphere thick with dust, rising from the pavement, rolling from the roadway, sifting through all crevices of the house, and borne in the garments wherever we go. Dust accompanies our pleasures; it is raised by the flying feet, and on the race-course we can call to mind the wail of Ezekiel, "By reason of the abundance of his horses their dust shall cover thee."

5. Sewers and stagnant pools are another fruitful source of pollution in the air. The best system of sewerage, carefully carried under the ground, with pipes impervious and cemented, cannot keep in all the pestilent vapors. Foul water, in its flow and its evaporation, inevitably dissolves into foul air. The convenience within the house becomes its plague. How shall the air of a city be quite pure when running rivers of filth are drawn under all its streets, to poison the water of the natural river into which they flow? Shall all the odors of Farina, genuine and spurious, clean the air of Cologne, while the river Rhine catches a flow not strained, but in no other respect like the quality of mercy?

6. Miasma from decaying vegetation, from marshes and alluvial soil, is another curse from which, in many localities, the air cannot escape. The deadly blight goes beyond the spot of its origin and spreads far, in spite of all effort to keep it back. It comes from the meadow up to the lawn, and from the lawn into the house. We breathe it in the mists of the evening and the mists of the morning, and the August air, which seems so refreshing and cool, is only malaria, which mortals ought to dread.

7. Combustion, too, in the methods which men employ it, destroys the air by the gases which it generates. Through the cast iron furnace and red hot stove, carbonic oxide finds its way into the current, and fills the house with a stupefying influence. Factory chimneys and house chimneys in the cities belch forth their smoke and send it through the air in sooty rain. Shall we expect pure air where the curling fumes of a copper mill or a chemical factory fleck the sky?

8. And then how many necessary nuisances disperse their odors in the haunts of civilized men! Glue factories, bone boiling works, soap works, tripe works, slaughter houses, breweries, tanneries, petroleum refineries, fish spread upon the land, charcoal pits, etc., combine to poison the air.

NITRATE OF SILVER REMOVED BY IODIDE OF POTASSIUM.—Dr. L. P. Yandell, Jr., reports two cases, both young merchants, who had been unsuccessfully treated for epilepsy by nitrate of silver, in their youth; and whose skins were badly discolored by the remedy. Both contracted syphilis, and for tertiary symptoms were given iodide of potassium in from ten to sixty grain doses, thrice daily, for a number of months. The color of the skin gradually improved, until in one no trace of the staining remained, and in the other but a faint shadow of it. He goes on to state that mercurial vapor-baths were administered during much of the time, which, by the diaphoresis excited, probably aided the action of the iodide; and suggests that in the treatment of nitrate of silver discoloration, the vapor-bath should be used in connection with the iodide of potassium.



PUBLISHED BY

DEWEY & CO.

A. I. DEWEY, W. B. EWER, G. H. STORNG, J. L. ROONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.50; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, April 25, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—A Contrast; The Unprofitableness of Farming; Is It True? 257. Irrigation, 261. How Shall the Coming Crop of Wheat be Shipped? Summer Fallowing; Mending Grain Sacks; Hemp, Flax and Jute, 264. Hints on Hop Growing.—No. 4: Hudepeth's Improved Bait for the Inclined Spout of Headed; A New Hand; Label Your Trees and Plants; A Lesson to Fruit Growers, 265. Patents and Inventions, 268.

ILLUSTRATIONS.—The Result of Good Breeding; The Ratt-Splitter, 257. Improved Bait for Headed Spouts; Rather Embarrassing, 265.

CORRESPONDENCE.—Silkworm Raising; Immigration: The Seed Question; Don't Believe that Melons and Squashes Mix; The Origin of Man; Treatment of Farm Hands; Destroying Ants; Diversified Agriculture; Sacking Grain; Tobacco in Washington Territory; Squirrel Poison; United States of Colombia, 258-9.

POULTRY YARD.—Parasitic Vermin; Rearing Ducks; Meat to Make Fowls Lay; Prices of Choice Fowls and Eggs, 259.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 260-61.

HOME CIRCLE.—The Old Canoe (Poetry); A Sermon on Sentiment and Romance; Farm House Chat; Grammarians by Rote; A Nice Little Tale; The Best Sewing Machine, 262-3.

YOUNG FOLKS' COLUMN.—A Sad Story; No Bureau for Blunders, 263.

GOOD HEALTH.—Health from Shakespeare; Foul Air; Nitrate of Silver Removed by Iodide of Potassium, 263.

USEFUL INFORMATION.—The Waste of Oil; Temperature Required to Hatch Eggs; Preserving Iron and Steel Surfaces from Rust; Adhesive Plaster; Artificial Marble; Strength of Building Material; Salt Manufacture; Glue Melting; The Pneumatic Dispatch; Fire and Water-Proof Paint; Extracting Chlorine; Anti-Boller Incrustation; A Red Ink which Resists the Action of most Chemicals, 266.

THE HORSE.—Judging Horses; Treatment of an Unmanageable Horse; How to Cure Split Hoof; A Tipping Horse, 266.

AGRICULTURAL NOTES from various counties in California, Washington, Nevada and Oregon, 268.

MISCELLANEOUS.—An Eventful History; Microscopic Crystals in Plants; High-Pressure Filter, 259. Gun-Cotton; The Heat of the Moon; Pointing Wire; Shoes by Steam, 267.

THE FARE AND FREIGHT QUESTION.—Some few injudicious people of Placer county recently burned Assemblyman Gilman of that county, in effigy, at Shingle Springs, whereupon an endeavor was made to show that the feeling of the people in that place was in sympathy with Mr. G., notwithstanding the act of burning. As an offset to this effort a mass meeting of the citizens was subsequently called, which, although it did not endorse the unwise demonstration of the effigy burners, yet passed some most scathing resolutions condemnatory of the course of Mr. Gilman on the Fare and Freight question. There is no mistaking the opinion of the people of California on this question, and they will not fail to embrace the first and every proper opportunity to make it known. All those who, like Mr. Gilman, misrepresented their constituents at Sacramento, last winter, will receive a most signal rebuke from the people at the next general election.

CROPS IN THE UNITED STATES.—A telegram from Washington states that the Department of Agriculture has received full information about the prospects of the wheat crop in every State in the Union. No winter has been so propitious since the reporting of crops was organized. Throughout the South the growth is vigorous. In New Jersey and Pennsylvania the weather since the middle of March has been unfavorable, but still the prospects are flattering. The Ohio valley reports are jubilant over the superior condition of crops in that section. From California the accounts are very promising. The Secretary of the California Board of Agriculture reports the prospect as favorable for 40,000,000 bushels in that State.

SEVERAL interesting communications are crowded out of the present issue, among them letters from C. H. D., E. B., F., S. H. W., etc.

How Shall the Coming Crop of Wheat be Shipped?

The farmers of California demand a cheaper system of wheat transportation. They think they may justly claim a larger share than they now receive of the proceeds of California wheat sold in foreign markets. They also claim that the present rates of transportation, besides making wheat growing unremunerative to the producer, are extremely damaging to our foreign wheat trade; virtually closing any possible opening for competition on our part in European markets, except during an occasional year of short crops in several foreign countries.

The fluctuation in the foreign demand has undoubtedly given rise, in a large degree, to the speculative element now so injurious to our wheat trade. But is it not possible to remove this element, and thereby cause the trade to be less fluctuating? We do not expect to see this speculative spirit exorcised by public indignation, nor is it reasonable to suppose that we can entirely overcome it at once; and especially, as many evidently hope, in time to save the coming crop of wheat from its clutches.

The system to which this product is subjected, from the time that it leaves the hands of the producer, until it passes into those of the foreign consumer, is complicated and necessarily expensive. We can undoubtedly reduce this complexity somewhat, and lessen the actual cost of shipping and handling by stimulating competition; but the idea of taking the matter at once out of the hands of those whose legitimate business it is to take charge of the wheat during its transmission from producer to consumer, savors of rashness; and the farmers would probably be the greatest losers by the operation.

No one who acknowledges that the laborer is worthy of his hire will deny that the farmer is entitled to a larger share of the returns from our exported wheat; and if the shipping of it can be relieved of its speculative element, and a reformation can be introduced which will enable us to sell our wheat in foreign markets in seasons of ordinary crops abroad, the country at large will have ample cause to rejoice. But we fear there will be little cause for rejoicing on the part of farmers or their friends, if a hasty, radical reform is inaugurated, and an attempt is made to ship the present crop of wheat wholly in bulk, and by entirely new parties.

The marked favor and high prices which California wheat receives in foreign markets is owing, principally, to the perfect condition in which it arrives there, in consequence of being shipped in bags; while that brought from Persia, Russia and other countries is shipped in bulk, and even though not actually damaged, is depreciated in value by its unclean condition. But may we not hope to see the shippers of California wheat so improve on the present mode, that they can ship a large portion of it, at least, in bulk, and still have it delivered in a condition which will do justice to its superior quality?

At present, ships are not properly ceiled for carrying wheat in bulk. If the demand were permanent for vessels adapted to this purpose, there would undoubtedly soon be an ample supply; but it would be unreasonable to expect that ships are going to be built or remodeled for this purpose in the present spasmodic condition of the wheat carrying trade. If the coming crop could be shipped in bulk, thereby saving the cost of sacks to the farmer, and greatly reducing the expense of handling, a larger portion of the proceeds would, of course, remain with the producers, and we should be able to compete with better crops abroad. But it is now claimed that first-class vessels will not take wheat wholly in bulk; and the insurance on cargoes thus shipped, even in this class of vessels, would be advanced to rates that would materially offset against the cost of sacks, and for the lower classes would range still higher; while for cargoes shipped in unreliable vessels, (a class in which inexperienced shippers would be apt to ship their freight), no insurance could be obtained from sound companies. We certainly do not want to have anything to do with cheap or venturesome companies, for it is a well established principle in insurance, and one which the insured understand as well as the underwriters themselves, that when a company takes undue risks, or on too low a scale of rates, they do so at the risk of their customers.

While we are endeavoring to escape from the grip of the monopolists, we should be careful how we rush in to the arms of adventurers. Those who have been led to examine matters pertaining to wheat shipping, have undoubtedly discovered evidences of extortion, and have detected some "tricks of trade;" but we apprehend that they have also come to the conclusion that it is, in reality, a trade, even when stripped of all its tricks; and one, too, in which outsiders should be careful how they embark. It is a trade requiring long experience, sound judgment, close figuring, and accurate calculation; and without these there can be no profit to the trade and no safety to their customers. In an article published in a late number of the PRESS, we gave a bill of costs for shipping a cargo of wheat by the barque Kale. It will be seen by this that there are necessarily many departments belonging to the shipping trade; and it is evident that the closest connection between these parts, with clearly defined responsibilities, and general harmony, are indispensable.

We have too high an opinion of the intelligence and candor of our readers to suppose that they would wish to have us warp our honest convictions to suit any prevailing feeling on this subject. None of them realize more fully than ourselves that the wheat growers of California occupy an uncomfortable position; but we should "look before we leap," and we would much prefer to see prudence prevail over pluck, much as we admire the latter quality in our farmers.

The shipping of our wheat is a matter too complicated for us to reform or reconstruct within the brief period before the coming crop is ready for transportation. We should by all means encourage competition to the fullest extent; treating the matter, however, in a strictly business manner, and not depending upon any supposed friendliness or sympathy. Further shipments in bulk will undoubtedly be made during the coming season, and it is to be hoped that these experiments will develop improvement and facilities, and attract the active interest of the commercial world to this new and important undertaking.

Summer Fallowing.

Our neighbor, the Gilroy Advocate, says of the subject: It is nothing unusual in some farming districts to hear that such and such a farm is giving out, that crops are falling off, that weeds choke the seed, and that, in fact, the soil is almost exhausted. And this is true in most of the cases represented. The wonder is, indeed, that complaints of this kind are not more general. When land is plowed and immediately seeded, year in and year out, and for perhaps twenty years, with the same kind of seed, without manure or any previous preparation, and always, without the least variation, bringing forth the same kind of crop, no wonder that the land gives out and that weeds choke up the seed when it begins to sprout. But to say that land is therefore exhausted, and that it is no longer profitable to till it, is simply absurd. If land were so easily exhausted, what had become, centuries ago, of agricultural lands in Europe and Asia, where populations are very dense, and where it is almost impossible to obtain a farm of maiden soil.

The fact is that, first, our farmers expect entirely too much from the fertility of the soil, and next, that after a few years they become discontented with their farms, and because land does not yield as well as in earlier years, they prefer looking out for a new farm rather than take the trouble of renovating the old. When seventeen or eighteen crops in succession are taken off a farm, the land is so poor that an area which in former years yielded so abundantly as to leave the cultivator a handsome profit at the year's end, now yields scarcely enough to supply his simple wants. What is he to do? He must, he thinks, go on cropping the full extent of his farm every year until he gets a chance of selling off, or until the land is so poor that nobody would take it as a gift, and then he has to h-take himself and his broken fortune away to some other part of the country and begin the world afresh.

Now, when a farmer finds his land becoming impoverished, what he should do first is, not to look around for a purchaser, but to sit down solid and contented, and resolve like a courageous man, to reap the benefit of all those improvements with which, by years of toil, he has surrounded himself. Having thus resolved, he should next resolve to fallow ten acres the following summer. If he finds he cannot spare ten acres from the usual area of sowing, let him fallow five; if he cannot spare five, let him fallow three. If, when he finds his land getting poor, he summer-fallows three or five acres every year, he would in a few years have the whole of his farm, of say, 160 acres, clear of weeds and as good as new. And why does not our California farmer adopt this simple plan? Because he is ever yearning after change. He never makes up his mind to live and die on his farm; he never sets sufficient value on settled habits and quiet domesticity so necessary, so entirely indispensable to rearing a family in comfort.

Planting Shade Trees.

Many persons setting out shade trees in front of their premises, say an exchange, make a great mistake in planting them close. No street shade trees ought ever to be placed nearer than thirty feet; when planted nearer they interfere with the proper development of branches, and necessitate cutting back every two or three years to the condition of barber poles, destroying all their beauty as trees, and promoting early decay. We notice that a disregard of this renders more than half the shade trees failures after they have been planted a few years. If one wants fine trees, plant far apart, to permit the full development of the branches on every side, never less than thirty feet; and strong growing kinds, like silver poplars, will make much finer trees at forty feet than nearer. The only cutting back necessary is when planted, and perhaps with some rapid growing sorts, shortening in the branches after one or two years' growth, to prevent becoming too top heavy to withstand high winds. Persons having trees set too close would do much better to cut out alternate ones than to massacre the branches until they resemble bean poles rather than shade trees, an operation to which half of the trees one sees in the vicinity have been subjected. The best way, however, is to set them right to start with, and then barbarous processes are never requisite.

Mending Grain Sacks.

Some time since a valuable hint was communicated to the RURAL by Mr. S. Stetson, which is timely now and will bear further and fuller explanation.

While in the neighborhood of Stockton, last year, Mr. Stetson was at the house of a farmer, an extensive grain-grower, who was complaining that he had several hundred sacks which were useless as they were, and would require more sewing to make them efficient than they were worth. He recollected, suddenly, that a brother farmer had told him that grain sacks could be expeditiously and securely mended by turning them inside out and attaching the patch with flour paste.

The idea of mending sacks, which have to resist considerable pressure and strain, by means of paste, seemed superlatively absurd; but it was equally absurd to ridicule the plan without having even tried it. So the experiment was made. The sacks were collected and sorted; a large quantity of flour paste was made; patches were cut from the bags which were too far gone for successful treatment themselves. A large number were thus repaired, and were found on subsequent hard usage to be quite serviceable. Thus a considerable saving was made, in a short time, and with very slight trouble.

The mode of operation is as follows: The sacks to be repaired are turned inside out and examined. For each hole a patch considerably larger than the hole is cut out of unmade bagging or from other sacks; if the holes are small and numerous, a single large patch will be found stronger, and at the same time easier to put on. The paste is best applied with a large wooden spatula, or "paddle." To make the flour paste it is only necessary to sift or stir flour into boiling water, taking care to avoid lumps, and remove from the fire when sufficiently thick. It will keep quite well if a few drops of carbolic acid or a little alum, previously dissolved in water, are added.

A little practice will enable any one to use this plan successfully. It is so highly recommended that it can not fail to prove serviceable. Of course it would be impossible to market grain shipped in such sacks; but it will save many, which would otherwise be thrown away, in safe condition for home use.

Hemp, Flax and Jute.

Says a high authority in agricultural and economical matters: Our textile products are becoming sadly neglected. Ten years ago hemp was quite an important product, and now we find it in a state of sad neglect. The world demands it as much as ever, and yet it is falling into neglect. Flax is another fiber that can be grown with success and is in demand as such, as well as for its seed as an oil-producing and feeding product. Jute takes an important position.

The demand for grain sacks and burlaps has increased to such an enormous extent within the last few years, that as an article of commercial importance, the manufacture of jute has become one of the great commercial staples of both this country and Europe—ranking second only to the grain itself, and heading the list in all our commercial records. This fact is so thoroughly established, so patent to every body, and so well understood by those familiar with the subject, and has been discussed and advocated so frequently and at such great length by the leading newspapers of the country within the last few months, that it would almost seem superfluous to urge the consideration of such an enterprise for encouragement at the hands of the public; yet the public, and particularly the farmers, are invited to lend their co-operation to the enterprise, as one promising the fullest success, not only in supplying an indispensable requisite, but promising to be highly remunerative to stockholders as an investment.

This mere question of bagging is running into the millions of dollars. Several of our indigenous plants are of great value for their fiber, as the Northern ramie or *urtica purpurea*, and are worthy an extended trial.

PACKING PLANTS FOR THE MAILS.—Prof. Thurber, in discussing the topic of sending plants through the mails, calls attention to the fact that there is greater danger arising from the presence of too much moisture than too little. The best packing material is sphagnum or bog moss, and this should be just so damp only as to be elastic to the touch. Plants packed in this, if not too damp, will remain for weeks uninjured; that is, if the plants are at rest. Another thing is to pack close. If sending by mail, take a piece of strong brown paper; lay the just damp, not wet, moss upon it; put the plants upon the moss, and more moss over the plants; then begin at one end of the paper and roll up hard, secure with a string, and then put another paper over for direction. So in packing in boxes; use the moss just damp, and have the box full and crammed down hard, so that there can be no possibility of moving or shaking in transit.

DISSOLVING STRYCHNINE.—Mr. N. W. Blanchard, of San Buenaventura, writes to say, in answer to the inquiry of Mr. Arnold, that he has found no difficulty in dissolving strychnine in vinegar, if the latter is heated.

ONE thousand acres of cotton will be planted this season in Merced county.

Hints on Hop Growing—No. 4.

The Yard's First Season.

The use of the ground of the hop-yard need not be lost to the owner during the season of root-planting. A cultivated crop would be beneficial to the new hop plants, as it would insure them a clean growth, and stirring of the earth. In eastern hop-yards a crop of corn is usually grown during the planting season. In localities where corn can not be grown satisfactorily, the most available hoed or cultivated crop should be substituted. But cultivation they should have, however they may get it.

The new yard should also be poled, for if left without poles they will run wild, and become matted in a manner that will be injurious to the vines and occasion more work than the poing of them. Besides, a new yard is well worth picking when the crop is short, or prices are high from other causes. A very light poing, however, will answer for the first season. On farms where hops have been grown there will always be sufficient refuse poles, either broken ones or those too short for old yards, which will answer for this purpose. Or, if hop-poles are not at hand, such material as you would use for poing beans will do. One pole in a hill is sufficient for the first season. Set the poles, the same as in the old hills, when the growth of the sprouts is sufficient to determine where the pole is most needed, and place it accordingly.

A common crowbar will answer for setting the small poles, but when you set your large poles, you should have a regular hop-bar, which any blacksmith can make for you.

Tying.

Hop-vines, like all the rest of us, are very aspiring and have an upward tendency, but like us they need a little guiding and even tying up occasionally. As soon as the young vines appear to need support they should be carefully tied to the pole. The best material for tying is woolen yarn. Take an old stocking, (one that will ravel), cut off the foot, then put it on the left arm like a sleeve, with the raveled end toward the hand. This will give you the use of the left hand, with which you can hold the vine to the pole, while with the right you can unravel the yarn, and the fingers of both hands are available for tying. If the vine is long enough to wind around the pole place it accordingly; only tying at the end of the vine to prevent falling away from the pole. A very slight and temporary support is all that is needed, for the vines will, within a very few days, harden in their winding position so that they can hardly be torn from the pole. This being the case woolen yarn is well adapted to this purpose; for it yields to the growth of the vine, and soon falls off entirely. It would be extravagant to buy new woolen yarn for this purpose; and, where the old stockings are not available, twine must supply the place of yarn. But be sure and use nothing that will shriek and cut the vine, or that will not even yield to its growth; for the vines at the base of the poles form a much larger circumference at their maturity than was enclosed at the first tying, and an unyielding band would be extremely injurious. In old hop-growing districts an article is sold expressly for this, called "hop-twine." But bearing in mind the points here suggested, even the new hop-grower in a new hop-district would have no difficulty in finding the proper material for tying.

This want of the hop-vines should be thoroughly attended to; from the time, as we have stated, when the young shoots first need support, up to the period when the growth of the vine ceases. In New York and Wisconsin, whose seasons about keep pace with each other, but are three or four weeks behind that of California, they adopt as their motto the doggerel.

"We must tie, tie,
Till the first of July."

There will be a uniformity of growth among the vines, sufficient to allow the tyers to go through the yard by course, perhaps three times before they reach the tops of the poles or stop growing. But between these regular tyings the yard should receive frequent visits and inspections, as a vine will occasionally fall away from its support, and thus need attention; and sometimes, where the stalk is too vigorous for the size of the pole, it will, often growing beyond the top of the pole, fall over and away from all the poles; when it might, with a moment's labor, be attached to the tops of the other poles in the hill. There is nothing objectionable in the vines from the different poles in the same hills becoming entangled.

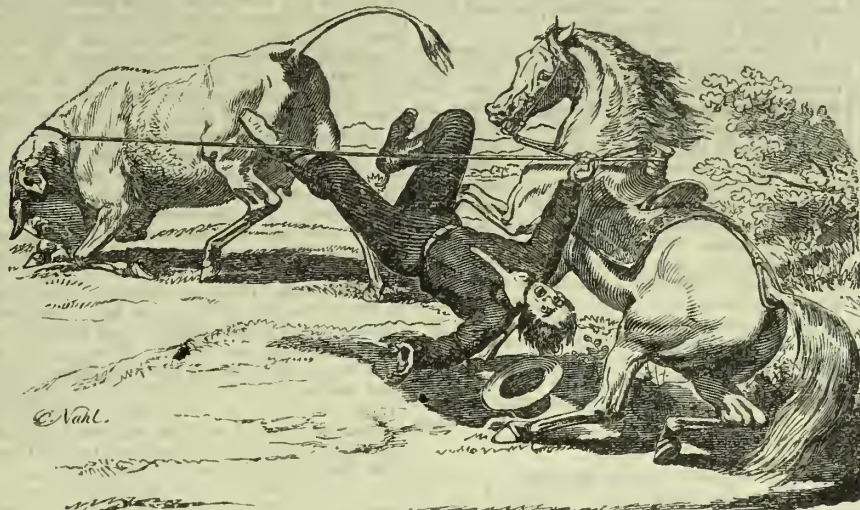
There is scarcely a crop grown which presents a more attractive appearance than a well-cared-for hop yard. The surface is clean, the rows are straight and of uniform width, and the lateral branches do not grow sufficiently low to obstruct the passage of the visitor or workman; while the leafy branches, and tops laden with their crowding blossoms nodding and swaying in the breeze, form a picture as worthy the pencil of an artist as any of the more orthodox rural subjects.

Much of this attractiveness depends upon the tying. But it is not expected that hop-growers are going to expend their time and money in beautifying their yards; still, when beauty results from what is strictly utilitarian, it forms an agreeable interlude in the labor programme. The labor that is bestowed upon tying will be amply rewarded at picking time; for in pulling the poles and delivering them to the pickers,

time and trouble are saved by having them kept in their places as closely as possible by thorough tying. And if the tying season can aid the picking season, it is very desirable to have it done; for the former occurs when time is of comparatively little value, and the labor can be performed by cheap help; while in the latter, time is extremely valuable, and the labor of the pole-puller is the most expensive of this expensive season.

Hudspeth's Improved Bail for the Inclined Spout of Headers.

This invention, which is herewith illustrated, is an improvement in the construction and mode of attaching the bails of the inclined



RATHER EMBARRASSING.

spouts of headers, which support the spout and to which a rope or chain is attached, passing thence to some part of the machine where it is made fast. These bails are ordinarily made curving, like a pot bail, and the rope is secured near their center. As the rope is carried back at an inclination to the spout, the latter is not at all times equally supported. The inventor, Mr. W. G. Hudspeth, of Santa Rosa, claims that a bail made according to his plan is far preferable to the ordinary hoop bail, as the former acts as a regulator to the chute, which the other does not.

Mr. Hudspeth's invention contemplates the use of a bail which is made with two parallel sides, having supporting hooks at their lower ends. The upper ends are united by a cross-bar, which is formed in the same piece as the sides, and so as to leave an eye at each corner, to which to attach a chain passing from one side to the other. A link encircles this chain, and to this link the supporting chain or rope is fastened, the link being free to move from side to side between the eyes.

In the illustration are shown the two parallel side pieces, A, A, of the bail. These sides and the cross-bar, B, are bent from a single piece so as to leave the eyes, C, C, at each of the top angles. The lower ends of the side pieces, A, A, are provided with hooks, D, D, which are joined to the sides of the spout by eye-bolts or otherwise. The cross-chain, E, is clasped by the link, F, loosely, so that the latter may move along it freely. The rope or chain, which passes over the usual pulley and thence to the point of attachment on the header, is shown at G, secured to the link, F.

The operation of the device will be as follows: The bail will support each side of the spout equally, and thus regulate the strain upon it as the weight shifts. As the header moves over the ground, and the spout takes various positions and angles, it is evident the elongated link, F, will slip from side to side upon the chain, E, and thus transfer the support of the chain, G, more or less directly over the place where it is most needed.

Improvements in agricultural machinery are fast becoming limited to particular working parts of the leading types of machines. As the patents upon different working portions of the more complicated printing press or loom multiply, so do the patents upon special parts of the threshers, reapers, headers, plows and other farm implements increase. In the invention which we have described, there is what would appear to be a very important improvement in a part so simple that, whatever its defects, few have thought of enlarging upon it.

MEETING OF CATTLE BREEDERS.—The "California Thoroughbred Cattle Breeders' Association" will hold a meeting at 302 Davis street, in this city, on Saturday, May 2d. Among the matters to be considered will be the advisability of holding an annual joint sale of thoroughbred cattle. The matter of improvement in the management of Agricultural Fairs in relation to the exhibition of stock will also come up for consideration. Other matters of much interest to the members of the association and to thoroughbred cattle breeders generally, will receive attention. It is desirable that there should be a full attendance of the members as above.

A New Hand.

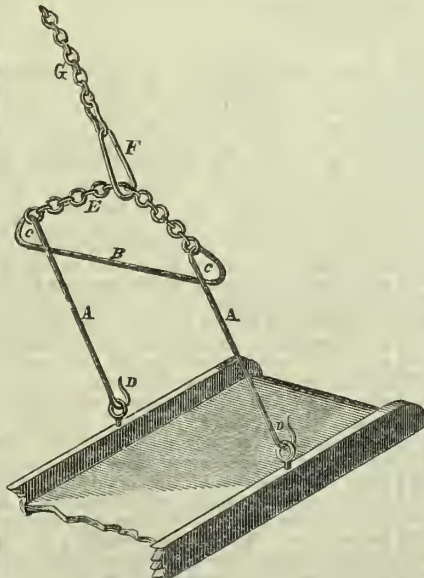
There are one or two things about which most people think there can be no question. In this State the man could hardly be found who would be honest enough to acknowledge his inability to manage a mustang and handle wild cattle; and nowhere, probably, could anyone be found modest enough to confess an incompetence to run a newspaper. The two things are about on a par, as regards simplicity and facility.

But our sketch limits us to the former occupation. Our friend, who appears to have been attempting a performance on a tight-rope, with



what brilliant success can be seen from his present easy and graceful position, is evidently a tyro in the business of lassoing wild cattle. The rope is certainly tight enough to satisfy the most exacting admirer of mathematically straight lines. From the expression of the performer's face one might judge that he at least finds it sufficiently so, for he certainly has a most reliable means of accurately estimating its tension, as the lasso has neatly wound itself around his left leg. It is this unfortunate occurrence which has determined him not to ride any longer, just at present; and though his mode of dismounting is not the most usual one, it at least has the merit of great celerity.

The wood-cut is from a drawing by Nahl.



Improved Bail for Header Spouts.

whose sketches of early California life on the ranch and among the mines have given him such a well deserved reputation. In this instance the artist has chosen a scene which cannot be common, as it does not seem very easy to reproduce the conditions by any ordinary bungling. A more frequent accident is caused by a sudden change of movement on the part of either lassoer or lassoed, thus twisting the line about the body of the former. It is well in this case that the amateur ranchero has not a furious bull charging upon him, instead of an animal who appears only anxious to get off.

FOLLOWING NATURE.—Very much is said nowadays about "following Nature" in her farming operations, and the maxim is one which will apply in most cases. But as examples of deviations from this practice an agricultural writer says: Nature nowhere trims back the grape annually to four or five buds, but the successful grape grower does it. Nature seldom outs back or heads in the peach or apricot, but many of our best fruit culturists do it. Nature never blanches the celery plant, but gardeners do it. Nature sows the most of her seeds directly upon the face of the soil; farmers and gardeners generally give seeds a necessary covering. Nature seldom transplants a tree or mutilates its roots, or propagates by grafting upon sections of limbs or roots; nurserymen do it.

Label Your Trees and Plants.

Label all your ornamental trees, plants and varieties of fruit. Do it now, and do it durably. It will save endless confusion and trouble of reference to a chart. The best as well as cheapest label, as suggested by a *Tribune* correspondent, is zinc, with copper or brass wire, and the name written by a common lead pencil. He says: I have such now in my orchards, some two years old, that are as legible to-day as when first hung on the trees. All that is necessary when consulting these marks is to morely apply a little moisture to the surface, and the writing becomes at once black, and is readily deciphered. There is some danger in the wires rubbing out the hole in the label. I obviate this partially by punching the hole in the center of the label, which prevents an excess of swaying in the wind. Labels for small fruits or plants must receive two good coats of paint, and then dip them in a pot of hot gaster, about as deep as they should go in the soil. When ready for use, apply a thin coat of paint over the side intended to be written upon, and while fresh, with the aid of a rather hard lead pencil, write the name. We thus have a distinguishing mark that will not decay under the soil for at least ten years, and will withstand the action of the weather for very nearly as long. The ordinary wire label attached to trees that have been procured from the nurseries, will in a short time "cut in" through the bark of the trunk or branch to which it is fastened, and thus soon destroy the same; therefore always remove these at once, and replace with the zinc label aforesaid, being careful at the same time to allow plenty of room for the branch to expand before the wire shall clasp it tightly.

A Lesson to Fruit Growers.

Last spring the bloom of the fruit trees, as now, promised a very large crop of fruit of nearly all varieties, in all sections of the State. Then, as now, the weather up to the first of April indicated a plentiful supply of moisture in the ground to mature the crop promised. The orchardists, therefore, generally took no steps to thin out on those trees that were plainly setting too much fruit for them to mature in good condition, even for a favorable season. The season did not maintain during the summer the promises of the spring. The north winds of the latter part of April and May blew away the dampness from the soil, and even dried up the sap of the trees themselves. The fruit on the overloaded trees first felt the effects of the drought, and its growth was checked when not half size. The limbs of the trees, especially of the peach, being deprived of the natural supply of sap and consequent elasticity, broke down under the burden they had been allowed to attempt to bear, and the orchardists and the country were great losers. The experience of the past season should teach our orchardists a lesson for their rule of action in this. However this season may terminate, whether favorable or unfavorable to maturing fruit, the only safe plan for our orchardists to pursue at this time is to thin out the blossoms, or the small fruit when set, on all trees indicating too great a quantity to well mature. The superiority in size and flavor of the fruit left after such thinning, will abundantly pay for the labor of thinning, even should the season continue favorable to the end. However, should the present season fail to fulfill its present promises, as did the last, the precaution taken and labor expended by our orchardists, in thinning out the present crop, will not only be well paid for, but their trees will be saved from injury and damage. We know that orchardists may look upon the thinning out process as slow and expensive, but it has been found to pay, and pay well, in every other country, and most certainly would in this. —*Sacramento Record*.

FRUIT IN THE MOUNTAIN.—The red soils of several of the mining counties are specially adapted to fruit raising. A stranger would be surprised to see the extensive and flourishing orchards of Nevada, Butte, Placer, El Dorado, Amador, Calaveras, Yuba and other counties in the foothill range. What is still more astonishing is the great variety of fruits which are successfully grown, in favorable seasons. The almond, peach, apricot, and pomegranate trees are as thrifty as the hardier apple, pear, plum, quince and cherry. The grape and fig may be seen almost anywhere, while in two or three of the counties named oranges and lemons are successfully cultivated. In connection with this subject, we are pleased to notice, from the interior press, that the unusual severity of the winter has kept back the fruits, so that they are not likely to sustain any injury from the late frosts, and a bountiful yield is therefore anticipated the coming season. —*Call*.

UNNECESSARY FENCING.—Mr. Mechi asserts that there are 1½ miles of fences to every 100 acres of farmed land in the United Kingdom, or a total of 130,000 miles, half of which could be profitably spared.

JUTE SEED.—We have had several inquiries of late asking where jute seed may be had. Those who are desirous of obtaining the seed can procure it from R. J. Trumbull, whose advertisement appears on another page.

A new paper is to be started at San Leandro, called the *Plainsdealer*.

USEFUL INFORMATION.

The Waste of Oil.

If there be one thing more than another which is likely to be wasted about a workshop, it is oil. This waste is not wanton or even intentional, perhaps, but those who do not have to pay for oil seldom realize how important it is to economize it, and it is not often they know how to use it properly. It would not be extravagant, perhaps, to assert that half the oil used about machine shops and metal-working establishments in general, is wasted. For example, if a workman wishes to oil his file for finishing, he will pour a stream over its surface, allowing two thirds or more to drip on the floor, when the file could be sufficiently moistened by a small bunch of waste, or better, a small sponge saturated with oil, without wasting a drop. If a hole is to be tapped in iron, whether cast or wrought, the workman too often prefers lubricating oil to patience and "elbow grease," and pours on oil until he saturates the substance or fills the pores of the iron. In ordinary cast iron, a tap, properly made or judiciously used, can be run without oil, or with a very small quantity, and in this work, as in many other processes, a saponaceous liquid is equally as effectual and much cheaper.

It is an old and worn out notion that almost every operation on the metals, and almost every use of a tool, must be accompanied with oil; neither is it correct that oil alone is a lubricant. Holes may be drilled and tapped, and surfaces finished without the use of oil, although some lubricant may be necessary. The addition of oil to an already clogged file, milling tool, saw or rotary cutter, is not only a waste, but is no aid to the progress of the work. Either of them may be quickly and effectually cleaned either by wiping with waste, combing with the card, or heating over the forge fire; when they will do the work required much better than if they had to overcome the resistance of a body of viscid oil.

In the lubricating of shafting, also, great waste is occasioned. Where shafting is suspended in ordinary boxes, most of the oil leaves the journal almost as soon as poured into the box, and finds its way, dirty and fouled, into the drip pan; once there it is nearly worthless for shop use. Gummy, dirty oil, charged with foreign matter, had oxidized by exposure to the atmosphere, although often used for tapping and screw cutting, is unfit for even those purposes. It corrodes the taps and dies, and by its adhesive quality adds greatly to the power required to do the work.

We might add other illustrations of waste of oil, or extravagance in its use, but this article is intended to be suggestive rather than instructive. Every manufacturer can, by investigation and experiment, find out what proportion of the oil used in his business is wasted, and by a judicious overseeing he can usually effect an important economy in the amount annually consumed. It is economy, or a disregard of it, in such little matters that often makes the difference between profit and loss to a manufacturer.—*Iron Age.*

TEMPERATURE REQUIRED TO HATCH EGGS.—A correspondent of the *English Mechanic*, who claims to have had great experience in artificial incubation, and who states that he has traveled over the continent of Europe and in Egypt, to ascertain practical facts in regard to the subject, asserts that the temperature required to hatch eggs should vary according to the thickness of the shells. He says the highest success is only to be reached by particular attention to this point. For thick shells he gives an average heat of 110° as the proper temperature for hatching. For medium shells, 100°, and for thin shells, 95°. Experiments of our own in artificial incubation, show that the latter temperature is several degrees too low for the eggs of any kind of fowl reared in this country. Various authorities give the temperature of the blood of a chicken as 111°. During the act of incubation, the temperature of the blood of fowls is somewhat raised, the animal becoming feverish. The temperature of eggs, during the natural process of hatching, is maintained probably quite up to that of the normal temperature of the blood of the incubating fowl. We have never succeeded in artificially hatching eggs at an average temperature below 110° and we believe that an attempt to hatch even the thinnest shelled eggs with an average temperature of 95° will fail.—*Artisan.*

PRESERVING IRON AND STEEL SURFACES FROM RUST.—A varnish which will effectually prevent iron and steel surfaces from rusting may be made of the following ingredients: Resin, 120 parts; sandarac, 180 parts; gum lac, 50 parts. These should be subjected to a regular heat until melted and thoroughly incorporated, when 120 parts of turpentine are added, and subsequently, after further heating, 180 parts rectified alcohol. After careful filtration, the varnish should be put up in bottles and kept tightly corked until used. It will keep bright iron and steel rods from rust under almost all conditions.

ADHESIVE PLASTER.—According to Otto Facillides, adhesive plaster, which has become brittle by age, and has lost its adhesive qualities, may be rendered adhesive again by coating it with oil of turpentine, by means of a sponge, and leaving it exposed for a day.

Artificial Marble.

A German chemist claims to have succeeded in making a most perfect imitation of marble in a new and very simple manner. He uses carbonate of lime, without any cement or high pressure, and the product is as hard and easily polished as the best marble, and is readily colored, in any shade, even to the most intense black. As the mass, while in a plastic state, is readily worked into any shape or form, its applicability for ornamental walls, floors, furniture, etc., is alleged to be very great. But the inventor especially directs attention to its value in furnishing material for the finer mosaics, which, as is well known, often consist of as many as one hundred and fifty pieces to the square inch. Convenient forms, brilliant colors, and great durability, even in the thinnest stratum of inlaid work, etc., are said to be practicable by this method.

Another ingenious and valuable process in this line consists in turning slabs of slate into imitation marble. The slabs of slate are first surfaced by a planer, and brought to the required thickness; patterns are then laid upon the slabs, and the mallet and chisel work out the required forms and moldings. The marbleizing, however, is the peculiar feature in the operation. The material for this purpose is prepared in a vat and the slab is let down upon the composition, which adheres to the surface of the slate; the slab is next baked in an oven for one night, then has a coating of a peculiar kind of varnish, and, after six repetitions of these processes, it is finally removed and polished, the surface presenting a beautiful appearance. So firmly united to the slate is this coating that it cannot be scaled or clipped off without taking the slaty substance with it. This material is a valuable substitute for natural marble in a large variety of cases.

STRENGTH OF BUILDING MATERIAL.—Experiments are sometimes made in regard to the power of stones of different kinds to resist compression, by cutting one cubic inch off each, placing it between two steel plates, and charging it with increasing weight till crushed. For convenience sake, this weight is applied by means of a lever, so as to obviate the necessity of actually handling the hundreds and thousands of pounds—one or more sliding weights on a strong beam being sufficient for these experiments. The results, taken from an exchange, are indicated in the following table, in which the number of pounds is that of which the substance could bear the pressure, while it was crushed by the addition of more:

Name of Stone.	Weight applied in Pounds.
Inferior Pale Brick.....	2,000
Common Good Brick.....	4,000
Hard Brick.....	4,500
Pressed Philadelphia Brick.....	5,000
New England Granite.....	11,200
Italian Marble.....	12,800

SALT MANUFACTURE.—A Call correspondent says: The manufacture of salt is one of the local interests of Alameda county. There are salt works at Alameda, San Lorenzo, Mount Eden, Alvarado, and Centerville. The works of J. A. Plumber, at Mayhew's Landing, below Centerville, are the most southerly in the county. They are called by the proprietor the Crystal Salt Works. The works occupy some forty acres of land for evaporating ponds, buildings, etc. In winter the water is let in by means of a flood gate, and is pumped by wind-mills and conducted by flumes from one pond to another, as it goes through different degrees of evaporation. About the 1st of June the salt will be crystallized. It will then be raked up and ground. About this time, some forty men will be employed at the works. The proceeds of these works are stated at 2,500 tons per annum. The salt interest of this county has been in a depressed condition for some time, on account of the opposition of the Pacific Salt Company, which has run down prices in the hope of breaking up the manufacture here. The Pacific Company has failed in this; but still the opposition is kept up, and consequently depressed prices are the rule. The average price received for the salt made here is \$10 per ton; the lowest is \$7, and the highest \$20. Mr. Plumber claims that he makes salt equal to the best imported from Liverpool. These works are seven miles from Niles station. Mr. Plumber employs a schooner to carry his salt to market. Since this item was written a correspondent states that there are at least 25 of these factories. In the vicinity of Mount Eden alone there are fifteen or eighteen.

GLUE MELTING.—Break the glue into small pieces, and soak from 12 to 24 hours in cold water; put the glue in the glue pot, fill the outer vessel with water, and apply heat. For ordinary purposes it should run freely, and be of the consistency of thin treacle. The hotter glue is, the more force it will exert in keeping the two parts glued together. In all large and long joints the glue should be applied immediately after boiling. Glue loses much of its strength by being often melted; that glue, therefore, which is newly made, is much preferable to that which has been used. When done with, add some of the boiling water from the outer vessel to the glue, so as to make it too thin for use. Put it away till wanted again, and by the time the water in the outer vessel is boiled, the glue in the inner is ready melted, and the proper thickness for use. Powdered chalk, brick dust or sawdust, added to glue, will make it hold it with more than ordinary firmness.

The Pneumatic Dispatch.

The London *Times* gives an account of the origin and development of the pneumatic dispatch system in England, and then goes on to describe the great pneumatic dispatch tube in the heart of London. It says:

The pneumatic tube extends from the London and North-western railway station at Euston Square to the general post-office in St. Martin's le Grand. The general station is in Holborn, where is also the machinery for effecting the transit of the trains. Here the tube is divided, so that in effect there are two tubes opening into the station, one from Euston to Holborn, and the other from the post office. The length of the tube between Holborn and Euston is 3,080 yards, or exactly a mile and three-quarters, a greater length than was originally contemplated, but which was rendered necessary by the avoidance of certain property on the route. The tube is of a flattened horse-shoe section, five feet wide and four feet six inches high at the center, having a sectional area of seventeen square feet. The straight portions of the line are formed of a continuous cast iron tube, the curved lengths being constructed in brick work, with a facing of cement. The gradients are easy; the two chief are one in forty-five and one in sixty, some portions of the line being on the level.

The sharpest curve is of 70 feet radius. The tube between Holborn and the post-office is 1,658 in length, or 102 yards less than a mile, and is of the same section and similarly constructed to the first length. Two gradients of one in fifteen occur in the post-office section, but this steep inclination is in no way inimical to the working of the system. The Holborn station is situated at right angles to the line of the tubes, which, are, therefore, turned towards the station, into which each opens. All through trains, therefore, have to reverse there, and this is effected in a very simple manner by a self acting arrangement. A train, upon its arrival, runs by virtue of its acquired momentum up a short incline, at the summit of which it momentarily stops, and then quickly descends by gravity. In its descent it is turned on to a pair of rails leading to the other tube, into which it enters and through which it continues its journey, the whole process of reversing occupying barely thirty seconds. Trains containing goods for Holborn station are simply run down from the top of the incline on to a siding.

The wagons, or carriers, as they are termed, weigh 22 hundred weight, are 10 feet 4 inches in length, and have a transverse contour conforming to that of the tube. They are, however, of a slightly smaller area than the tube itself, the difference, about an inch all around, being occupied by a flange of India rubber, which causes the carrier to fit the tube exactly, and so as to form a piston upon which the air acts. The machinery for propelling the carrier consists of a steam engine having a pair of 24-inch cylinders, and with 20-inch stroke. This engine drives a fan 22 feet 6 inches in diameter, and the two are geared together in such a manner that one revolution of the former gives two of the latter; or, in technical terms, the engine is geared at two to one with the fan. The trains are drawn from Euston and the post-office by exhaustion, and are propelled to those points by pressure. The working of the fan, however, is not reversed to suit these constantly varying conditions; it works continuously, the alternate action of pressure and exhaustion being governed by valves. The engine takes steam from three Cornish boilers, each 30 feet long, and 6 feet 6 inches in diameter. Telegraphic signaling is carried on between three stations by means of needle instruments.

FIRE AND WATER-PROOF PAINT.—Slack stone-lime, by putting into a tub, covered to keep in the steam; when slacked pass the powder through a fine sieve, and to every six quarts add a quart of rock salt and a gallon of water; then boil and skim clear; to every five gallons of the liquid add pulverized alum one pound, pulverized copperas, half pound, and stir slowly; add powdered potash, three-quarters of a pound, then very fine sand or hickory ashes, four pounds; then use any coloring matter desired, and apply with a brush. It looks better than any ordinary paint, and is durable as slate; will stop small leaks in roofs, prevent moss from growing thereon, make it incombustible, and render brick impervious to water.—*Boston Cultivator.*

EXTRACTING CHLORINE.—The object of a new invention is to facilitate the extraction of chlorine from chloride of lime. For this purpose the chloride of lime is placed in an air-tight cistern or chamber partly filled with water and provided with one or more hollow shafts formed with hollow arms and capable of revolving, by which the chloride of lime contained in the cistern is agitated, and by a current of air passing through the shafts and arms the chlorine is extracted from the chloride of lime and mixes with the water, and the liquor when settled is drawn off for bleaching purposes.

ANTI BOILER INCORUSTATION.—As a preventive of boiler incrustations, milk of lime and baric chloride are recommended; the former for the precipitation of the lime bicarbonate, the latter for that of the gypsum, before the water is run into the boiler.

A RED INK WHICH RESISTS THE ACTION OF MOST CHEMICALS.—This ink is a solution of carmine in soluble glass, and must be kept in a bottle, with a well oiled cork.—*Sc. Am.*

THE HORSE.

Judging Horses.

In judging horses everything depends upon the use for which they are intended—whether in time of peace for farming purposes, roadsters, hackneys, passenger railways, cart or dray or family horses; or in war, for commanding and staff officers, cavalry, artillery, ambulance or teaming purposes.

In the first place, the person or persons selected as judges should have had considerable experience. Science and theories, while of incalculable value in the food, treatment, and diseases acquired by horses, are of comparatively little value in judging their soundness. The horse is sound when free from disease and such malformations as may impair his natural usefulness.

On examining a horse that promises to answer your purpose, after satisfying yourself that he is sound, study his physiognomy as you would that of a man with whom you desire to become associated. Look fairly and squarely into his eyes. As the eye of man is the index of his soul, so the eye of a horse also, all other things being right, you can form a pretty good idea of his character. By comparisons, too, we often obtain our most useful knowledge. Being satisfied on the points named, you next proceed to examine his mouth to ascertain his age, the general rules for which are as fully explained in the standard books on horses as they possibly can be in written descriptions; but oral instruction by an experienced horseman, accompanied with the examination of many living animals, is the surest and perhaps the only way that the necessary information can be conveyed in regard to the proper method of ascertaining either the age or the general qualities and defects of a horse.—*Colorado Agriculturist.*

TREATMENT OF AN UNMANAGEABLE HORSE.—The New York *Commercial Advertiser* says: A beautiful and high-spirited horse would never allow a shoe to be put on his feet or any person to handle his feet. In an attempt to shoe such a horse recently, he resisted all efforts, kicked aside everything but an anvil, and came near killing himself against that, and finally was brought back to his stable unshod. This defect was just on the eve of consigning him to the plow, where he might work barefoot, when an officer in our service, lately returned from Mexico, took a cord about the size of a common bed-cord, put it in the mouth of the horse like a bit, and tied it tightly on the animals head, passing his left ear under the string, not painfully tight, but tight enough to keep the ear down and the cord in its place. This done, he patted the horse gently on the side of the head, and commanded him to follow; and instantly the horse obeyed, perfectly subdued, and as gentle and obedient as a well-trained dog, suffering his feet to be lifted with impunity, acting in all respects like an old stager. The gentleman who thus furnished this exceedingly simple means of subduing a very dangerous propensity, intimated that it is practiced in Mexico and South America in the management of wild horses.

HOW TO CURE SPLIT HOOF.—I had a horse which had both hoofs split from top to bottom. He could not walk without his feet spreading apart. I kept him for three months on straw one foot deep in the stable, but all did no good. At last I went to the blacksmith-shop and had heavy shoes made which spread wide at the heels. To these heavy shoes there was welded, at the outside of each heel, a piece made of shoe-nail iron. These pieces were made to fit well round the foot, about an inch below the hair. I let the pieces come together within half an inch, each end turned up about three-fourths of an inch. In the turned up part a hole was made to receive a bolt, an inch long, with a square head and screw and nut on the other end. On nailing the shoes on and putting the bolt in and screwing on the nut the foot was brought together. In this way I was enabled to work him every day if I wished. Previous to this my horse had not walked one mile in three months. Next day after I had the shoes put on I drove him in a carriage twenty miles, and I have used him right along.—*Cor. Cin. Gazette.*

A TRIPPLING HORSE.—A sad case of depravity in horse-flesh is reported by the Paris *Figaro*. The favorite horse of a certain baron fell seriously ill, and though every care was taken of the animal it rapidly grew worse, and began to show signs of sinking. As a last resource, the coachman, an American, suggested that two glasses of brandy with ginger should be administered every morning. The cure was most speedy; but ever since the horse, having been accustomed to stand at the door of a wine-shop to receive its maternal beverage, now stops at every similar establishment it passes, and last week, angry at not being attended to, forced itself right through the window of a marchand de liquors!

CAPPED HOCKS are seldom entirely reduced. The best treatment consists in frequent fomentations with hot water and the subsequent use of some discutient lotion, such as the following: Dissolve sal ammoniac and nitre, of each one ounce, in two pints of water, add vinegar and alcohol, of each four ounces. Keep the parts constantly wet until all heat and tenderness have disappeared. Blistering would only tend to increase the injury.—*Spirit.*

Gun-Cotton.

It is now more than a quarter of a century since the discovery of gun-cotton, and yet we have not learned fully regarding its wonderful nature and capabilities. It was at one time, soon after its discovery, supposed capable of supplanting gunpowder in war; but this expectation soon gave way to the [astounding truth, that it was destined to play a much more conspicuous part in facilitating and perfecting the beautiful art of photography. It was the handmaid of the arts of peace, rather than an agent of destruction in human combats. At Woolwich Arsenal, England, the chemists, Professor Abel and Mr. E. O. Brown, have devoted more than ten years to investigations into the nature of this explosive, and some of the results reached are curious enough. The object of the researches was to learn if it could not be rendered safe and effective for gun uses in the English navy. To reach the desired result the violence of its explosion had to be tamed, then a compressed form of the material was devised, and then it was shown that like its sister explosive, nitro-glycerine, gun-cotton could be violently detonated if ignited by a charge of fulminate. Gun-cotton, in fact, turns out to be sympathetic, for, according to the energy with which it is inflamed, so it responds in its behavior. Thus, if gently ignited by a spark, the cotton, in the form of yarn, smouldered slowly away; when set fire to by a flame, it burnt up rapidly; if in the form of a charge it was exploded in a mine or a fire arm, it at once resented the shock and replied with corresponding energy, behaving like gunpowder under similar circumstances; while lastly, if fired with great violence with a few grains of fulminate, it was detonated with as much force and with the same terrible effect as its instigator.

The most curious fact learned in this investigation is that gun-cotton is exploded to best advantage when in a wet condition. This grand discovery is of the utmost importance, because, although there may be danger in storing and using gun-cotton when dry, the most nervous would scarcely hesitate to employ it sopping wet. In this latter condition the material is, strange to say, not only non-explosive, but positively non-inflammable; so much so, indeed, that it would be probably as serviceable in putting out a fire as a wet blanket or a damp towel would be. It can neither be inflamed nor exploded when wet; and further, unless one has the key to its detonation—a little fulminate of mercury—it is of no more value as an explosive than so much wet paper pulp. When placed in contact, however, with a fuse of the proper construction and a cake of dry gun-cotton, to start the action, the wet pyroxiline detonates as readily as when the moisture amounts to but a fraction of one per cent. Moreover, the quantity of water in the material is really of no importance, for it has been found that for submarine mines, compressed cakes enclosed in a fishing-net, and thrown overboard with a dry primer and a fulminate fuse, will explode with just as much energy as when confined in a water-tight steel case.

Recent experiment has shown that the rapidity with which gun-cotton detonates is altogether unprecedented. Indeed, with the exception of light and electricity, the detonation of gun-cotton travels faster than anything else we are cognizant of. Thus detonation will run along a line of gun-cotton cakes, placed so as to touch one another, with a rapidity only inferior to that of electricity, setting fire to a charge or conveying a signal, if desired, almost instantaneously. Twenty thousand feet, or nearly three miles per second, is calculated to be its rate of traveling, according to Noble's electric chronoscope. In one experiment 42 feet of the material was fired, and records secured at every six feet; and in this case the results given were most uniform, for the velocity only varied from 19,000 to 20,000 feet per second, the ratio of transit being in no instance less than this.—*Boston Journal of Chemistry.*

THE HEAT OF THE MOON.—The Earl of Rosse, in a recent lecture before the Royal Institution, gave some interesting information concerning the various experiments heretofore made to detect the heat of the moon, and then described his own efforts in this line, which are the latest that have been made known. By means of a specula mirror, a thermo-pile, and a pair of reflecting galvanometers, made on Sir William Thomson's plan, such as are used for sending messages through the Atlantic cable, the Earl was enabled to demonstrate the presence of heat from the moon, but the temperature of the lunar surface still remains far from being determined. My calculations, he says, lead me to estimate the heat from the moon as the eighty-thousandth part of that from the sun. Bonger's experiments give the brilliancy of the full moon as the 300,000th part of that of the sun; Wollaston gives it as the 80,172d; Zollner as from 618,000th to 619,000th, and Bond as the 470,980th. The maximum of the lunar heat appears to be a little before full moon; the unequal distribution of its mountains and plains, perhaps, goes to explain this phenomenon.

POINTING WIRE.—The wires are rolled forward under a roller covered with India-rubber and subjected to the grinding action of a revolving stone. The grinding effect is equalized by using a stone curved to suit the roller and conical. The table moves vertically, having a lateral, longitudinal, and dipping movement. Artificial stones and emery wheels are used when required, with continuous streams of sand or emery upon the wires.

SHOES BY STEAM.—Army boots and shoes, having the soles screwed to the uppers by means of brass screws, are being manufactured in Philadelphia. Between 600 and 700 pairs are turned out each day, and the work is almost wholly performed by machinery driven by steam. In this system the uppers, after having been cut out by hand, are screwed together by a machine, and the soles pressed into shape by an iron mould driven by steam. The two are slightly attached by hand, and are then taken to the brass screw-machine, which is about the size of an ordinary lathe, and controlled by a single workman. The shoe is put upon a movable arm of steel, and is placed under the upper gearing, to which a long brass wire one-eighth of an inch in diameter is fed. By one movement a thread is cut upon the brass wire, and the screw thus made is forced through the sole and uppers, and is riveted on the inside under a pressure of 1,700 pounds. Just as the operation is completed, the screw is cut from the rod close to the sole, and the operator repeats the action until the shoe is studded with brass screws from toe to heel. The ends of the wires are cut off by two rapidly revolving discs, and they are then filed down to a level with the sole. The heels are cut off by machinery, and have the holes punched in them for the nails at one motion. The nails are put in the holes by boys, and then by one movement of a machine the heels are securely fastened to the shoe. The heels are burnished by means of a burnisher heated by gas and also worked by steam. The edges of the soles are burnished by hand, and the soles are then sand-papered and finished by machine. The whole operation is exceedingly rapid.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry. This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

San Francisco Employment Office,

NO. 606 CLAY STREET,

Crosset & Co., Proprietors.

(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.

Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. ap18-tf



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,

246-tf President Business College, San Francisco.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to ELWOOD COOPER,

226-1y President Board of Directors.

OUR SPECIALTY: "BEYOND THE MISSISSIPPI."

GO WEST, YOUNG MAN! GO WEST!

Gold by the Bushel! Silver by the Ton!

Capital required: Nerve and Honest Industry

THE FAR WEST,

The Great Treasure Chamber of America.

All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in

CROFT'S WESTERN WORLD,

for \$1.50 a year. With \$10 Premium Chromo,

"AMERICAN PROGRESS,"

free to each subscriber.

Two sample WORLDS sent for 10 cents. Agents wanted.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 173 J street, Sacramento.

Saul & Co., 579 Market Street, San

Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of

Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; G. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The New A1 Clipper Ship

FRIEDLANDER.....1,638 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,

San Francisco.

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m

304 California Street.

Self-Fastening
Bed Spring.Double-Spiral
Bed Spring.

We manufacture all sizes of BED and FURNITURE SPRINGS, from No. 7 to the smallest Pillow Spring; also, the Double Spiral Spring, which is the most durable Bed Spring in use. It is adapted to upholstered or skeleton beds. We have the sole right in this State to make the celebrated Obermann Self-Fastening Bed Spring. Any man can make his own spring bed with them. They are particularly adapted to Farmers' and Miners' use. Send for Circulars and Price List to

WARNER & SILSBY,

14v28-eow-hb-3m

147 New Montgomery St., S. F.

The New Wilson
SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market. G. A. NORTON, Gen. Ag't for the Pacific Coast.

337 Kearny St., S. F.

PRICE, \$50.

ap25-tf

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,

36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7

JOSEPH SEYMOUR & SON,

12v7-3m

Syracuse, N. Y.

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.

WILLIAMS & MOORE, Prop'rs,

3v7-2m

Stockton, Cal.

LANDS & HOMES FOR SALE

FARMING AND GRAZING LANDS

FOR SALE by YOUNG & PAXSON.

Solano County—4,000 acres highly improved, having the Sacramento river for one of its boundaries; \$25.00 per acre.

Napa County—3,500 acres rich valley land, \$10 per acre.

Santa Clara County—Fruit orchard of 92 acres in full bearing; including all the buildings and machinery for carrying on a large business. Price, \$80,000; one-half cash.

Monterey County—10,000 acres bottom land on the Salinas river, well watered. Price, \$12.50 per acre.

Stanislaus County—2,000 acres wheat land, improved; \$12.50 per acre.

Contra Costa County—160 acres farming lands; \$20 per acre.

Santa Clara County—3,000 acres farm and grazing land, ten miles from San Jose, well watered; \$10 per acre.

Merced County—6,320 acres wheat land; \$11 per acre.

Fresno County—3,200 acres wheat land; \$5.00 per acre.

Also, large ranches in San Diego and Los Angeles counties. Full particulars on application at our office, No. 424 Montgomery street, San Francisco. ap18-1m

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee.

542 MARKET STREET,

ap25-tf

N. E. Cor. Montgomery.

FOR SALE OR EXCHANGE.

For San Francisco, Oakland or Alameda property—200 acres in Napa Valley, adjoining Yountville, enclosed and cross fenced with substantial board fence; small vineyard and Orchard of selected Vines and Fruit; a large amount of Live and Red Oak Timber; accessible at all seasons, being within a stone's throw of railroad and country roads on two sides; 30 acres within a mile and a half of Vallejo; well watered by running stream and living springs; desirable place for many purposes. A Cottage in South Vallejo near the railroad terminus and steamboat landing; has fine view of San Pablo Bay; it is provided with outbuildings, barn, well, cistern and city water; the lots are covered with shrubbery, Vines, Fruit and Shade Trees. A span of mares, (Morgan and Patchen), good steppers; drive single or double; perfectly gentle. A Concord built Buggy—shifting seats and top, pole and shafts. A new 3½-inch thimble skein Wagon, patent brass bearings, hanging brake; Clapp & Bro. makers, Michigan. Harness, Saddles, etc. The above mentioned, as well as the 'not included,' will be sold or disposed of in part or as a whole, as may be required or desired. Apply or address, at South Vallejo

ap11-4t-12p

G. C. PEARSON.

STOCK AND GRAIN FARM FOR SALE.

IN SUISUN VALLEY, SOLANO COUNTY, within one mile of a railroad station and one mile and a half of a landing for vessels, comprising 140 acres good grain land; 100 acres now seeded to wheat and looking well, and 40 acres of barley, also very promising. Also, 300 acres of good tule land, excellent pasture and hay land. Has a good house, barn, corals and fences, and full assortment of agricultural implements, etc. Price moderate. Terms easy. Apply to BERRY & CAPP, 418 Montgomery st.,

14v7-1m

Real Estate Agents and House Brokers

FARM FOR SALE.

165 Acres ½ mile from the town of Windsor; 1 mile from depot; 2½ miles from the famous Russian river. The place is beautifully situated; land all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and outhouses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2,500 cords of black oak timber; and wood brings \$5 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to JOSEPH DIMMICK, P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap18-tf

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,

ap18-tf 311 Montgomery street, San Francisco.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

FOR SALE.

100 Acres of Good Land, ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-tf

P. H. SUMNER.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. hptf

FOR THE GIRLS.

A PAPER DOLL BOOK, 7x3½ inches, sent Free for 4 letter stamps. Address, NOVELTY, 513 Hayes street, San Francisco, Cal. ap11-4t

AGRICULTURAL NOTES.

CALIFORNIA.

AMADOR.

PROSPECTS.—*Ledger*, April 18: The copious rains of Saturday and Sunday last gave new impulse to the rapid growth of crops of every kind, and fully assures an abundant harvest. Our farmers, gardeners and fruit-growers are jubilant over the certainty of a heavy yield, sown or planted, nor do we think any climatic changes can now affect the anticipated yield in every department of our cultivated lands.

CALAVERAS.

CROPS.—*Citizen*, April 18: The coming hay crop will be larger in this county, provided every thing remains as favorable as at present, than any for several years. From no part do we learn of failure, and the recent rains, though beating down some crops that were well advanced, (which, however, have righted during the last few days of sunshine,) only served to make "surety double sure." In the lower portion of the county the grain crop will be far above the average.

Thus far we have had no frosts severe enough to destroy the young fruit, and every rancher speaks of the large crop that has already set; so that it is safe to say that we shall have abundance, and if the fine, favorable weather continues, a superabundance of grapes, peaches, apples, pears, plums, etc.

CONTRA COSTA.

WHEAT.—*Antioch Ledger*, April 18: It is now certain that the wheat crop in this vicinity will be far in excess of any previous year. Both the late and early grain is in splendid condition, and growing nicely.

EL DORADO.

FINE GROWTH.—*Democrat*, April 18: Last Monday we were shown a sample of rye, this spring's growth, cut by G. Baehler on his ranch near this city. Some of the stocks measured 38 inches and the whole would average over 30 inches. In some of the orchards of Upper Town we have already noticed crops of clover fully four inches high.

FRESNO.

WOOL.—*Expositor*, April 18: The spring clip of wool is being shipped to market by rail daily. Large teams are constantly bringing in immense loads for shipment. The railroad company has recently made a considerable reduction on the freight on wool, and allows several parties to join together in hiring a car, provided the wool is consigned to one party. This, of course, will be advantageous to the wool-growers of Fresno county.

GRAIN.—The grain is looking splendidly in all parts of the county, and grass has not been so good for years. If we are not very badly mistaken, this will be the most prosperous season ever known in Fresno county. A large number of fruit, shade and ornamental trees and vines have been planted during the past winter and spring, and a considerable amount of land is now being prepared for planting in cotton.

HUMBOLDT.

Register, April 17: The farmers are plowing in Paradise Valley, and notwithstanding the backward spring the usual amount of grain will be sown.

MARIN.

Journal, April 18: The Griuter Bros., of Bolinas, have illustrated what may be done with our tide and overflowed lands, by a little experiment at the head of Bolinas Bay. A fresh water creek flows into the bay. The Griuter boys built a dike along the edge of the salt water, and flooded the land from the fresh stream. After soaking it well, the water was drained off, and the land left to the sun's influences for a time. This simple operation was repeated from time to time until the land was not only reclaimed, but presented a rich and generous soil, that is perhaps not surpassed in the county.

MENDOCINO.

Star, April 10: Favorable crop reports from all parts of the county.

MERCED.

CROP PROSPECTS.—A correspondent, T., writing from Cressey station, April 18th, says: The winter sown grain is now coming on finely; the only trouble with it is, a portion of the seed rotted in the ground, making the stand rather thin. Volunteer grain is not going to do much, and the chances for a crop by this mode of cultivation have got to be rather poor. This land gets foul after the second crop, making it a waste of time and horse feed, by putting land in this way. We have had a fine rain within the past week, and the prospects are better than they have been the last five years.

Argus, April 18: Last week this section of the country was favored with copious showers of rain, which have materially improved farming prospects, causing farmers to feel certain of harvesting an unusually heavy crop of wheat this year. There never was a time in this county when general prosperity of the people was so apparent as at the present, and this year will witness greater improvements than were ever before made in one season in the valley.

NAPA.

FARMING AFFAIRS.—*Free Press*, April 18th: For the farmers of Napa the season has not been as favorable as could have been desired. The acreage sown in grain has not been so large as usual. The heavy rains coming on so

early prevented a large part of the grain land from being sown. Most of the early-sown grain, especially that on elevated land, is now looking finely. But some that was sowed early on land from which the rain did not readily run had the satisfaction of seeing their grain rot in the ground, and they were compelled to re-sow. Much land has continued wet so long that it has not been sown at all. Some parties are plowing and sowing even yet, thinking it not too late for hay. Even the late-sown grain is looking well and growing finely. Owing to the land remaining wet so late, a greater acreage will be planted in corn and other vegetables. The prospects for an abundant crop of hay were never better. Most likely the yield will exceed that of any previous year. The prospects for a large fruit crop are excellent. So far, the season has been very favorable for fruit. Early frosts have kept back the trees and vines, so that these are late putting forth. A slight frost fell on last Monday evening, but not severe enough to do any damage. Most all our vineyard men, profiting by the experience of last Spring's frosts, delayed pruning till late, thus retarding the budding forth of the vines. If no late frosts come, the yield of all kinds of fruit, and especially of grapes, will be abundant beyond precedent. Last year the grape crop was nearly a total failure; but, while it did much injury to the producers, it had one good result—it enabled the winemakers to dispose of their old stock of wines, thus clearing their cellars of much otherwise unsaleable, and thus enabling themselves to be prepared better to receive and care for the new crop.

PLACER.

CROPS.—*Herald*, April 18: A farmer who lives a few miles from town, was in our office the other day, and, of course, we propounded to him our old stereotyped question, viz: "How are the crops?" "Well, my dear sir, I will say this, and it is saying considerable: I have been here in this part of the country since '49, and most of that time have farmed more or less, and, upon my word, sir, I never saw better prospects for a most abundant harvest of grain, hay, vegetables, fruit—every thing—from that time to the present. Yes, it is true, the heavy and continued rains prevented us from putting in our grain just at the time we would otherwise have done, but late and early we got in about as much as usual, and the very excellent growing weather we have had the last few weeks is more than making up for all drawbacks. We have grain two feet high now, and as thick as it can stand. Grass is growing equally fast."

SANTA BARBARA.

PICKING STRAWBERRIES.—*Press*, April 11: A gentleman who resides in the Montecito, near the base of one of the mountains of the Santa Ynez range, is picking thirty and forty pounds of strawberries a day.

SANTA CLARA.

THE FRUIT CROP.—*Advocate*, April 18: From present appearances the coming fruit crop will be more than unusually abundant, and the question what to do with it is just now very pertinent. Sending it East in its raw state has not been productive of much profit to the grower, in consequence of its perishable nature, cost of carriage and great bulk, but something should be done, and this in time to save it.

As a specimen of what our hills will produce, we were the recipient this week of two of the largest heads of cauliflower we have ever seen. They were grown at the Hot Springs, and were indeed monsters.

FRUIT CULTURE.—*Mercury*, April 18: The orchards, for the last two months, the almond, next the peach and apricot, then the cherry, and now the plum, prune, pear and apple, have been a cloud of blossoms—first, the yield promises to be beyond all precedent, and hundreds of tons of choice fruits would be left to perish upon the ground, as in times past, but for the increased facilities for preserving and shipping it. We regard fruit culture as the most important industry that our farmers can engage in, wherever the land is well adapted to the business. With skillful management we believe it can be made to pay thrice the profit of grain growing.

SANTA CRUZ.

ITEMS.—*Mercury*, April 16: Most of the grain in this county has attained an altitude of three feet. The late wind and rain blew down a great deal of it, but it is fast gaining its upright position. Down Alviso way the grain is growing so rapidly, and so rank, that fears are entertained of its lodging so as to make it expensive harvesting. The cultivation of the fig is attracting increased attention in this county, and a large number of trees of an improved variety have been planted during the present season. Giles A. Smith has received 100 Los Angeles orange trees, for planting on his ranch east of the city. McGowan says he has a field of oats on his place over five feet in height. Mr. Babb has set out between 700 and 800 orange trees on his place near Feldstadt's.

SONOMA.

Democrat, April 18: An experienced farmer tells us that the crop prospects in Sonoma county are better than for the past six years. The shower on Sunday was well-timed and beneficial. There has been but little north wind. The late sown grain is especially strong and vigorous.

The indications are that the fruit and grape crop in this county will be unusually large this season.

TEHAMA.

Independent, April 18: Louis Schultz informs

us that he measured wheat on his lower ranch to the height of 33 inches. Stalks were not picked to be measured, and the whole field shows a very even growth.

From all portions of the county we hear the same report of the condition of growing crops, and that is, everything promises an abundant yield. The grain has assumed such a growth that the usual amount of dry north winds will not affect it.

TRINITY.

AN ODDITY.—*Journal*, April 18: Frank W. Young has a curiosity at his residence, in the clover line. Among the green clover in his yard there has sprung up several bunches having white leaves. The stems are green and the roots seem to be perfectly healthy.

Grass is springing up nicely on the foot-hills, and cattle now have an abundance of good feed. Peach trees are just beginning to bloom here. Rather late, but so much the better.

VENTURA.

FARMING ITEMS.—A correspondent, S.W.M., writing from Tesipe, communicates the following information to the *RURAL*: I have lived in this county for the past five seasons. We have, as a rule, pretty good crops of grain—barley principally, but a good deal of wheat away from the coast. But this season beats anything I ever saw here; the early sown and volunteer barley and wheat are all headed out. I saw some barley that measured 5 ft. 6 in., and wheat 5 ft. 3 in., and still growing. This is not partial but the whole length of the valley—which is 40 miles long, from here to the coast. Good judges say we shall have one million sacks of grain in Ventura county alone. All late sown grain looks better than I have seen here at this season of the year before. There will also be a large crop of corn. Stock and sheep look better here than any place I know, for there is an abundance of feed in the hills this year.

YUBA.

FRUIT.—*Appeal*, April 18: Early fruit is advancing quite favorably. Fortunately, the apricot crop has escaped serious damage from frosts, and promises to be a full average crop. The fruit is now about the size of a hickory nut, and growing very fast. Cherry plums are also maturing rapidly. The cherry trees appear to be unusually well loaded with fruit.

NEVADA.

CONDITION OF STOCK.—*News*, April 11: A gentleman says that during his visit to Steptoe, he saw some 6,000 head of cattle, the majority of which were in good order and condition. The owners with whom he conversed were confident that the losses altogether would not average over four out of every hundred.

THE VALLEYS.—The terrible snow which has covered the ground in all directions for many weeks, seems to be taking itself off very rapidly. Gentlemen from White River and adjacent sections assure us that but little snow remains below the foothills, and that, in many instances, grass and wild flowers are already putting in an appearance.

SPROUTING.—*Reveille*, April 6: It is stated that notwithstanding the severe weather, the grass has commenced to sprout on several of the cattle ranges in this vicinity.

OREGON.

ITEMS.—*Oregonian*, April 11: The farmers in the southern portion of Benton county are nearly through seeding. An unprecedented acreage has been sown to cereals this spring, and the prospects for an abundant yield were never better at this season of the year.

Farmers are busily engaged plowing throughout the Powder River valley, and there will be more grain sown this season than any heretofore.

The *Yamhill Reporter* says: Farmers from different parts of the county have spoken to us very encouragingly of the growing grain, and express the prospect of a better crop than last year, if no drawback transpires between this and harvest. The late cold weather somewhat checked the growth of grain, and it is not so large as it was at this time of the season last year; and the farmers say it is all the better for that, as much of the grain last year got such a start and grew so fast that much of it was wasted in sunt instead of filling up in heads and ripening.

WALLA WALLA SPIRIT. It is now thought that not near so much stock has died this winter as was anticipated. Stock begins to pick up once more, and in the course of some weeks will be all right again. Sowing of spring crops has gone energetically on of late. The universal desire now among the farmers is for a rain. It is hoped that we may get one soon. In case we do, large crops may be certainly looked for this year.

The stock on Butte creek, Jackson county, is getting along finely, and there is but little danger of any further loss. The loss during the winter was not heavy. Grass is springing up nicely, and with a few days more of fine weather will be good grazing.

WASHINGTON.

KITTASS.—*Union*, April 4: A gentleman who had just returned from a visit to the Kittass valley, says the people over there all seem to be getting along quite well. They are going ahead and improving their farms and expect to have a good country sometime; but at present there is no money there. He says that wheat, cows, calves, flour, lumber and pigs are all a legal tender, money being unknown. The people over there are in a bad fix; they are entirely out of reach of market for anything except their stock. They had hoped great things of

the Northern Pacific Railroad, but as yet it has only been a damage to them; it has done them no good, and has harmed them by withdrawing one-half of the land in the valley from settlement. But soon, we hope not at a very distant day, Kittass will be a good county to live in; at present it has some serious drawbacks, which we have already mentioned.

The Petaluma cheese factory, which started four weeks since, has already shipped five tons of cheese to San Francisco.

CURRY COUNTY, Oregon, promises to be a great wool-growing section.

Peach trees are just beginning to bloom in Trinity county.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., April 21, 1874.

FOR WEEK ENDING April 7, 1874.

MILK-PAIL.—Ledyard Frink, Rio Vista, Cal.

CAR-COUPLING.—Jacob F. Buruer, Elko, Nevada.

MEDICAL COMPOUND.—Hawkins W. Epperly, Cambria, Cal.

CLASP FOR STOCKING SUPPORT.—Edward Halsey, San José, Cal.

DESIGN.

CENTER-PIECE.—Samuel Kellett, S. F., Cal.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.

NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

The Pacific Rural Press,

NOW IN ITS FOURTH YEAR.

Is a Large, Handsome, Illustrated, Home Journal. Every Farmer, Gardener, Country Gentleman and Rural Homestead Owner should take it. Every Miner, Mechanic, Manufacturer and Professional man and woman who contemplates agriculture, should read it.

It is worth its price for home reading. Send it abroad and extend a knowledge of our wonderful growing country. Subscription, \$4 a year. One sample copy free. Four copies (postpaid) 25 cts.

DEWEY & CO., Publishers.

No. 338 Montgomery St. S. F.

PESCADERO, CAL., Aug. 28, 1873.

MESSES. TREADWELL & CO.—Gents: The *Etna* I purchased of you is a Mower and Reaper that cannot be beat. I have tried it in almost every kind of grain and grass, oats, barley, wheat, clover, and even in squirrel grass that was not eight inches high, up hill, and the wind blowing it over as I went. I cut it close to the ground. It is the best I have ever run. I have run the Buckeye, Ball's, Wood's, Champion and Kirby Clipper, but the *Etna* beats them all. Yours truly,

C. TRASHKAR.

NOTICE TO FARMERS.

Something Entirely New.
HOME SEWING MACHINE.

This machine is manufactured after an experience of twenty years. It contains within itself every known improvement. It is the best because the simplest, easiest to understand and by far the lightest to run, and the equitable adjustment of all its parts makes it the most durable Machine in the market. Take the INTERESTED STATEMENTS OF NONE, but

EXAMINE for YOURSELF.

SEND FOR A CIRCULAR.

It uses a Shuttle, Straight Needle, Two Threads, and makes a stitch alike on both sides.

E. W. HAINES, Agent.

17 New Montgomery St., Grand Hotel Bld'g, S. F.

We also continue to sell another machine, the

HOME SHUTTLE SEWING MACHINE.

Price, \$15.

Mme. Demorest's Reliable Paper Cut Patterns. Send for a Catalogue. 157-1-cow-6m

JUTE SEED! JUTE SEED!

NOW IS THE TIME TO PLANT.

Just received, an invoice of FRESH JUTE SEED, which will be sold in quantities to suit. Also, just received a full supply of

EGYPTIAN CORN,

(Chicken Feed,) which is in fine condition. Orders respectfully solicited.

R. J. TRUMBULL, Seedsman.

ap25-3t

427 Sansome street, San Francisco.

New Patent Cheese Vat and Heater, Manufactured by G. HARRIS & SON, Petaluma, Sonoma County, Cal.

Warranted to give satisfaction.

ap25-1m

S. F. MARKET REPORT.

At wholesale and not otherwise indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, April 22, 1874.

Again we have to chronicle a general decline in prices of Domestic Produce. The change is not perhaps disadvantageous to farmers, for reductions have been pretty much confined to articles of spring growth, indicating only that the supply throughout is much fuller, and is a natural result, to be expected at this season. The main cause of complaint, however, is that Grain and other Produce of last year's harvests remain so low—that is, low in comparison with terms already secured, and in striking contrast to the expectations founded upon the remarkable high prices which held last fall.

Crop reports are rather more favorable each week. As will be seen elsewhere in our columns, the Department of Agriculture estimates that the present year promises better returns than any since the inauguration of the crop statistics.

Receipts

Of produce at this port during the past week have been as follows: Flour, 2,350 barrels; Wheat, 20,467 cent; Barley, 14,292 centals; Oats, 4,814 centals; Corn, 4,555 centals; Rye, 50 centals; Beans, 3,046 centals; Mustard Seed, 21 sacks; Flax Seed, 29 sacks; Potatoes, 5,479 sacks; Peas, 50 sacks; Onions, 166 sacks; Hides, 4,302; Wool, 2,709 bales; Hops, 11 hales; Hay, 1,142 tons; Straw, 122 tons; Wine, 35,490 gallons; Brandy, 1,000 gallons; Oranges, 422,500; and Lemons, 65,800.

It will thus be seen that the movement in Wheat is insignificant, compared with the receipts of a few months ago. The last of the Potatoes are now being sent forward to fill the urgent need; while Feed of all kinds is in request and calls for full supplies are promptly answered.

Beans.

Rates are a trifle better to-day. Prices are, however, but a shade higher than last week. Stocks are running pretty low and the demand will probably hold until the new crop enters the market. The present terms are much more favorable to holders than quotations of three months back.

Broom Corn.

No change to report, and quotations nominal.

Dairy Produce.

Supplies are very full and prices remain low. There is some Butter of very good quality now in market, while whole milk Cheese of State makes in some cases very fine indeed. Of our Butter the Baltimore American says: "A case of California Butter was received on Thursday, by one of our commission firms in this city, and was all disposed of at private sale at \$1 3/4 lb. The quality of the article was very superior. The cost of bringing the Butter here is, however, too great for the regular trade."

Eggs.

Eggs are still lower to-day. The contrast between the quantity now received and the dearth last winter, when prices ruled as high as 75 cts. a dozen, is marked.

Feed.

Feed of all kinds is in demand and holds its own better than most other Produce. Hay is coming forward in large quantity, for the season, but prices remain quite firm.

Flour.

Extra is weak at \$6 as the extreme. In New York, shipping brands of Flour have advanced 25¢/30¢ during the week, but here the strange contrast is presented of Flour steadily weakening day after day, while no change is noticed in Wheat. If the price of Flour becomes much lower, there will be no margin of profit at all for the millers.

Hops.

Both in this city and in the Eastern market Hops are very dull. Quotations at the latter were 25¢/30¢ for good to choice Domestic; 10¢/12¢ for lower grades, and 17¢/25¢ for the crop of 1872. Bavarian sold at 22¢/30¢ and English 20¢/25¢.

Potatoes.

Potatoes have declined from 5¢ to 10¢ through the list. New are coming into market more and more plentifully, but not yet in sufficient quantity to break the present rates, which are certainly very fair.

Poultry.

No change in quotations. Receipts fully up to the demand.

Wheat.

There is not much excitement in the Wheat market, as most of the trade for the season appears to be over. Only one ship laden with Wheat has cleared for a week, and none the previous week. Prices are steady. Day before yesterday a good deal was put on the market, said to be the clearing up sale of a leading San Joaquin valley grower.

Wool.

There is a slight activity in Wool. The Alta says: The spring clip of Wool is now beginning to be shipped to our market. The largest quantities seem to come from the San Joaquin and the southern counties. The result of this year's clippings promises to be unusually remunerative. The Wool coming down is far above the average, both in quality and quantity. From Fresno county we have most encouraging reports. We learn that the railroad company has recently made a considerable reduction on the freight on Wool, and allows several parties to join together in hiring a car, provided the Wool is consigned to one party.

Provisions.

There is rather more activity in Provisions. The demand for Bacon, both California and Eastern, is more pressing and quotations are stiffer.

DOMESTIC PRODUCE.

WEDNESDAY M., April 22, 1874.

Beans, small wh. lb.	5 1/2	@	5 1/2
do, butter.	8	@	7
do, large, do.	6	@	7
do, bayo.	2 1/2	@	2 1/2
do, pink.	2 1/2	@	2 1/2
do, pea.	5 1/2	@	5 1/2
do, Lima.	14	@	14

Per ton.....	\$109 @ 250	H. M. Bay.....	— @ —
DAIRY PRODUCE		Piccon Pot...l	70 @ 1 75
Butter, Cal. choice	22 1/2 @ 25	Humboldt...l	75 @ 1 80
do, good.....	20 @ 20	Petaluma...l	70 @ 1 75
do, inferior.....	15 @ 20	Mission.....	— @ —
do, firkin.....	21 @ 26	Sglinas.....	1 70 @ 1 75
do, pickled.....	12 @ 16	Bodega.....	1 75 @ 1 80
Cheese, Cal. new	13 @ 16 1/2	New Potatoes...4	4 @ —
do, Eastern.....	14 @ 14		

Eggs, Cal. fresh	23	@	21
do, Oregon.	20	@	22 1/2
do, Eastern.	20	@	22 1/2
do, Ducks.	20	@	24

FEED.			
Bran, per 100.....	17	@	19 00
Middlings.....	27	@	30 00
Hay.....	15	@	19 00
Straw.....	9	@	00
do bale.....	1	@	1 25
On cake meal.....	—	@	32 50
Corn Meal.....	36	@	37 00
Ducks, tame, doz 50	50	@	25 00
Geese, per pair 1	75	@	29 00
Hare, per doz. 2	40	@	30 00
Shine, Eng., doz	75	@	2 00
Quail, per doz	—	@	—
Mallard Ducks.....	—	@	—
do small.....	—	@	—
Wild Geese, gray	—	@	—

FLOUR—Superfine		&	do white.....	—	—
Extra.			Doves, per dozen	50	@ 75
Alvino Mills, hbl	62 1/2	@ 60	Prairie Chickens	—	—
California.....	62 1/2	@ 60	Grouse.....	—	—
City Mills.....	62 1/2	@ 60	Rabbits.....	1 50	@ 2 00
Commeil Mills.....	62 1/2	@ 60	do tame.....	4 00	@ 5 00
Golden Gate.....	62 1/2	@ 60	Venison, per lb.	—	@
Notional Mill.....	62 1/2	@ 60	PROVISIONS.		

Santa Clara Mills. . .	4 62	6 00	Cal. Bacon, Light	—	@	13
Genesee Mills. . .	4 62	6 00	do Medium	—	@	10
Oregon. . .	4 62	6 00	do Heavy. . .	—	@	10
Vallejo Star. . .	4 62	6 00	do Meas'N. . .	11	@	13
Venne, Oakland. . .	4 62	6 00	Export. . .	12 1/2	@	13
Stockton City. . .	4 62	6 00	Cal. Hams	—	@	15
Lambard, Sac. . .	4 62	6 00	do Whittakers	—	@	15
			do Duffield, ch	—	@	14
			do Plankton &	—	@	14
			do Harmon	—	@	14

Beef, fr quality...	10 @	12 1/2	do Harm. & Co	— @	13
do, second do...	7 @	8	Eastern Should's	10 @	—
do, third do...	5 @	6	do new hams	10 @	—
Veal.....	8 1/2 @	10	Cal.Smoked Beef	10 @	11
Mutton.....	7 1/2 @	8	ward, Cal.....	11 @	13
Lamb.....	7 @	8	do Eastern.....	12 @	15
Pork, undressed.	— @	6 1/2	SEEDS.		
do, dressed.....	8 @	8 1/2	Alfalfa.....	18 @	20

Wt. Cal. c'st. cl.	80	@	1 90	do, shipping	1 85	@	35
do, milling	1 80	@	2 00	Barley, Feed	55	@	65
do, Brewing	1 80	@	1 85	Oats, good to	1 65	@	1 70
do, ch. do	1 65	@	1 70	do, common	1 55	@	1 60
do, common	1 55	@	1 60	do, common	1 55	@	1 60

Corn, White.....	1 65	@	1 75	Timothy.....	60	@	75
do, Yellow.....	1 65	@	1 75	Sweet Clover.....	60	@	75
Ruckwheat.....	3 00	@	3 25	Orchard do.....	30	@	25
Rye.....	1 75	@	1 80	Red Top do.....	30	@	40
				Hungarian do.....	12 1/2	@	15
HOPS.				Lawn do.....	5 1/2	@	60
California, 1873.	35	@	37 1/2	Glover Red.....	20	@	20
Eastern, 1873. Do..	45	@	47 1/2	do White.....	60	@	75
do New York.....	45	@	47 1/2	Alsike.....	—	@	—

MISCELLANEOUS.				Esparto Grassin			
Beeswax per lb.	27	@	30	Packets.....	—	@	1 00
Honey choice				WOOL,			ETC.
Northern.....	15	@	20	Spring, short, lb.	17	@	19
do Dark.....	8	@	10	do choice Nort	24	@	25
do Strained.....	8	@	12 1/2	Medium grades.....	20	@	22
Pulu.....	8	@	8 1/2	Good to Choice.....	17	@	19
Onions.....	3	@	3 1/2	Fall clip.....	14	@	15

FRUITS AND VEGETABLES.

WEDNESDAY M., April 22, 1874.

The main feature of the Fruit market during the week has been the advent of Strawberries in quantity, for the first time. For two weeks past there have been occasional supplies and at prohibitory rates, it would seem, though what were to be had did not remain long on the market. During the last two or three days supplies have been fuller, and Strawberries have been sold at wholesale as low as 35¢ per lb. 400 lbs came in yesterday. In a few days receipts will be quite free. The steamer Reform makes her first trip to Alviso to-day, and it is said that she will, during the season, bring the bulk of the crop. The growers give the steamer the preference over the railroad, for the reason that the fruit arrives in better condition and is laid down at a more convenient point. A consignment of Oregon Apples, 1,500 boxes, sold yesterday at \$1.10/\$1.15 per box at auction. Vegetables are coming in more freely. The market to-day is completely overstocked with Asparagus, which accounts for the excessively low price. Dried Fruits have declined considerably. Latest New York advices are: Apples have a fair call for consumption; the season is becoming late for Apples, but our stock is not heavy; should the West be able to get through with its stocks the market will probably remain unbroken to the end of the season. Peeled Peaches of prime quality are scarce and very firm. Unpeeled are very quiet. Other kinds are without material change.

FRUIT MARKET.				DRIED FRUIT.			
Tahiti, Or. M 16	00	20	@	Apples, per lb.	6	1/2	@
Lorita do.	15	00	@	Pears, per lb.	8	1/2	@
Cal. do.	15	00	@	Oranges, per lb.	11	00	@
Limes, M.	10	00	12 1/2	Apricots, per lb.	8	1/2	@
Cal. Lemons, M	30	00	30	Plums, per lb.	8	1/2	@
Mesquite do.	30	00	30	Pitted, do per lb.	15	00	@
do per box.	10	00	12 00	do Extra, per lb.	15	00	@
Bananas, per bunch	2	00	30	do Royal, per lb.	5	1/2	@
Cocoanuts, per 100 lb.	10	00	10	Black Figs, per lb.	5	1/2	@
Pineapples, doz 6	00	7 1/2	@	White, do	10	00	@
Apples, eat'g, h. 1	50	02	50	Prunes, per lb.	6	00	@
do Common.	50	01	1 50	do German.	12	00	@
Oranges.	—	—	@	VEGETABLES.			
Blackberries.	35	00	@	Asparagus, per 100 lbs.	1	1/2	@
Strawberries per lb.	35	00	@	Beets, per 100 lbs.	1	00	@
Gooseberries.	—	—	@	Cabbage, per 100 lbs.	1	50	@
Raspberries.	—	—	@	Carrots, per 100 lbs.	1	00	@
Currants.	—	—	@	Cauliflower, doz.	1	00	@
Plums.	—	—	@	Celery, doz.	1	00	@
Peaches, h. 1.	—	—	@	Green Peas, doz.	15	00	@
Pears, Eating.	—	—	@	Green Corn, per doz.	—	—	@
do Cooking.	1	25	02 00	Squash, per doz.	—	—	@
do Bartlett.	—	—	@	Marzo eat S's, tn 60	60	00	@
Crab Apples.	—	—	@	Okra, per lb.	35	1/2	@
Nectarines.	—	—	@	String Beans, per lb.	—	—	@
Watermelons.	100	00	@	Lima Beans, per lb.	—	—	@
Canteloes.	100	00	@	Parsnips, per lb.	12	1/2	@
Pomegranates, h. 1	50	02	50	Shell Beans, per lb.	—	—	@
Grapes, Black H.	—	—	@	Peas, per lb., 40 lbs.	—	—	@
do Muscat.	—	—	@	Okra, per lb.	25	00	@
do Malaga.	—	—	@	Okra, Green.	—	—	@
do Sweet W.	—	—	@	Quennberts, doz.	75	00	@
do Mission.	—	—	@	Tomatoes, per box.	—	—	@
do Rose of Peru.	—	—	@	Eggplant, per lb.	2	1/2	@
do Tokay.	—	—	@	Shubarb.	2	00	@
do Morocco.	—	—	@	Lettuce.	12	1/2	@

MISCELLANEOUS.

(RETAIL.)

[Corrected weekly by B. SHARBRO & BRO., Grocers, No. 25 Washington street, San Francisco.]

Prices of Groceries and Provisions are still very low.

There are no new declines this week.

Butter, Cal. choice	25	@	30
do common.	22	@	25
do, 1st.	15	@	19
do, 2nd.	12 1/2	@	15
do, 3rd.	10	@	12 1/2
do, 4th.	8	@	10
do, 5th.	6	@	8
do, 6th.	4	@	6
do, 7th.	3	@	4
do, 8th.	2	@	3
do, 9th.	1	@	2
do, 10th.	—	@	—
do, 11th.	—	@	—
do, 12th.	—	@	—
do, 13th.	—	@	—
do, 14th.	—	@	—
do, 15th.	—	@	—
do, 16th.	—	@	—
do, 17th.	—	@	—
do, 18th.	—	@	—
do, 19th.	—	@	—
do, 20th.	—	@	—

GENERAL MERCHANDISE.

WEDNESDAY M., April 22, 1874.

Coal is steady. Coffee is quiet at the reduced rates. Eastern quotations have fallen off slightly again for Coffee, but no further change is noted here. Fish are rather more active. There is no news in Sugar and the aspect of the competition is about the same as reported last week. Turpentine has advanced 7¢.

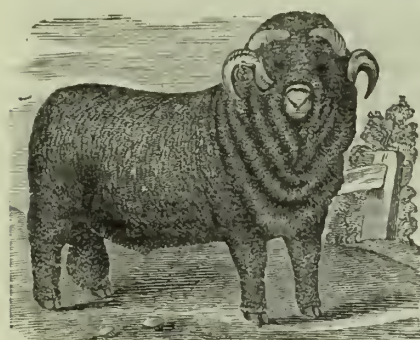
BARS.			PAINTS.		
Eng. etand, Wht	12	@ 13 1/2	Atlas, W. Lead.	8	@ 11 1/2
Cal. Machine....			Whiting.....	8	@ 2
Gilroy E.....	12	@ 13 1/2	Putty.....	4	@ 4
do, 22x36, do W	12 1/2	@ 14	Chalk.....	23	@ 2
do, 22x10, do....	14 1/2	@ 15	Paris White....	24	@ —
do, 23x10.....	—	@ 15	Ocbre.....	4	@ 8
do, 24x10.....	15	@ 16	Venetian Red..	3 1/2	@ 5

Stock Notices.



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.
Address **N. GILMORE,**
El Dorado, El Dorado County, Cal.



Pure Blooded French Merino Rams and Ewes,

For sale by **ROBERT BLACOW**, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.

12v5-3m

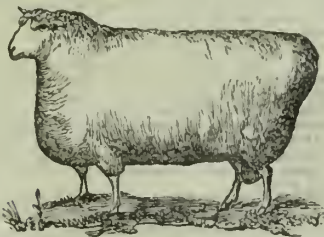


We respectfully invite the attention of wool growers to our fine stock of Cotswold Sheep and Angora Goats. We have 200 head of Pure Breed Angoras to select from; we have some of the finest Goats in America; we guarantee everything we sell to be as represented; our prices are as low as any in America for the same grade of stock. Call and see, or address,

LANDRUM & RODGERS,
Watsonville, Cal.

13v7-cow-1f

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND CRAIN.

Office—405 Front street. S. F. 14v7-3m

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Homs. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

Angora Goats at Auction.

ON WEDNESDAY, MAY 6TH, AT 2 O'CLOCK P. M., I will sell to the highest bidder Seventy Head of Thoroughbred Angora Goats, imported by their owner, Mr. A. Euthychedes, from Asia Minor. Sale Positive. Terms cash, in U. S. Gold Coin. **ROBT. BECK,**
I have also the best imported Alderney, Jersey and Ayrshire Cattle; Spanish and Silesian Merino Sheep at private sale. R. B.
Sacramento, March 10, 1874. 11v7-6t

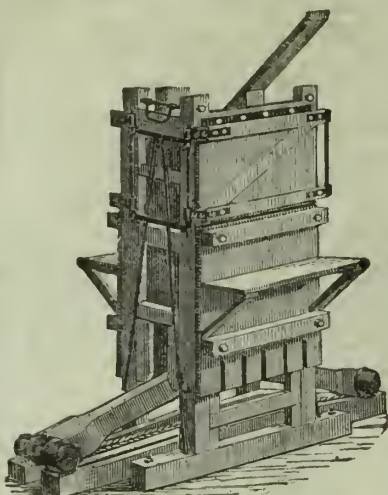
"THE EAGLE HAY PRESS."

THE KIMBALL MANUFACTURING COMPANY,

OWNERS OF THE PATENT AND SOLE MANUFACTURERS ON THE PACIFIC COAST,

COR. FOURTH AND BRYANT STS.,

SAN FRANCISCO, CAL.



Several years were devoted by the patentee to the perfection of this powerful press.

Its unprecedented sale at the East induced the Kimball Manufacturing Company to introduce them in California and the Pacific States.

During the past season a number of important improvements have been made, in order to gain all the power desired in condensing the weight and size of the bales. The wood and iron of the frame have been increased and strengthened, and it is now the most perfect and powerful press in use.

It Possesses Other Advantages:

Being cheap, simple to manage, with no intricate machinery to get out of gear, thus losing time waiting for a new piece.

All who have used these presses pronounce them superior to anything used heretofore.

The power applied by means of two levers increases in ratio to the resistance; and as the levers approach a perpendicular position, this power can be scarcely estimated.

Three men, with one horse, can bale from ten to fifteen tons per day; each bale weighing from 300 to 350 lbs., using less rope than any other press.

When a bale is pressed and fastened, the follower runs down of its own weight and the bales can be taken out on either side.

On account of its great power, it is well adapted to pressing hides, rags, cotton or moss.

The particular attention of wool growers is called to our improved Wool Press, constructed on the same principle, which was tested at the State Agricultural

Hall, Sacramento, April 18th, 1871, and stood the test of a bale of wool weighing 550 pounds. Reference, Major Robert Beck.

These presses are manufactured in San Francisco by the Kimball Car and Carriage Manufacturing Co., who have a stock constantly on hand. Prices \$250.00 for Hay Presses; \$350.00 for Wool Presses. Weight of Hay Press, 2,500 lbs.; Wool Press, 3,500 lbs. Can be shipped in pieces or set up. 13v7-2am-3m

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

U. S. LIVE STOCK EXCHANGE,

S. E. Cor. Fifth & Bryant Sts.,

SAN FRANCISCO.



Cattle, Sheep, Milch Cows and Horses sold on commission or bought on farm for cash. Our accommodation for Live Stock are the most convenient, complete and extensive in the City or State.

WANTED: Milch Cows, Cattle and Work Horses. apls-1f Address: **DAWSON & CO.,** 449 5th St., S. F.

JERSEY CATTLE.

A few head of very choice Jersey Cows—Heifers and and Bull Calves—for sale. Apply to 15v7-3m **R. G. SNEATH,** Menlo Park.

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID AND ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot-Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best Disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

THE STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kans's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Blueing, Harness Soap, Thomas' Cool Water Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Cologne, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street.

v7-16-3m

SAN FRANCISCO, CAL.

SAN FRANCISCO

Pioneer Screen Works,

John W. Quick, Manufacturer,

203 FREMONT ST., (near Howard) SAN FRANCISCO.

Screen Punching of all kinds and qualities for

QUARTZ AND FLOUR MILLS,

AT EASTERN RATES.

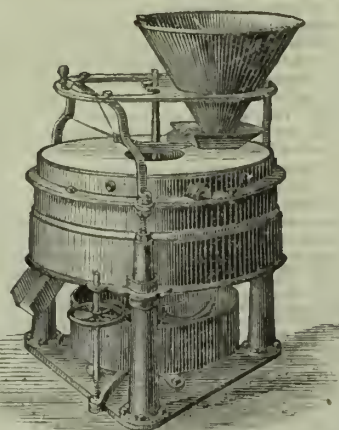
I would call special attention to my slot cut and slot punched screens, which are attracting much attention and giving universal satisfaction. I was the first manufacturer who introduced these Screens to the Millmen on this Coast. This is the only establishment on the Coast devoted entirely to the manufacture of Screens.

Mill Owners using battery Screens extensively can contract for large supplies at favorable rates. Orders solicited and promptly attended to. v7-16-cow-1y

J. WAGNER,

MANUFACTURER OF

FRENCH BURR MILL STONES AND PORTABLE MILLS.



General Mill Furnishing. Portable Mills specially adapted for Farmers' use. 113 and 115 Mission street, San Francisco. 13v7-3lu-2am

LONDON

ASSURANCE CORPORATION.



The Oldest and Wealthiest

Fire Insurance Company doing business in America. Risks taken at current rates.

CROSS & CO., General Agents,

feb14-cow-bp

316 California Street, S. F.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO. 21v2-1y

Agricultural Articles.



LINFORTH, KELLOGG & CO,

Importers of

HARDWARE

And

Agricultural Implements.

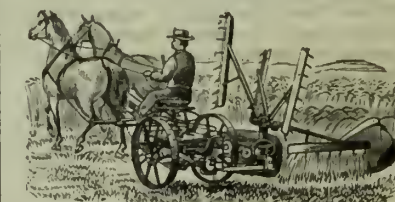
Sole Agents for

Peerless Mowers,

World Mowers,

Clipper Mowers,

Wood's Eagle Mowers,



Peerless Self-Rake Reapers.

World Self-Rake Reapers.

World Mower and Reapers, with Dropper.

World Reapers, and Mowers with Dropper and Hand Rakes—side delivery.

Clipper Mowers and Reapers, with Dropper.

Cayuga Chief Mowers and Reapers.

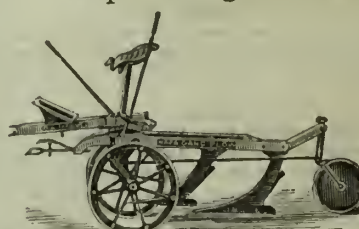
Sulky Rakes—Furst & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

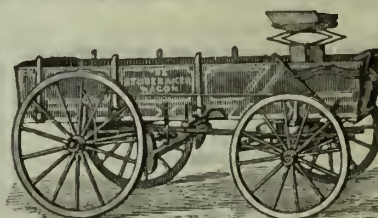
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps; Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators,

Mortise Head Hay Rake, Scythes and Snaths,

Soule, Ketsinger & Co.'s First-Class

Farming Tools,

Gold Medal Forks, Hoes and Rakes,

Batchelor's Forks,

Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,

Road Scrapers,

Canal and Garden Barrows,

Hay Cutters—Burdick's

National, Belcher & Taylor's

Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Hoadley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & CO., San Francisco.

McLAREN, PILCHER & BELL,
MANUFACTURERS, DEALERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.

CURRENT'S PATENT HARVEST SHARPENERS,



The only successful Grinding Machine in existence for Harvesting Machines. No farmer who has a Reaping and Mowing Machine can afford to be without it. It is simple, cheap, quick, durable and portable GRINDING INSTRUMENT, which is adjustable to any kind of knives, so that it will sharpen the section immediately, without removing the cutter or unhitching. For particulars call on or address,

McLAREN, PILCHER & BELL,
605 Clay street, San Francisco.
Agents wanted. 15v7-6w



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m **MATTESON & WILLIAMSON,**
Stockton, Cal.

THE CELEBRATED MITCHELL WAGON



WM. ZARTMAN & CO.,
CARRIAGE AND WAGON MAKERS,
Cor. English & Howard Sts., PETALUMA.
Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate.
SPECIAL RATES TO GRANOERS. 12v7-3m

O. CREOO. S. O. BOWLEY.

CREGO & BOWLEY,
Importers and Manufacturers
—OF—
CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.
CALIFORNIA STREET.....SAN FRANCISCO.

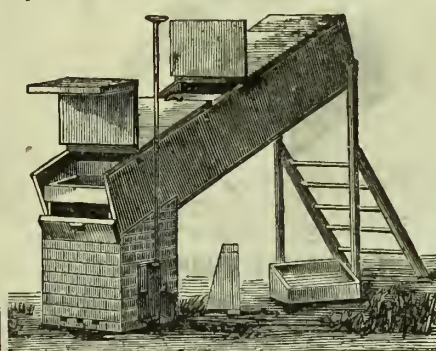
Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkeys, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.
We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:
Charles S. Coffey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.
Also, a large assortment of single and double Harness, of the most celebrated makers:
O. Graham, New York; J. R. Hill, Concord; Pitkin & Thomas, Philadelphia.
Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,
No. 9 Merchants' Exchange, California street,
24v5-3m San Francisco.

H. C. SHAW,
STOCKTON, CAL.
Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros." General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Geared Headers.
The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW, 14v7-3m Box 95, Stockton, Cal.

Ryder's American Fruit Drier.



This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by
J. M. KEELER, General Agent,
306 California street, San Francisco

THE CELEBRATED SLUTHOUR PUMP.



Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.
CHASE PIPE CUTTING and THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from 1/4 to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,
Commission and Forwarding Merchants.
Agents for Eastern Manufacturers, 306 California street, San Francisco.

CHINESE EMPLOYMENT COMPANY.
We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Landrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.
PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F.
11v7-2m

AGENTS WANTED—LADIES OR GENTLEMEN, in every town on the Pacific Coast. Business new, honorable and pleasant. Address, with stamp,
CHAS. P. KIMBALL,
ap18-tf 513 Hayes street, San Francisco, Cal.

NURSERY NOTICES.

Fruit, Shade and Ornamental

EVERGREEN TREES AND

Plants for Sale,

At the old stand, corner Oregon and Battery streets, Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices. Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care. Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE
100,000 Ramie Plants for Sale Very Low.
Address **THOMAS MEHERIN,**
516 Battery Street, SAN FRANCISCO.
P. O. Box 722. 24v6-3m

O. W. CHILDS,

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;
GRANGE TREES, SEEDLINGS;
LEMON TREES,
LIME TREES,
CITRON,
SHADDOCK,
POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.
Send for priced Catalogue. 24v6-6m

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to
B. F. CLAYTON, San Jose.
Gr **C. J. CLAYTON,**
Clayton, Contra Costa Co., Cal.
10v7-6m

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best variety of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrus Decadare, or Deavine Cedar Seeds.

L. M. NEWSOM,
East Oakland, 12th St., near Tubb's Hotel.
Send for Catalogue. jal0

PEPPER'S NURSERIES,
PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.
Address, **W. H. & G. B. PEPPER,**
Petaluma, Sonoma Co., Cal.
21v6-1y

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;
SEVEN OF THE BEST VARIETIES
Of Peaches and five of Plum. The Tinley Peach, Georgia Freestone Seedling, the first offered in the State. Its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.
BRYAN & DOMINGOS,
P. O. Box 157, Sacramento, Cal.
4v7-2m

THE ALDEN

Fruit Preserving Company
OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.
W. M. WHERRY, Vice President.
FRANK PYLE, Sec'y and Sup't.
BANK OF CALIFORNIA, Treasurer.

11v7-6m
H. K. CUMMINGS, 1858.
H. H. RALSTON, 1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer.
4v23-1y

OUR SEEDSMEN.

ALFALFA!

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.
SEND FOR CATALOGUE. 21v6-tf

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.
19v6-tf

WAKELEE'S

Granulated Squirrel Exterminator.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is so good that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco.

Who may also be addressed. 3v7-3m

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, at \$3.00 per dozen; White Leghorns, Game Bantams, Creve Coeurs, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Pencilled Hamburgs, (first premium at Buffalo, 1873), Silver Spangled Bantams, Golden Bearded Poland, Black Poland, White Crests, Brown Leghorns, White Sultans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland,
At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 44 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent U. O. D.
6v7-tf

IMPROVED POULTRY.

Brahmas, Cochins, Leghorns, Hamburgs and Houdans. Bronze Turkeys, Aylesbury and Rouen Ducks. Fowls and Eggs for Sale.

I have without doubt the largest and finest birds of their respective kinds to be found on the coast. For price list and circular send to

C. W. WILSON,
P. O. Box 1874. 14v7-1m San Francisco, Cal.

J. Y. BICKNELL,

WESTMORELAND, ONEIDA COUNTY, N. Y.

40 Varieties Land & Water Fowls.

I have shipped fowls to California annually for many years past and they have given entire satisfaction. Circulars with prices and practical hints free. Reference—Editor PACIFIC RURAL PRESS. ap18-4t

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

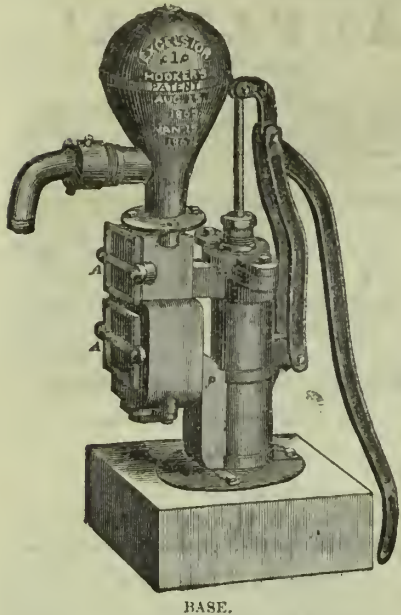
GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street, Agents for the Pacific Coast. 11v7-3m

PURCHASERS please say advertised in Rural Press.

THE "EXCELSIOR" FARMERS' PUMP.

After Seven Years use proving itself the Best Pump on this Coast, and consequently the CHEAPEST.



BASE.

We can advise all parties to buy the Pump to be worked by hand, wind-mill or horse power. All sizes for sale.

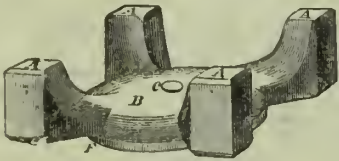
REMEMBER,

Every Pump is tested to 125 lbs. hydraulic pressure per square inch.

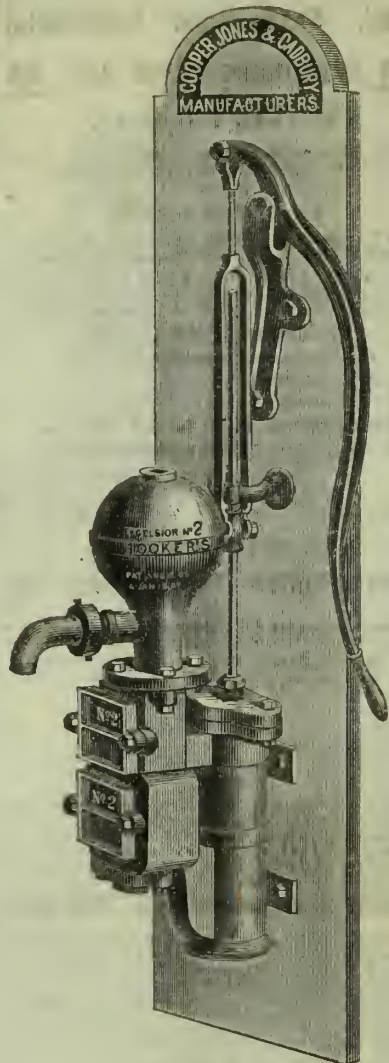
Will pump water 250 feet high.

So simple every Farmer can keep it in order.

EVERY PUMP WARRANTED



VALVE.



MOUNTED.

BRITTAN, HOLBROOK & CO.,

111 and 113 California street, San Francisco, (and also Sacramento,) General Agents.

Send for Circular.

6v7-6ow-3m

BEST SHADE IN USE.

—THE—

RUSTIC WINDOW SHADE.

This New and Elegant article of manufacture is FAST SUPERSEDING ALL OTHER STYLES OF WINDOW SHADES IN USE. Wherever it has been introduced and its merits tested.

IT IS MADE OF WOOD, IS

Light, Strong & Extremely Durable.

It Lowers from the Top or Raises from the Bottom.

And forms a complete and THE ONLY SUBSTITUTE FOR INSIDE BLINDS.

When soiled it can be cleaned with water without the slightest injury. Its fixtures are ample, work to perfection, and never get out of order.

Our facilities for the rapid manufacture of a perfect article are now such that we defy competition in quality and price with any window shade in the market. Orders for any quantity and of any size promptly filled at

THE PIONEER FACTORY,

No. 417 Mission Street, (Mechanics' Mill), by

GATES, JOHNSON & CO.

For sale by all Furniture and Carpet Dealers.

6v7-16p-3m

W. M. BRANDON. JACOB W. ROGERS

BRANDON & ROGERS, California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the state of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large flat of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.

20v6-1y-6p

EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz.; Buff Cochins, \$3 per doz.; White Faced Black Spanish, \$4 per doz.; White Leghorns, \$3 per doz. Buff Cochins and Light Brahma Fowls for sale. Address:

G. A. DEAN, Pacific Straw Works,

12v7-3m-16p

1 thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,

San Rafael, Marin Co., Cal.

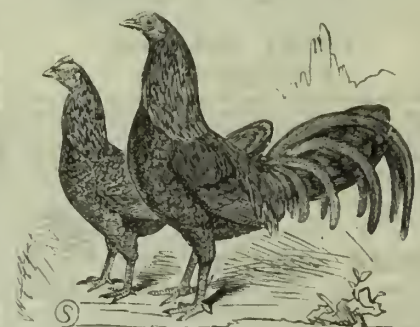
17v7-3m

IMPROVE YOUR POULTRY,

It Costs No More to Keep Good Fowls than Poor Ones!

OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.



GAME FOWLS!

Warranted to Stand Steel.

Prize winning strains of the following varieties, just received from the East: Earl Derby Games, Red Pile Games, Blue Pile Games, Heathwood Games, White Georgian Games, Black Breasted Red Games and Silver Duckwing Games. Eggs, \$12 per doz; guaranteed to reach the purchaser safely.

For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed

8v7-11

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GEES,

58 pounds to the pair, at maturity.

Eggs for Sale Now.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGHES, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address:

M. EYRE,

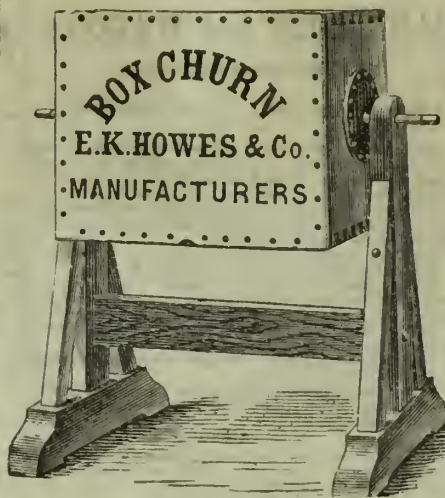
Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.

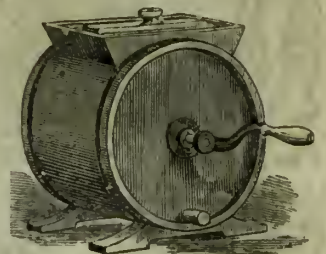
17v7-1m-16p

E. K. HOWES & CO.,

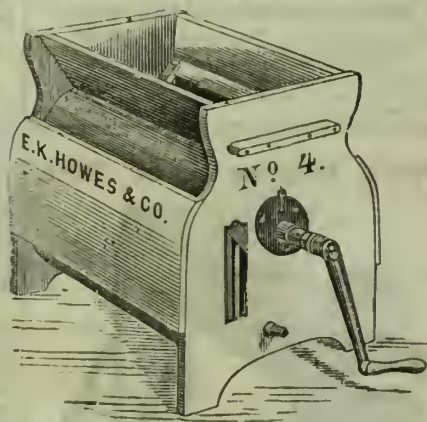
NOS. 118, 120 AND 122 FRONT STREET, SAN FRANCISCO.



BOX CHURN.



CYLINDER CHURN AND DASHER.



THERMOMETER CHURN.



BLANCHARD CHURN.

SOLE MANUFACTURERS ON THIS COAST OF

All Descriptions of Churns, Butter Workers & Moulds, Butter Tubs, (35, 50 & 60 Pounds), Butter Kegs—Plain and Gal Hoops—Wholesale & Retail.

Send for Price List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.

6v7-16p-6ow-3m

(ESTABLISHED IN 1852.)

New York Seed Warehouse,

R. J. TRUMBULL,

427 Sansome street, San Francisco.

WHOLESALE AND RETAIL DEALER IN



Dutch Bulbous Roots, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc.

Keeps constantly on hand a large and fresh stock of Vegetable and Field Seed of all valuable kinds.

CHILE AND CALIFORNIA ALFALFA, of best quality, in quantities to suit, at the lowest market rates.

MESQUIT GRASS, KENTUCKY BLUE GRASS, ORCHARD GRASS, RED TOP GRASS, RYE GRASS, TIMOTHY GRASS, FINE MIXED SEED FOR LAWNS, WHITE AND RED CLOVER SEED, etc.

Agent for GAREY'S SEMI-TROPICAL FRUIT TREES, which are offered at Nursery prices, free of freight charges to San Francisco.

To parties desiring to purchase anything in the above line, I will send any of my catalogues FREE OF CHARGE.

BUTL CATALOGUE now ready. SEMI-TROPICAL CATALOGUE ready Nov. 1st. ILLUSTRATED SEED CATALOGUE, embracing Seeds of all the valuable varieties, Flowering Plants, Ornamental Shrubs, Fruit and Shade Trees, etc., ready Nov. 15th.

R. J. TRUMBULL, 427 Sansome st., San Francisco.

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILLIPS, 608 Clay street, S. F.

11v7-1m

DR. ABORN, OCUList, AURIST,

Catarrh, Throat and Lung Physician,

The Most Difficult Cases are invited to call.

Office and Laboratory, 213 Geary street,

Office Hours—10½ A. M. to 3 P. M.; 6 to 7½ P. M.

13v7-1m-16p

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,

ENGLISH RYE GRASS,

RED TOP,

ORCHARD GRASS,

TIMOTHY,

MESQUIT,

RED CLOVER,

WHITE CLOVER

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS.

7v6-1f-16p2

PURCHASERS please say advertised in Rural Press.



Volume VII.]

SAN FRANCISCO, SATURDAY, MAY 2, 1874.

[Number 18.]

The Black-billed Cuckoo.

The cuckoo family, the *Cuculidae*, is distinguished by the gently curved and usually lengthened bill, rather short toes, and long and soft tail, with some eight or twelve feathers. The members of this family are as a rule fine looking birds and have some curious habits which render them peculiarly interesting. The common European cuckoo differs from almost every other bird in not constructing a nest, and in not under any circumstances hatching its own eggs, which it deposits in the nests of other birds, particularly of the hedge-sparrow. It is said that the young, unfledged cuckoos are accustomed to take full possession of their strange home, and eject the lawful tenants forcibly, and thus monopolize all the care and attention of their foster parent. The American is as domestic and as kind a parent, as its foreign congener is the contrary.

The black-billed cuckoo, shown in the engraving, known in ornithological parlance as the *Circus Erythrophthalmus*, found in this State, is nearly as numerous as other species of the cuckoo family, though when first observed it was confounded with the yellow-billed cuckoo, a closely related bird.

Its particular markings, however, and some of its habits, sufficiently characterize it as a distinct species. The general color is nearly that of the yellow cuckoo; it is almost an inch less in length; the tail is of a uniform, dark, silky drab, except at the tip, where a great many feathers are marked with a spot of white, bordered above with a slight touch of dull black; the bill is wholly black, and much smaller than that of the yellow, and it wants the bright cinnamon on the wings. But what constitutes its most distinguishing trait is a bare, unwrinkled skin, of a deep red color, that surrounds the eye. The female differs little in external appearance from the male. The black-billed cuckoo is particularly fond of the sides of creeks, feeding on small shell-fish, snails, etc. There are also found broken pieces of oyster-shells in its gizzard. The eggs of this cuckoo are smaller than those of others, usually four or five in number, and of a rather deeper greenish blue.

Wilson deserves the credit of distinguishing this species. It is closely allied to, but differs widely, both in its habits and feeding, from its congeners and the true cuckoos. In addition to shells and water insects, Audubon mentions having found in their stomachs a small black frog, which appears after a rain.

A NEW SENSATION IN THE POULTRY WORLD.—It is now proven beyond doubt that mothers, at least those of the poultry yard, are no longer needed. Where the utility of the discovery will end, it is at present impossible to foresee. When a few weeks ago we urged upon the readers of the *Press* the practice of using capons for rearing chickens, we thought we were somewhat in advance of the prevailing custom; but it is now ascertained that a gentleman in a neighboring city has left us quite out of sight. He has succeeded in utilizing the rooster in the nursery, to the fullest extent, without caponizing him. When the female members of the poultry yard are out shopping, attending conventions, etc., and the little ones at home need that care which it was formerly supposed none but the mother could properly give, our progressive neighbor simply takes the idle, swaggering rooster, and without caponizing, removes a few feathers from his breast, and scratches the part slightly with a pin; then places him in a low coop, as was described in our process, and at once puts the chickens under him. The gentle pressure of the downy coats of the little ones is at once soothing to his irritated breast, and mere selfishness prompts him to brood them carefully. And, as in the case of the capon, a brief, a very brief exercise of this fostering care, develops an affection which was not supposed to have existence in the fowl; his usefulness in other respects remaining unimpaired. There are truly more things in the chicken yard than are dreamed of in our philosophy, and the thoughtful will begin to ponder on the probable results of this new departure in domestic life.

Effects of Deep Tillage.

The increased production derived from a deeply tilled soil, over that which is obtainable from land with a more superficial cultivation, is now so generally admitted by intelligent farm-

the west and south is a variety of soil so excessively dry and hard in summer as to be considered unfit for any other crop than the cereals; in fact, even oats or barley had failed to make a paying crop for the few years preceding the last. But what of the last year? Simply this: Two years ago the sugar company



THE 'CALIFORNIA CUCKOO.

ers, that further argument in proof would seem quite unnecessary; and yet there are a few who still hold to the opinion that a four-inch depth of culture for wheat, oats or barley, is better than a greater depth. We propose no

determined to test this dry, hard, compact soil for the growth of sugar beets.

Accordingly they put in their plows and turned up and completely pulverized the soil and subsoil to a depth of ten inches, and though, from the extreme dryness and heat of



BAD ENOUGH, BUT IT MIGHT BE WORSE.

word argument to refute their position; but will simply lay before such, a matter of fact, in proof that deep tillage alone will increase the productiveness of at least one variety of soils.

Four miles to the east of Sacramento city are located the works of the Sacramento Beet Sugar Company. To the east of the company's buildings are the justly celebrated bottom or alluvial lands of the American river, while to

the season, the beets were nearly a failure, yet the deep tillage given to the land put it in such condition that on the following year a most remarkable yield of grain was the result—a yield greater even than the land was ever known to produce before—with a certain promise of a like yield being repeated this year. Facts are stubborn things to reason down.

In King's valley, Benton county, Oregon, every available acre of ground is being plowed and prepared for sowing grain.

Another Awkward Position.

As a companion to the engraving, from Nahl's drawing, published in the *RURAL* last week, we here present an illustration which portrays another sad accident that has befallen our new hand on the ranch. Last week he had the misfortune of getting the lariat entangled about his leg, and was thus suddenly brought to terra firma. Undeterred by his previous experience, which should have proved a sufficient warning, it would seem, he again essays the task of lassoing wild cattle. Some one posted in the correct style should certainly have told him not to get his lasso about a bull's neck if he really intended to hold the latter, but to throw for the horns or a leg. It will evidently take some time to become fully acquainted with the ropes, and no rope is more difficult to "get the hang of," perhaps, than the lasso—it is well that the lasso has not got the hang of him.

The accident this time has resulted from the slipping or breaking of the saddle-girths. Both horse and late rider are apparently astonished at the result; but what could be expected with a strong wild bull neatly harnessed to the saddle but that it should give way? Perhaps, too, it has been affixed in a manner consistent with our hero's usual method of doing things, and the parting was more sudden than was absolutely necessary. However that may be, there is no time to speculate on the influence of cause upon effect, or to deduce carefully weighed logical conclusions on what might have been, if—It is on record that the favorite attitude of the great Addison Alexander was somewhat similar to the present position of our friend, when the celebrated scholar was most deeply engrossed with his books. Many amateur students of astronomy have also found that placing the back of the head upon the ground rather quickly and firmly would give unlooked for facilities for pursuing the study of the grandest and most ancient of sciences, from the fact that the celestial orbs would become visible even in the brightness of the noon-day sun, and could be seen in conjunction with the central luminary of our system, a result to be attained by no other known means so quickly and yet satisfactorily. The uncultivated masses, in their vulgar way, call this self-sacrificing occupation "seeing stars," an expression which is not calculated to convey the full meaning of the devotion of those who thus employ themselves, and who are usually so modest as to state they were merely tired and wished to recline.

The new ranchero has much to learn yet. It is to be hoped that his information will not have to be pounded into him, for that is not in accordance with the spirit of modern education, which dispenses with, instead of dispensing, corporeal punishment. If his brother rancheros are more magnanimous than is always the case, they will put him up to the tricks of the trade in advance, and not throw the entire burden of the pursuit of knowledge upon unadvised brain and unassisted shoulders.

VEGETABLE WAX OF CHINA AND JAPAN.—This wax is found on trees, in pieces the size of a hen's egg, and has, therefore, been called vegetable, but it is really the secretion of an insect of about the size of a grain of rice. After gathering, it simply needs to be melted and strained a few times to clarify it, when it is ready for shipment.

• In some recent experiments on the droera, it was found that the leaves could reach round and catch a fly anywhere within half an inch of the plant. The flies have to be tied, as it takes the leaves about an hour to get round. —*Sci. American.*

SAFFLOWER is one of the dye matters the use of which has of late been interfered with by the discovery of the aniline colors. Nevertheless, about six hundred tons are annually shipped from Calcutta.

DURING the year 1873, ending November, there were 1,313 recorded train accidents in the United States, by which 302 persons were killed and 1,262 injured.

THE total length of all the railroads in Europe is 58,650 miles.

CORRESPONDENCE.

Cheese Factory Wanted.

EDITORS RURAL PRESS:—I noticed with pleasure in a late number of the *Petaluma Argus*, the complete success of the cheese factory at that place. There is no reason why, with the superior advantages California possesses, they should not be much more remunerative, both to the proprietors and farmers, than in the Eastern States, where they can be operated only a small portion of the year, the balance of the time the owners of cows being at great labor and expense in keeping them through long and unremunerative winters. Notwithstanding these disadvantages cheese factories are continually multiplying there, and no lack of capital to invest in them is experienced.

Now, I wish to call the attention of those experienced in the business to this place as possessing superior advantages, even to many of the best dairy portions of the State, for just such a factory.

Santa Ana is located in the midst of one of the richest valleys in the State. It possesses a climate unrivaled, and within easy access to shipping points to all the mining regions of the eastern and southern parts of this State, and the whole of Arizona, as well as San Diego and San Francisco.

With the luxuriant fields of alfalfa, for which this section seems peculiarly adapted, within a radius of four or five miles an unlimited supply of the purest and richest of milk can be procured throughout the entire year, at rates less than at Petaluma.

The rainfall is always moderate, and there is no time in the year that roads are impassable. In fact they are at all times simply magnificent.

The town is supplied with an abundant flow of pure artesian water, and the country surrounding is as densely populated as many of the older settled districts around the bay of San Francisco.

Corn is produced in wonderful quantities, and all the hogs that such a factory could sustain through the summer, could be fattened at small expense in the fall and winter. The purity of the atmosphere renders the curing of bacon and pork an easy matter at any time in the year, a fact that has already been demonstrated more than once.

Mr. Robert McFadden, of this place, slaughtered and cured several hundred head of hogs last season with the most complete success. He has also, in company with Mr. Collins, formerly of Point Reyes, established an extensive dairy, and they are producing butter and cheese of a superior quality, and in quantities equal to the best dairies of Marin county, in comparison to the number of cows milked. Could not our old friend, Johnny Hegeler, of the State Grange dairy department, send some enterprising parties here to investigate the matter?

Our Grange at this point is a success. We already number over seventy members, with a constantly increasing membership. Our people are in earnest in this cause.

The season so far has been unusually propitious, and crops are very promising indeed, with a much larger area planted than ever before. Fraternally yours,

N. O. STAFFORD.

Santa Ana, Los Angeles Co., April 27, 1874.

More About Graham Flour and Gems.

EDITORS PRESS:—One of your correspondents suggests sifted graham flour as an improvement on the rule, one-third white flour and two-thirds graham for bread. I protest against this. Sifting graham flour takes the best part out, and one might as well not use graham at all.

In a former article I stated that I had eaten graham gems once, but had no wish to either eat any again or learn to make them. Those gems were not made properly. I have since learned how to make a kind that are so nice, I consider it a duty to give the receipt to the readers of the Press. Here it is:

Four cups of sweet milk, four cups of graham flour, two eggs beaten, a little salt, nothing else; soda or yeast powder would spoil them. Have a good fire, and put the iron gem pans on the stove to heat before you commence mixing the gems. When the pans are scorching hot, grease them a little and drop a spoonful or two of the batter in each pan; put in a hot oven, and bake to a nice brown, which will take perhaps ten minutes. This quantity will fill the gem pans four or five times, and the gems are nice either hot or cold. L.

A Hint for Orange Growers.

EDITORS PRESS:—Coming across the following extract in an account of the Bermudas, by a member of the deep-sea-observation party, on board H.B.M. ship *Challenger*, I thought it might be useful to any who are inclined to disregard that valuable advice concerning the reprehensibility of putting one's entire stock of eggs in a single basket.

"Some years ago the Bermudas were famous for their oranges; several of the best varieties were cultivated in gardens; and the fruit arrived at wonderful perfection; while the lemon, the lime, and the bitter orange were self-sown,

and sprang up everywhere, so that the country lanes and hedgerows were redolent of the delicious perfume of orange blossom, and the fruit fell off and rotted on the ground. About the year 1854, a minute insect of the family *Coccidior* appeared on the orange trees, and multiplied infinitely. The leaves, covered with acicles, and glutinous with a viscid excretion from the animal, became yellow and fell off, the fruit dropped before ripening; and finally, many of the trees died. The Bermudas have never recovered from this plague, and now there is scarcely an orange grown on the islands."

Now we already hear of insect-infected trees in Los Angeles, and I send you the above as some offset to those very pretty calculations that appear from time to time as to the advantages of adopting that ready road to riches, the planting of an orange orchard and the disposal of untold thousands of oranges from each tree at two cents a piece.—*Verb. sap.*

EDWARD BERWICK.

THE DAIRY.

Raising Cream.

From time immemorial cream has been separated from the other parts of milk for the purpose of making butter, yet the best method of effecting the separation is far from being settled.

Opposite practices in many particulars are advocated and adopted. A beginner in butter-making is always confused with the contradictory notions of old practitioners; and these differences of opinion and practice are likely to continue until the operators assemble and compare practices and products, and settle differences by discussion.

In the present unsettled state of opinion and modes of operating, an appeal to general principles becomes necessary. The statement of a few leading facts will help us very much in deciding what is and what is not proper.

The first prominent fact in the separation of cream from milk is, that it rises by reason of its having a less specific gravity than the milk with which it is mingled. But in respect to specific gravity, cream varies very greatly in the milk of different cows; and even in the milk of the same cow, some globules are very much heavier than others, and hence they come to the surface very unequally. The specific gravity of a sample of cream, quoted by Professor Johnston, was 1024.4, of water being 1,000, while we have sometimes found it to be .985. It sometimes sinks in water and sometimes floats on it; and the cream on one cow's milk may sink in the milk of another cow. The milk and cream of the same cow occasionally differ so little, that the latter never rises so as to indicate any line of difference between the milk and the cream. We have recently been experimenting with the milk of a grade Jersey, in which, after standing twenty-four hours, the cream is seen diminishing all the way from the top to the bottom of the per cent. glass, without showing any point of distinction.

The second essential point is the fact that fats expand and contract more with heat and cold than water, and more than the other elements of milk. The difference in specific gravity between milk and cream is varied by the circumstance of temperature. It is greatest when hot, and least when cold, and this fact materially affects the rising of the cream.

A third important fact that affects the separation of cream, is the growth of minute organic germs in the milk, which, up to a certain point, is greater the higher the temperature.

There are thousands of germs in all milk exposed to the air, that are ready to start up and grow whenever the milk is warm enough for them to do so, and by their presence, hinder the upward passage of the cream globules. The sour milk cells, illustrated in a previous number, are the principal obstructions in the way of the rising cream. They begin to form long before the milk begins to appear thick. The growth of other germs does more injury by altering the flavor.

Are these facts appreciated by butter-makers? Most people seem to have the opinion that milk must be cooled to make the cream rise fast; and that the colder they get it, the faster the cream will rise. The fact is exactly the reverse. The colder the milk, the slower the cream rises, because there is less difference between the specific gravity of the cream and milk, and because the milk is more dense and offers more obstruction to the motion of the cream globules. It does not rise as fast at 60 as at 160 degrees. In cheese-making the waste of butyric matter is confined almost wholly to the minutest particles of cream. These rise with great difficulty and very slowly.

Those who make butter from whey often heat the whey to 170 degrees, when the difference in specific gravity between the fat in the cream and the water in the whey, becomes so great that they cream all rises to the top in a short time. By cooling to 60 degrees five or six times, as much time is required to effect the same result.

Milk for butter-making should be cooled, not to make the cream rise faster, but to prevent souring, and other changes which would hinder the cream from getting up. The highest point at which these changes can be stopped, or held in check long enough for the cream to come to the surface, is the point to which milk should be cooled. Every degree it sinks be-

low that point hinders the creaming process, and prolongs the time necessary for the milk to stand in the dairy-house. Not to reach that point is to make the milk thicken before the cream is all up, thus diminishing the yield. The great majority of experimenters agree in putting that point at 60 degrees, but variations that reach from five degrees above to five below are made by some parties with very fair success.

The common error in private dairies is to allow the milk to be too warm in hot weather, and too cold in cold weather. The cream will not rise perfectly in either case, and the resulting butter will be imperfect. The loss sustained in failing to get all the butter that a given quantity of milk is capable of making, is much greater than is generally suspected. Few farmers know how much milk they are taking to make a pound of butter. They seldom weigh or measure, or even guess, at the quantity they are using. From what we have seen, and from facts gathered during a series of years, it appears that 28 and 30 pounds are usually required. Where the facts could be got at, the amount has varied all the way from 34 down to 20 pounds.

If the practices in creaming and churning could be suddenly made so perfect as to get all the butter from milk that it is capable of yielding, every fifth cow could be thrown out of the dairy, and the same quantity as at present obtained. If farmers would take a little pains to know more precisely what they are doing, such losses would not be endured.

Creameries and butter factories usually give us precise figures, but even they are not always fortunate in showing the happiest results. In factories recently visited, the difference in amount required for a pound of butter has run from 22 to 28 pounds, and this difference is due, not to the milk, but to the different modes of managing it.

There is no mode of raising cream so perfect as to separate all the cream from the milk. It has been already remarked that different parts of it rise unequally. The larger globules meet with less resistance in proportion to their bulk than the smaller ones, and hence they get to the surface soonest. The smaller the globules, the slower they rise; and some of them dwindle down to such minuteness that they would not rise through three inches in the week, if the milk could be kept sweet that length of time. Cream will continue to rise till the milk gets thick, be that time short or long. The best part rises first. If milk is skimmed every 12 hours, and the cream of each period churned separately, the product of the first period will be the highest flavored and the highest colored, and the color, quantity and flavor of each successive skimming will diminish to the last, but the keeping qualities will grow better. The 4th and 5th skimmings will be pale and insipid, but can be kept sound a long time. Where a high flavored article is desired, it is not advisable to continue the process of creaming too long. What will rise in 48 hours, at 60 degrees, on milk four inches deep, is all that is generally profitable to separate. What comes up after that is so white and tasteless as to do more injury, by depressing color and flavor, than it can do good by increasing quantity.—*Canada Farmer.*

A Letter from Hon. Harris Lewis.

[Wishing to obtain opinions from the most reliable sources on some points connected with the dairy interests of California, we addressed some inquiries to Hon. Harris Lewis, of Herkimer county, N. Y. Mr. Lewis is President of the N. Y. State Agricultural Society. His experience in dairying is not excelled by any, and his judgment, both in his own neighborhood and throughout the whole American dairying community, is highly valued. We had asked information as to the earnings of cows in Eastern dairies, and after informing him as to the peculiarities of our climate, we asked his opinion as to its probable effects on butter and cheese making. We hope the views expressed in the following letter will inspire increased confidence among our dairymen.]

EDITORS PRESS:—The earnings or product from our average dairies per season, with cheese at 12 cents, is about \$50 per cow, but the range is from \$30 to \$80. The condition of your atmosphere would be a decided advantage in the manufacture of butter and cheese, and if properly made, would be of long keeping qualities. The very end; yes, the inevitable end of putrefactive ferments, is in butter, rancidity, and in cheese, rotteness; the very thing that gives us most trouble. Our butter and cheese tend to early decay, from the very fact that our atmosphere through June, July and August, is too hot and damp. Your milk should not be made into cheese so soon as here, say not sooner than twelve hours after milking; and where there is no danger of the milk souring, it would make the best cheese if twenty-four hours old; that is, make the milk of one day into cheese the next day. This would give the milk time to ripen as it ought to, in order to produce the very finest cheese. But milk kept so long for cheese should be agitated, to prevent the cream from separating from it, if whole milk cheese is desired. It is my opinion that a moderately cold and moist climate is best for milk-producing grasses, and that a greater quantity of milk will be obtained. Yours truly,

HARRIS LEWIS.

Frankfort, Herkimer Co., New York, April 13th, 1874.

THE ORCHARD.

Pruning at Midsummer.

The Germantown, Penn., *Telegraph* has a sensible article on this subject, which we reprint. The climate of our State is so much drier, and in most localities hotter, than in the neighborhood for which the article was especially written, that still greater care than is advised would be necessary to successfully perform what must be considered a very delicate operation. The *Telegraph* says:

It is many years since, from our own experience, we recommended people to prune at midsummer, although we know it was opposed to the views of many eminent horticulturists. At that time it was regarded as a bold innovation on established rules, and we have often since seen articles to show that summer pruning must be wrong. The reasoning by which this is supported is no doubt very good. It does seem, by the reasoning we have referred to, that it ought to be wrong to prune at that season; but, on the other hand, we have the evidence of our own senses not only that no harm but absolute good resulted from the summer pruning of the trees.

But it seems to be forgotten by many good people that there are two sides to every story—two sides to winter pruning and two sides to summer pruning. Few of these horticultural operations are unmixed good or unmixed evil. In any case what we wish to accomplish is to be gained at a little expense of good points—good if we are after some other object. So in this summer pruning question. It is said by persons whom the whole horticultural community respect, that "winter pruning strengthens while summer pruning weakens trees." If one were to deprive a tree of the whole of its foliage this would probably be true enough to work serious injury. It is on the principle on which noxious weeds are destroyed. Deprived of every leaf as fast as one appears, a plant is often killed in one season. But may this not be different when only a few branches are taken off? The remaining leaves and branches have more food at their disposal. What was intended for a thousand branches is now to be divided among nine hundred. But we will not enter into these minute points of physiological science. It is enough for practical men to know that the cutting away of a few branches has never been known to work any serious injury, while the ease with which the wound heals over is in striking contrast with the long time it takes a winter wound to get a new coat of bark over it. We have seen in a vigorous, healthy tree a stout branch of two inches in diameter taken off, in which the new bark nearly covered the stump in two years. In winter the same spot would have been several years in closing over, and perhaps the parts would decay first, and thus lay the foundation of future disease in the tree. So well is this known, that in many places where winter pruning is practiced to any great extent it is not unusual to have shellac or some other composition ready to paint over the wounds, to keep out the weather until it shall have been closed over by the new bark.

Of course a heavy loss of foliage would be a serious loss to a tree; but it is very rare that any tree has been so much neglected as to need the half or even the fourth of its branches taken off in summer time. But there are in many cases branches here and there along the trunk of trees which it is an advantage to the tree to lose; and thinning which may be done in various ways to advantage, and in such cases summer pruning will tell a good tale.

TRANSPLANTING LARGE TREES.—This requires considerable labor and care. The principal thing is to keep the earth around the roots close to the trunk, so as not to injure the fine fibers of the roots nearest to the tree. Far outspreading branches may be cut off. It is best to dig out square around the tree, and have a large square box, which can be taken apart, and inclose the cube of earth cut in the vertical sides of this box; then digging under is commenced and some deeper-going roots cut off, so as to slide the bottom under the box. After attaching this securely, the whole box, with the tree, is lifted out by proper leverage attached to a four-wheeled contrivance placed next to the tree, and when the box is fairly raised above the ground, the wagon transports the box and tree to the place where a hole has been dug, into which it is lowered, the box removed by fragments, and more earth filled in. In a similar way many large trees in the Central Park, New York, have been transplanted.—*Manufacturer and Builder.*

HASTENING THE RIPENING OF FRUIT.—Acting upon the principle that renewal of the earth immediately surrounding the roots increases their activity, and accelerates the maturing of all parts of the plant, including the fruit, Mr. Stall removed the earth about an early pear tree, eight weeks before the normal period of ripening, for a space of 13 to 15 feet in diameter, and to such an extent as to leave a depth of earth over the roots of only about 2 to 2.4 inches, which could be thoroughly warmed by the sun. He was surprised, not only by the ripening of the fruit in the middle of July, but also by its superior juiciness and flavor. In another experiment, the removal of the earth from the north side of a tree, alone, caused the fruit on that side to ripen several days earlier than that on the south side. Frequent watering was of course necessary in the above experiments.—*Vineyard Gazette.*

THE SWINE YARD.

Growing and Fattening Hogs.

The hog is accustomed to a great variety of food. He will eat animal and herbaceous food alike—there is nothing that comes amiss to him, and he thrives upon all. To select food for him, then, is not the thing. Though you can fatten him on one kind of food, you cannot do it economically. Take what breed you like, and it is economy in producing the greatest result from a given amount of food—that is the point that gives the profit in hog husbandry. The cheapest food, then, is to be sought if it answers the purpose. By the cheapest we mean also that which accords with his nature, and which he relishes and thrives upon. Corn alone, though the great hog feed—made a specialty—is not the most advantageous. The exception to this is in the west, where corn is very cheap. But even here, other grain and feed added, will produce a better growth of muscle and fat. All animals require a variety of food, and the hog is no exception. His appetite then will be satisfied, and all the wants of his system supplied. Grass in summer suits him; he revels in a clover field. Milk suits him all the year round, and assists a rapid growth. Milk contains a great variety of elements in solution, and is an aid to the digestion of the more solid food. He likes vegetables—they stimulate his appetite, not only for the vegetables, but for the more concentrated and richer food. Though a "hog," he is governed by the same physiological principles as other animals, and is therefore liable to disease—to many ailments; but most of these are caused by abuses in management. Where he is well attended to, and supplied with a variety of good food, he seldom suffers from disease.

How the Pig Should be Grown.

Milk, then, to begin with. Sweet milk first; then sour or skim milk, with a little meal, (corn and oats ground,) or some other grain. We have found all of them good, and find the advantage to consist principally in selecting, as a main feed, the cheapest, whether that be corn, barley, rye or some other grain. In addition to the milk and meal, a little potatoes or roots of some kind afford an agreeable dessert. Occasionally a handful of hard, dry grain will be relished. This petting exactly suits the hog's nature. Though a "hog," he will thrive best when he is treated delicately, changing his food to suit his appetite. He will now want grass in the season in lieu of roots and potatoes. You cannot give him too great a variety. He is especially fond of lettuce.

In this way he is not "forced" in his growth, but takes it on naturally, healthfully, pleasantly. There will be better pork, also a better hog throughout. He has thus far been growing. His fattening is yet to come, it will be thought. But this is a mistake. It is the great mistake, or one of them, in the treatment of our hogs. The diet which has been begun and thus far carried out, must be continued. You must grow and fatten your hog as you go along, from his pignood up; grow him all he will healthily grow, so that when fall comes he will be in condition for the knife—to be put in better condition by increased proportion of grain—corn principally, and old corn at that—in his diet. Do not, however, omit the other aids entirely; it is not only the proportion that should be changed. The health, the vigor, the strength, the appetite, will then be continued. You will have the sweetest pork throughout, nothing rank, providing always there is a

Clean Pen

And pure atmosphere, a point that is too much overlooked where quality is a consideration. The animal will also breathe better and enjoy himself more in clean quarters, especially when cool and with access to pure water in summer. By nature the hog is not "dirty." He will wallow—so will a fowl—but it is not because he relishes mire; he seeks to be cooled, and water will do it. The fattening, then, is to begin when the growing does—at birth—to be increased as the killing period draws near, but only sufficiently so to reach the desired degree of fatness. This with some breeds, notably the Berkshire, can be done with but little extra feeding. For good healthy pork, you must avoid over-fattening. An over-fat hog is a suffering hog, remember; and its carcass, which suffers, cannot have the excellence which a healthy hog furnishes. Strain at nothing; use regularity and care in feeding, and there will be no difficulty in securing profit as a fine article for the table.—*Live Stock Journal*.

SCURVY.—A correspondent informs us that he finds buttermilk to be an almost unfailing cure for scurvy in hogs. To prove the fact, among other cases which have come under his notice, he says he owns several pigs which, a few weeks since, were suffering terribly from the effects of the disease, and that a speedy cure was effected by merely pouring the buttermilk over them a few times in pen. Readers will do well to remember this simple remedy.—*Colorado Agriculturist*.

AN INQUIRY.—EDITORS PRESS:—Can any reader tell me of any ready method of curing "inflammation of the lungs" in hogs? Youatt gives an accurate account of the disease, and prescribes purges, bleeding in the palate and the subsequent use of digitalis, etc.; but it is more than can easily be done. I have lost 11 head out of 50 head. The disease is very contagious and fatal. EDWARD BERWICK.

THE FLOWER GARDEN.

Fish Geraniums.

Those of our readers who are in the back country have little idea how the old race of fish geraniums, as they are called, have been improved. Even the name has been blotted out. They are geraniums no more. In most of the leaves there is a black zone, or, as we old folks used to say, a horse-shoe mark, and these old-time plants are now Zonale Pelargoniums.

At the time we referred to, the little bright scarlet flowers and the dark green leaves were about all we had of the real old fish; now there is no end to the colors of both flowers and leaves; and they are of many forms, and some are double as well as single. Blue ones are, however, yet a desideratum, and though some have been named yellow we cannot see it. After the scarlets, we remember, came bright pinks, and then white, and after this various shades of these all in the one flower. About four years ago the French gave us double ones, and now we have double scarlet, double rose and double white.

A remarkable advance has been made in what are known as tricolors. These have the leaves with the old horse-shoe of the usual dark shade, but margined by crimson or white on the usual green ground. Sometimes, however, the edge is white or silvery, and at others a yellowish instead of a green tint.

The same rule, however, seems to hold good with these improvements as we often find in human progress. With refinement seems to come effeminacy, and these advanced forms are very sensitive as to how they are treated, either in the greenhouse or the open air.

The strong old-fashioned kind in many cases give the most satisfaction, either as window-bloomers or for making a display in the open air—at least those kinds which in the most degree resemble them are deemed the best. For instance, the silver-edged and the tricolors are said not to do much good in the sun, and the double ones, though they grow somewhat rank, seldom give half the heads of blossoms that the single ones do. Again, many of the single ones which charm us so when we go to the florist's greenhouses to buy in the spring, are of little account when they have to run the gauntlet of a hot summer's sun. Indeed, so well is this recognized now by the florists themselves, that to be "a good bedder," as we see by their catalogues, has come to be a special and honorably distinctive character.

Still there is no evil without its charm. We have lost in a measure some of the old-time hardy character of the old fish geranium in its transformation to a Zonale Pelargonium, but the almost endless variety and beauty make amends for much of the tenderness.—*Germantown Telegraph*.

A NEW FLORAL ORNAMENT.—A writer in *Les Mondes* suggests a new idea for floral decoration. An ordinary earthenware flower pot is filled with water, and allowed to stand until its porous sides are completely soaked. The water is then thrown out and the pot is repeatedly dipped until it will absorb no more, and its outside becomes thoroughly wet. On the outer surface fine seed is thickly sprinkled and allowed to remain sticking thereto. The pot is then refilled with water, and set in the shade under a bell glass. In a short time the seeds will germinate and throw out shoots, so that, to prevent their falling from the sides of the pot, some thread or wires must be repeatedly wound around the exterior of the latter. Eventually the entire vessel will become a mass of living vegetation, which is nourished by the percolation of the water contained within through the porous sides. A non-porous receptacle may also be used, but some thick cloth must be wound about its exterior and the seed sprinkled thereon. This cloth is kept continually moist by repeated applications of fresh water.

COMPOST FOR FLOWERS.—In cleaning off the garden and flower borders, there is more or less of leaves, litter, etc., that must be disposed of in some way. Take it and make the basis for a compost heap for the winter; empty all the coal and wood ashes of the house over it, as they accumulate from time to time; save all the bones and refuse of the kitchen, and all the greasy dishwater, and the chamber-lye, and add them daily to the heap. Gather, if you can, from the blacksmith-shop or elsewhere, iron filings or scales from the hammering of heated or rusty iron, the parings of horse hoofs and, with a little of sharp, sandy soil, add them to the heap. This, well mixed, in the spring, will form one of the cheapest fertilizers for all kinds of flowers in the open border.—*Horticulturist*.

TRAINING PETUNIAS.—A writer in the *London Garden* says that a fine effect is obtained by this method of training petunias: He procures a number of hazel rods, each about two feet long, bends them like hoops, and drives both ends into the bed, placing them at suitable intervals all over it. On these he ties and trims his petunias, which blossom more abundantly than usual under this treatment. Petunias have been successfully treated as if sweet pea vines, and trained on a slanting trellis. The trailing habit of this plant, especially late in the season, is not always sufficiently considered.

A new geranium, the Pride of Mount Hope, is announced and highly spoken of.

THE VINEYARD.

Training the Grape.

Following are some hints on grape culture offered by the *Home Journal*, of New Orleans, which may prove of service to our California readers, although given in view of the special peculiarities of Louisiana:

Perhaps the most essential element to success in grape culture is the proper mode of pruning and training the vine. The soil, location and aspect may be all right; the varieties may be such as are exactly adapted to our peculiar climatic conditions, and yet if some intelligent system of training is not adopted and the pruning not done in accordance with the requirements of such system, we need not expect permanently healthy vines or remunerative crops. It is of the very first importance to know, therefore, when we plant a vine how we are going to manage it.

Our first lessons in grape culture came from the old world, where they cultivate an entirely distinct species of grape, and one which, from long culture under a universal *procrustean* system of pruning and training, has become pretty well reconciled to its stubbing in treatment. It was very natural that our early cultivators should follow the examples and instructions given them by the great lights of European grape culture, without investigating too critically the difference in species, habits, soils and climates that existed between the two countries.

Our native species of the great *vitis* family, great in importance if not in numbers, prove refractory under the severe pruning to which the European grape patiently submits, and fail, when thus treated, to yield its cultivator those permanent incomes which are the legitimate expectations of every commercial fruit grower. Our grapes require a longer training, more room, and with this condition must be coupled that other one of frequent renewals. Good strong vines of one or, at most, two years old should alone be planted and these should be set four feet apart in six feet rows. This distance will fulfil all the conditions of both systems and will give greater amount of crop than can be secured by setting the vines in wider rows or further apart in the row.

We will suppose that strong one-year-old vines are to be planted. These should be cut back to two or three stout eyes, so that when planted about six inches of the cane shall be above ground. Suffer two eyes to push, generally the two upper ones, rubbing out all growth below them as soon as it manifests itself, and pinch the end of the weakest of the two shoots as soon as it has reached six or eight inches in length. Train the other shoot to a six feet stake driven one foot in the ground, and when this growing cane has reached the top of the stalk, pinch it also and cut out entirely the weak cane that was pinched before. The vine will need no further care as to pruning or training the first year. In January, before the sap begins to circulate, cut the cane down to within two or three good eyes of the last cutting and train up this year two canes, rubbing off all other growth and pinching out any laterals that may appear on the growing canes.

When these canes have reached the top of the stake pinch them as before directed. If properly managed these canes will be of nearly equal strength and will correspond laterally with the direction of the rows. At the pruning in January, cut back the left hand cane, as you face the row, to two strong eyes, leaving about four to six inches of spur according to the growth of variety. The other cane should be cut back from three to five feet, according to its strength. This is to be the bearing cane for the ensuing or third year. A stake two and a half or three feet long should be driven firmly into the ground, one foot to the right of the vine, the middle of the long cane tied to it loosely in two places some six inches apart and then the top brought over and tied, with the top down, to the long stake, forming almost a complete circle. From the "spur" two new canes are to be trained up the long stake, to be treated next year precisely as directed for the two third year canes, except that the fourth year the new bearing cane is to be trained to a short stake upon the left of the vine. The bearing cane of the third year is to remain another year, having its bearing side-shoots cut back to three eyes. This will give for each year after the third two bearing canes, one one year old and one two years old, and two growing canes for future training as "spur" and "bow." In January the two years old bearing cane is to be cut entirely away.

GRAPES AND THEIR CULTURE.—It is surprising that so many families in the country are willing to live year after year without cultivating a single grape vine about their dwellings. They are compelled to purchase this delicious fruit for the table or not taste it during the season. There is a common impression that to cultivate grapes perfectly, a vast amount of knowledge and tact is required. To many the simple trimming of a vine is a mystery. This is an erroneous view and ought not to prevail. Any person of common intelligence can learn in an hour how to trim and nourish vines; and if instruction cannot be obtained from some experienced cultivator, there are books filled with cuts and illustrations which make everything plain.—*Science of Health*.

MISCELLANEOUS.

Gold Hill and Virginia City.

Virginia City and Gold Hill, whose unification is now well nigh completed, constitute, taken together, one of the most remarkable boroughs to be found anywhere on the continent. The many novel sights to be witnessed on the streets and thoroughfares of our cosmopolitan abiding place are a never-failing source of wonderment to the chance visitor. The lengthy procession of quartz teams, consisting of from 12 to 18 animals each, driven by a single muleteer, wending their way to the music of bells from the mines to the mills, with their heavy loads; the moon-eyed Celestials, hawking wood about the streets by the donkey-back load; Indian mahales, strolling along with their papposes closely ensconced in willow baskets of ancient style of manufacture; next, a Broadway "bns" or a "prairie schooner;" then great crowds of miners, hurrying to their work, armed with well-filled dinner-buckets and dangerous-looking candlesticks—all these sights, and many others which we have no time to enumerate, constitute objects of interest to a tourist. Ours, too, is a busy community. Day and night, week-days and Sundays, the noise from hoisting-works and quartz-mills is heard perpetually; while over the somber-looking city hovers the smoke and steam generated by huge furnaces required to move machinery of herculean proportions. Creeping up the steep grade leading to our mountain home are to be seen trains of cars, constantly arriving. From the summit of the Sierras, water, distilled from snow, is brought to our midst across a valley and up a steep mountain, a distance of 30 miles, by means of an inverted mammoth siphon. Everywhere about us are to be seen traces of a heroic conflict of man with nature—roads built in apparently impassable localities, mountains removed, and millions upon millions of treasure wrested from the bowels of the earth. Virginia and Gold Hill can boast a cosmopolitan population. In the mines, along the sidewalks, and in places of public resort, are to be found, indulging in Babylonish jargon, representatives of all nations. The shadows from Mount Davidson at evening rest upon a queenly city, a more prosperous one than which, considering its size, is not to be found elsewhere in the Union.—*Gold Hill News*.

CO-OPERATIVE SHIP-BUILDING TO BE TESTED.—The *Vallejo Chronicle* details the following as the result of the movement to commence ship-building by co-operation in Vallejo: This morning ten or twelve of our best mechanics met together to discuss the proposition of forming an association to build a vessel. The matter was thoroughly canvassed, and the most feasible means of carrying out the enterprise well considered. The universal opinion was that it was eminently practicable; and the determination was made to form an organization and commence work. The system of operation agreed upon is as follows: The association will be composed of about a dozen of the best workmen, who will assume all the responsibilities, and be the real builders of the vessel. These men will, of course, stick by the work of construction until the vessel is built, whatever may occur. This association will, however, employ such other workmen as the necessities of the work may require; the workmen thus employed agreeing to wait for their pay until the vessel has been sold. The assurance was conveyed to those present at the meeting that there were business men here who would furnish all the materials necessary for a vessel and wait until its sale for their money. The description of the vessel to be built was fully discussed; some favoring the construction of a ship, so great was their confidence in the success of the enterprise. The general disposition, however, seemed to favor the construction of an outside schooner of about 300 tons burden. As the present enterprise is a trial experiment, the latter design seems to be a trial well as safest. An agreement was then drawn up by those present, setting forth that the subscribers would build a vessel at Vallejo, the character and dimensions thereof to be hereafter decided. The members are now engaged in inspecting the beach to determine the best location for the construction of the contemplated vessel.

IMPROVED MACHINE FOR ASSORTING POTATOES.—This machine consists of long rollers, a hopper, assorting board, and grading chutes, so combined and arranged that, the potatoes being shoveled into the hopper at one end and caused to run along the assorting board and the rollers, the smaller potatoes will escape between the roller and assorting board, while the larger ones will be discharged at the end. The distance between the roller or rollers and the assorting board increases from the head toward the tail, and the potatoes escape through the space, varying in size in the same measure, so that they can be separated into two or more grades by suitable partitions in receptacles below. The assorting board is adjustable toward and from the roller, so as to change the grade at will.

PROFESSOR DONDERS shows that the time occupied in the transmission of a sensation through the eye to the brain, the formation of a judgment, and the transmission of a volition from brain to hand is .15 of a second; but when the ear is the receiving organ the time required is only .09 of a second.

GRANOS AND GRAIN SACKS.—At a late meeting of Antelope Grange, Yolo county, the sack question came up, and that Grange voted unanimously to endorse the action of the State Executive Committee in relation to grain sacks.

Grange Convention.

Pursuant to a special call, issued by the Executive Committee, the various Granges throughout the State of California elected delegates to a convention, which met in this city on Tuesday of last week, for the purpose of establishing a Grangers' bank, and devising other plans and systems whereby the Patrons of Husbandry may be enabled to more fully carry out the objects of the Order. The convention remained in session three days. The business accomplished was considerable and important. We give below a brief synopsis of whatever is proper to spread before the public. A full report of the proceedings has been published in pamphlet form for distribution among the various Granges.

The Organization.

The Convention was called to order by J. C. Merryfield, who was elected temporary Chairman; W. H. Baxter being elected temporary Secretary, and T. H. Merry, Assistant.

The permanent organization was effected as follows: G. W. Colby, Master; R. C. Haile, Overseer; J. Walter Ward, Secretary; J. R. Helron, Ass't Secretary; J. W. Clark, Steward; J. D. Fowler, Ass't Steward; J. D. Gardner, Chaplain; E. M. Carr, Gate Keeper; Cyrus Cutter, Ass't Gate Keeper.

One hundred and thirty-one Granges were represented by two hundred delegates. Fifty-one Granges were not represented.

Introductory to the main business for which the Convention had assembled, and after a full discussion of the matter, it was

RESOLVED—That a general system of banks and warehouses, with a central bank in San Francisco, is an absolute necessity for the future success of the Order.

A Committee of seven was appointed to prepare a plan of organization, which subsequently reported the following:

Prospectus of the "Grangers' Bank of California."

The "Grangers' Bank of California" is organized under the statute of 1872, known as the Civil Code. Its capital stock is fixed at (\$5,000,000) five million of dollars, divided into (\$50,000) fifty thousand shares of the par value of one hundred dollars each.

Its place of business is the city and county of San Francisco, State of California.

This bank has been organized for the purpose of enabling the Patrons of California to secure to themselves such advantages in obtaining money for use in the agricultural portions of the State upon as favorable terms as it can be obtained in the city for commercial purposes. Believing that the bonded security of the agriculturist is equal if not better than city property as a basis of credit, and at the same time giving people of every class an opportunity of safely and properly investing their money.

The opportunity is now offered to Patrons of this State to subscribe to the capital stock of said bank in such sums as they may severally be able to. And it is to be hoped that Patrons throughout the State will embrace this opportunity of making a decided and united effort to employ the means and organization now at their command to put themselves in a position that will insure the desired result, and that shall command the respect of all business men in the land—not allowing the present opportunity to pass without taking hold of this means of emancipating themselves from the embarrassing condition which has heretofore surrounded them.

By the articles of agreement between the original subscribers and the Directors (which is appended hereto), it will be seen that only ten per cent. of the amount subscribed will be called for on the first of July, A. D. 1874; the next assessment being deferred until the first of January, A. D. 1875.

It should furthermore be understood that in case it should be deemed necessary to levy any future assessments, due regard will be had by the Directors to the circumstances of the stockholders, and the time and amount of such assessments will be so fixed as to correspond with these circumstances, so far as may be, and not be oppressive to the stockholder.

The Directors, therefore, respectfully solicit subscriptions to the capital stock, and request all, particularly those interested in agriculture, to transact their business with an institution especially established in the interest of the agricultural community.

In the management of the Bank it is intended by the Directors that the rights of the smaller stockholders shall receive the same consideration and attention at their hands as the larger, and that no action shall be taken by them at any time prejudicial to, or which shall discriminate against the interest of the smaller and in favor of the larger stockholder, it being the intention of the management to conduct the business affairs of the Bank with equal justice to all.

A set of by-laws has been printed and submitted, but not yet adopted. They are so framed as to have all the safeguards, not inconsistent with law, that it is possible for them to have. Still, upon adopting them, as must necessarily be done within thirty days from the date of incorporating, as required by law, any additional safeguard deemed necessary will be incorporated. It is provided in the by-laws that mining stocks are not to be taken as security for money, bonds or stocks. None but Patrons of Husbandry can become stockholders. The following gentlemen have been chosen Directors:

T. McConnell, of Sacramento Co.; Gilbert

W. Colby, of Butte Co.; John G. Hill, of Ventura Co.; John P. Crisman, of Contra Costa Co.; Carlisle S. Albert, Monterey Co.; Jno. V. Webster, of Alameda Co.; Calvin J. Cressey, of Stanislaus Co.; Flavel J. Woodward, of San Joaquin Co.; Justice C. Merryfield, of Solano Co.; Alfred F. Walcott, of San Francisco Co.; John Llewellyn, of Napa Co.

Upwards of \$500,000 has already been subscribed to the capital stock. It was resolved, as the sense of the Convention, that no expense should be incurred for salaries of officers until after \$100,000 shall have actually been paid in by the stockholders.

Special Notice.

Patrons of California, let earnest zeal be the test of your manhood, and show to the world that once having put our hand to the plow, we shall never look back; thus proving that we are not only men who mean business, but that we are true Patrons.

The blanks for obtaining subscriptions to the capital stock should be returned to W. H. Baxter, Secretary of the State Grange, 320 California street, San Francisco.

A General Warehousing System.

The Committee on Warehousing reported a plan for the establishment throughout the State of warehouse or storage companies, under corporate names, and that such companies offer facilities for storing grain and other produce. This report also embraces a plan for the establishment, in this city, of a warehouse or general depot for the sale of all the various products of the Patrons of California, to be conducted under such regulations as the Executive Committee may establish.

Shipping in Bulk.

In relation to this matter it was RESOLVED, That this Convention endorses the proposition to change the system of handling and shipping grain in sacks, now in operation in this State, to a system of handling in bulk.

RESOLVED, That from this day on, as farmers and producers of wheat and other produce in California, will work for the change of system above referred to.

The entire proceedings were conducted with the utmost harmony and good feeling, and before adjourning the Convention passed a vote of thanks for the able and efficient manner in which the officers had discharged the various duties assigned to them.

The Centennial Celebration.

Among the matters discussed and acted upon was the Centennial Exposition. The farmers represented in this body, by their action, have shown that they desire to make this Exposition a success, that all the industries of each and every State should be fully represented, and with that view, have already appointed a committee who will soon enter upon the work of preparation of gathering not only valuable information relating to the industries of our State, but also to see that a grand show is made of California productions.

The following resolutions on the above subject were introduced by Bro. Baxter:

RESOLVED, First: That it is the sense of this Convention that the State Grange of California take steps for a creditable exhibition of the industries of the State at the Centennial Exhibition, to be held in Philadelphia, to open April, 1876.

RESOLVED, Second: That the Executive Committee of the State Grange be requested to appoint, as soon as practicable, a Committee of five, to carry out the above resolutions, in accordance with the recommendation of the National Grange, at its session recently held at St. Louis.

San Francisco Mechanics' Fair.

The following resolution in relation to the coming Mechanics' Fair in this city, was also adopted:

RESOLVED: That in the opinion of this Convention, the Patrons of this State should take an active part in the Mechanics' Fair to be held in the city of San Francisco in August next, ensuing.

THE GRANGE AS AN EDUCATOR.—One of the most marked advantages resulting from the Grange movement is the change which it is effecting in the minds of agricultural communities, with regard to the importance of a better education among farmers as a class. Intelligent farmers are more and more coming to see the disadvantages under which they have heretofore labored in this respect, and the importance of more thoroughly educating their sons. Since farmers have begun to throw off their dependence upon middlemen, as a separate class, and undertaken to do their business themselves, they have seen the importance of being more thoroughly versed in the knowledge of business matters. They see the necessity for a more intimate acquaintance with books and newspapers, as much, at least, as that possessed by ordinary professionals, manufacturers, tradesmen, etc. The great fact that "knowledge is power," is being brought home to them. Farmers can seize this power if they will, and use it greatly to their advantage. The Grange should be more and more made a medium for giving knowledge. It can't take the place of books and newspapers entirely; but it can be made to greatly aid them, and by interchange of opinions, fix more firmly in the mind the information gained from other sources. The Grange should be made a literary association and a debating club, as well as a symbolic farm.

STATE GRANGE INCORPORATION.—A bill is before the New York State Legislature for incorporating the State Grange of New York. The bill, which has been favorably reported on, authorizes the incorporators and their successors to hold such amount of real and personal property as the laws of the State permit; the yearly increase of the estate in no case to exceed an annual amount of over \$20,000.

From the Granges.

PLAINSBURG GRANGE, MERCED CO.—Brother T. J. Wilcox, Secretary of this Grange, writes, under date of April 25th, as follows: "We are going slow and trying to do our work right. Our officers were installed on the 12th of April, and we shall finish up a class of nine on next Saturday, and start a new class of several immediately thereafter. This, you will conclude, is not going very slow; but in the weightier matters of the law we aim to go slow. We are in the midst of one of the finest wheat-growing sections of the State; our crop prospects are extremely flattering. Major J. L. Strong is planting 400 acres in cotton, 1½ miles above Harrisburg, on Mariposa creek. He certainly deserves success for his energy and enterprise in endeavoring to introduce the cultivation of cotton on this Coast; but as he has fully written up the cotton question in several papers on this Coast, I will say no more on the subject."

ANTELOPE GRANGE, YOLO CO.—Z. J. Brown, Chaplain of this Grange, writes as follows: "On Thursday, the 16th of April, Antelope Grange enjoyed a Harvest Feast, after duly earning the same by conferring the fourth degree on a class of thirty-four new members; we now number 80 in all. This Grange was organized last fall, and this was our fourth Harvest Feast. Over 100 members and invited guests sat down at the tables, at which the utmost good feeling prevailed. I think our Grange can scarcely be excelled for harmony and earnestness. A week or two ago a sufficient amount of money was raised with which to purchase an organ, with which to add to the interest and zest of our meetings."

KELSEYVILLE GRANGE, LAKE CO.—Bro. T. Ormiston, Secretary of this Grange, writes: "Our Grange is prospering finely. We now number 62 and have a class of 6 advancing. We join with Lakeport Grange on the 1st of May in a picnic at this place." We should be exceedingly happy to accept the kind invitation extended to visit the Granges in that section and may do so some time during the summer. The Kelseyville Grange has passed resolutions in sympathy with the Dixon Grange, in relation to patronizing the repudiating sewing machine agencies.

BONITA GRANGE, STANISLAUS COUNTY, held its second harvest feast April 11th, after conferring the fourth degree—six members. Another class was commenced on the 18th. The Grange at that locality is getting to be decidedly popular, and many are knocking for admission.

ANTIOCH GRANGE is gaining steadily. Three have just been taken through the fourth degree, and a class of ten others started. Applications are coming in at every meeting.

TABLE BLUFF GRANGE, HUMBOLDT COUNTY is reported to be progressing finely, and in the most perfect harmony. They have a class of fifteen now under way.

SATACOV GRANGE, VENTURA COUNTY, is progressing in a manner most satisfactory for one so young. Nineteen were initiated on the 4th ultimo.

SANTA BARBARA GRANGE is reported as making good progress, especially in view of the present busy season for farmers.

ROCKVILLE GRANGE, SOLANO COUNTY, is moving along finely. Eight new members were initiated at a late meeting.

HAYWOOD GRANGE.—Another pleasant and bountiful harvest feast was held at Haywood last Saturday. The County Council adjourned about 1 P. M., and joined with Haywood Grange and guests from other Granges in Alameda county, in conferring the degrees of Matron upon two sisters and of Husbandman on ten brothers. Haywood Grange has a large number of good members and is now a strong organization. Quite a number of new applications for membership were received. It was a real pleasure to meet with so good an attendance and note the prosperity of our neighbors in the Order.

ALAMEDA COUNTY COUNCIL.—The Council met at Haywood, April 25th., Dr. E. S. Carr in the chair. The following officers were elected to serve until March, 1875: Joel Russell, Haywood, M.; J. O. Webster, Brooklyn, O.; James Shinn, Centerville, C.; S. E. Osgood, Centerville, S.; E. M. Carr, Suñol, A. S.; G. C. Baxter, Haywood, G. K.; E. M. Carr, Daniel Inman and J. Overacker, Trustees. The meeting was well attended, and much interest manifested in the business on hand.

CELEBRATION AT SNELLING.—The Snelling Grange, Merced county, are to have a grand celebration to-day. The *Argus* says: A general invitation is extended to the people of the surrounding country to attend and take part in the exercises. There will be an oration by the State Lecturer, J. W. A. Wright, a picnic, exercises by several schools in the neighborhood, and a ball in the evening. The large town hall will be made ready for those who delight to "trip the light fantastic," and a supper suited to the occasion will be served at the Galt House. Already we hear numbers of our citizens expressing the determination to attend, and we have no doubt but there will be the largest assemblage on that occasion that has ever taken place at Snelling.

SOMEBODY says that William Wright, Secretary of Little Lake Grange, Mendocino county, is probably the best penman in California.

HEALDSBURG GRANGE.—The following preamble and resolutions were adopted by Healdsburg Grange, No. 18, P. of H., April 25th:

WHEREAS, The Executive Committee of the California State Grange has been in session recently in San Francisco, from which our Delegates report, therefore

Resolved, That we have just cause for congratulation, and that we most heartily approve the progress they have made for the good of our Order.

Resolved, That we will use our utmost endeavors to carry out the plans proposed by that body, while in session.

Resolved, That a copy of these resolutions be sent by the Secretary to the *Russian River Flag* and the *PACIFIC RURAL PRESS* for publication.

SARAH A. PECK, Secretary.

A GRANGE CAKE.—An eastern cotemporary is enthusiastic over a harvest feast which he recently attended, where, among conspicuous displays on the table, was a huge "Grange cake," ornamented with plows, rakes, hoes, etc., all done up in elegant confectionery. It was crowned with a bouquet of wheat, oats and rye, while over all was displayed the motto, "Divided we Fall." This is rather a more elaborate piece of nicety than farmers this way can generally afford to serve up, even on special occasions. Moreover it might be well to caution Patrons against too much extravagance in this direction. We think it much better that our harvest feasts should be plain and simple rather than rich and extravagant.

BE BROTHERS INDEED.—Call not your neighbor and fellow Patron, *Brother*, unless you are ready to meet him as a brother in fact. Let not the generous and gentle terms that your Order renders it your duty to use in your intercourse with your friends, be words of mere mockery—words without meaning. Be true to your words and your professions and thus make the people who are not of your Order admire it—admire and love you.—*Ex.*

IN THE GRANGE.—While religious—that is to say sectarian—topics are, as they should be, excluded from discussion in the Order, the Grange will ever be found ready to espouse any movement that tends to make people happier and better. The Grange should also keep free from all party entanglements, and certainly if true to itself will keep out of all church controversies.

THE MINNESOTA PATRONS are making a move to reduce all their wheat to flour before shipping. The idea is good one. For thus only can the State get credit for the superior grade of her product, and thus, too, will the bran and shorts be kept in the country where they are needed. We commend the suggestion to the Grangers of this coast.

A GRANGE, exclusively composed of colored Patrons, has been formed at Knightstown, Henry county, Ind.

POSTPONED.—The picnic celebration proposed by the Kelseyville Grange has been postponed to the 16th of May.

A VALUABLE MINERAL SPRING.—The *West Coast Star*, of Mendocino City, reports the discovery of a mineral spring, near Little Lake, which is thought to possess valuable medicinal qualities. It is claimed that important benefits have already been derived from the use of its waters, in several cases of chronic diseases, skin diseases, bilious cramps, neuralgia, dyspepsia, etc. The spring is owned by Mr. H. L. Norton, who is about to erect buildings for the accommodation of visitors and invalids, and such as with its natural attractions will make it a desirable watering place. Dr. L. Lanzweert has furnished the following report on a sample of the water sent him for analysis.

The water contains 99.28 grains of solid matter to the gallon, consisting of Chloride of sodium, 62.00; borate of soda, 11.76; carbonate of lime, 7.20; carbonate of iron, 2.08; silica, alumina, 2.64; organic matter, traces; free boric acid, 10.00.

A BIT OF ADVICE.—A lady correspondent, who evidently cares more for the flavor of canned fruit than for its appearance, makes the following suggestions, which we commend, as she requests, to the consideration of fruit-packers: "There is no earthly reason why I should not make a suggestion to you, Mr. Editor, as it will be in your line to do so; and that is, to ask the canners of peaches what kind of an idea it would be for them to put two or three pits in each can, that they might retain a little of the flavor of peaches, instead of the tasteless things they are; especially the finer kinds? To have the pits left in is the beauty of plums; and why not of peaches? It is the old-fashioned way of preserving them; we always used to do so."

NEW FEEDING MACHINE.—We have just received one of Forsaith's paper folding machines, for use in folding this and other journals printed at our office. We expect to get it in operation soon, and hereafter give our patrons a better folded sheet than it is practicable to furnish by hand folding.

CINCHONA TREES.—A. D. Pryall, of Oakland, has received from the Agricultural Bureau, at Washington, a number of these trees in fine growing order. He also received specimens of New Zealand flax.



White Lies.

"Why are you wand'ring here, I pray?"
An old man asked a maid one day.
"Looking for poppies so bright and red,
Father," said she, "I'm hither led."
"Fie, fie!" she heard him cry,
"Poppies 'tis known, to all who rove,
Grow in the field, and not in the grove."

"Tell me," again the old man said,
"Why are you loit'ring here, fair maid?"
"The nightingales so sweet and clear,
Father," said she, "I'm come to hear."
"Fie, fie!" she heard him cry,
"Nightingales all, so people say,
Warble by night, and not by day."

The sage looked grave, the maiden shy,
When Lubin jump'd over the stile hard by;
The sage looked graver, the maid more glum,
Lubin he twiddled his finger and thumb;
"Fie, fie!" was the old man's cry,
"Poppies like these I own are rare,
And of such nightingale songs beware."

An Orchardist's Views on Eve's Apple.

EDITORS PRESS:—In the RURAL PRESS of April 11th, "Adamite" is very severe on Mr. Darwin and the Evolutionists. He evidently puts no credence in the proposition that we all sprang from the "tittlebats," and would take no stock in a company founded for the evolution of average specimens of the genus *Homo* from the spawn of those delightful little creatures.

I don't propose to enter into a discussion with "Adamite" as to those hundreds of anatomical differences in the various races of mankind. I can see sufficient divergence in form and feature, constitution and character among members of my own family, to induce me to believe in some evolution. Neither do I wish to consider man's evolution from his pristine condition of hunter and fighter to his present condition of money-grubber and practicer of "commercial morality."

I propose to consider him in the relationship assigned to him by that Greek poet whom St. Paul quoted, of

"God's Offspring."

I don't know the exact amount of incredulity necessary to induce our great grandmothers to perform that often mentioned, but rarely witnessed feat of "turning in their graves," but I have a notion that the suspicion that their descendants discredited the belief that the earth was made in six days, each of twenty-four hours' duration, would make most of them uneasy. Yet I presume that every thinking person now-a-days willingly concedes to geology, those thousands of thousands of years, which, though passing our powers of thought, are to the Lord "but as one day;" and, I doubt not, the concession is made without the loss of one particle of real trust in God.

The fact is, we are all too apt to disregard that Scriptural warning which admonishes us that "the letter killeth, but the spirit giveth life."

The fact is, we are all too apt to disregard that scriptural warning which admonishes us that "the letter killeth, but the spirit giveth life."

It was our Lord's habit to speak to his disciples entirely in parables. Man must reason from things visible to things invisible—from the known to the unknown. I look upon the first few chapters in Genesis as allegorical; as setting forth in a tangible shape the separation of humanity from Divinity. It is a long, long story, but possibly, from the tremendous issues involved, some may think it at least as interesting as a discussion on the merits of crops and stocks.

"Adamite" quotes an opinion that discoveries in ethnology, etc., make men infidels. Truly those who do not wish to believe, and who care "for none of these things," are easily made infidels. Possibly some are staggered by such an apparent contradiction as this: that man was made in God's image, and yet Christ affirmed that a spirit had not flesh and bones as He had. We hardly give ourselves time to consider what God's image is.

Is the principal part of man the body, or the will directing and controlling the body? Man, considered as an intelligent being, is will having power, calling that good which accords with his will, and that evil which resists or is contrary to his will. Thus from will having power proceeds knowledge of good and evil.

This is precisely what the Scriptures inform us to be the nature of the Divine Trinity. From the Supreme Will (the Father) manifesting itself in Power (the word by whom all things were made), proceeds the Spirit of Knowledge and Truth. This, to me, is the image of God in which man is made. In the account of the Creation, Adam is described as having everything, (of all the trees of the Garden, even of the tree of eternal life, he might freely eat), but as having no will apart from God's will, as being in fact one with God, and unconscious of his own existence, as an unborn child. The forbidden fruit was self-

will. He might not eat of the fruit of the tree of knowledge.

Obviously he could have no exercise of will apart from God's will without incurring the inevitable penalty of death. It was no arbitrary law that God made about the eating of an apple.

God does not set traps to catch men. The first exercise of self-will contradicted God's will, separating Adam from God, and manifesting him mortal. Nothing otherwise could have happened short of there being two Omnipotents, which is an absurdity.

I will not prolong this contribution to the Home Circle, or I may be wearisome. Perhaps I should apologise for calling myself an orchardist. My modest 150 trees, mostly just set out, put in their claim to be called an orchard on the principle of the following story:

Some organist had just finished playing a grand voluntary, when the half-witted lad who had been "blowing" the organ looked round the corner, asking, "Didn't we play that well?" "We, you impudent fellow! What do you mean by 'we'?" During the next performance the organ's thunder tones came to a dead stop, to the dismay of the enraged performer, who, seeing his "sub's" head again round that corner, made desperate signs to him to resume his "blowing." "Shall it be 'we,' then?" was the pertinent rejoinder of the despised "sub." And, of course, "we" it was.

So, though my share in the California orchardist's performances is a humble one, I may still claim to be of the "we" of the orchardists. EDWARD BERWICK. Carmel Valley, April 16, 1874.

A Bit of Romance.

The lives of the pioneers in the remote mining districts of California were generally devoid of romance or excitement, save that witnessed at the gaming tables, and to relieve the monotony of mountain life they frequently passed a few months in "Frisco" (San Francisco), or sojourned for a season with the Web-feet, otherwise known as Oregonians. Mr. Charles Bradbury, of Indian Town, Northern California, had been quite fortunate in mining, and as winter was approaching when little could be done in his claim, he left it in care of his partners and set out to visit a relative who resided in the Willamette valley some three hundred miles distant. A party had been made up to cross the Siskiyou, on the summit of which the snow already lay deep. This, it was understood, would be the last party which would undertake the passage of the mountains before they should be closed for the winter.

Near the time of starting they were joined by a young man named Alfred Boise, whose parents resided in Oregon. He had recently been suffering from indisposition and was cautioned not to undertake the trip, which was sufficiently arduous even for the most vigorous; but his anxiety overcame his prudence and he set out with the others. Before the summit was reached he became quite exhausted, and had it not been for the kindly assistance of Bradbury he must have perished. From this occurrence they became warm friends, and at young Boise's urgent solicitation Bradbury accompanied him to his home near the head waters of the Umpqua, where he was cordially welcomed by the family. A sister of his friend, named Adaliza, was a charming girl of seventeen or eighteen summers, and at once won the admiration of the susceptible Californian. His stay was lengthened from the few days which he at first purposed remaining, to several weeks. Not wishing, however, to prolong his visit to a visitation, he bade his new found friends a reluctant adieu and continued on his way to the Willamette. Here he purchased a fine horse, and not unfrequently tested his speed with that of the best horses in the neighborhood, and always to his entire satisfaction.

Bradbury remained a few weeks with his relatives, but the spirit of unrest possessed him, and he soon turned his face southward, urging as an excuse that his business at Indian Town demanded his presence. His business, however, was not so pressing but that he turned aside to halt awhile at the ranch of his new friends, the Boises. His admiration for the fair Adaliza had deepened to the tender passion, and this fact he was not slow to declare. But she replied:

"You Californians like nothing better than to come here and make love to us Web-foot girls, and when you have won our hearts you go off to your cabins and your claims and never come back."

"But," said Bradbury, "I will marry you before I go back, and when I have provided a home for you, you shall come to me, or I will come after you."

But she would give him no direct answer, but remained on very friendly terms with him, and they often rode together to the neighboring village and to other points about the valley.

One day they were slowly riding toward home, and Bradbury was urging his suit, and pleading for an answer to end his suspense. They were nearly a mile from the ranch, near which grew two large live oak trees, standing very near each other. Said Adaliza:

"If you will pass those twin live oaks before I do, I will go with you to California some day."

Bradbury prided himself upon his horsemanship, and accepted the challenge with a wave of the hand and a laconic, "I'm your man!" dashed spurs into his steed and sped like an antelope over the plain. The girl was taken by surprise at his sudden movement, but gave her horse the word, and he too "stretched neck and stretched nerve till the hollow earth rang." It has already been intimated that Bradbury was well mounted; his companion was no less so, and they rode on as only those can ride who are at home in the saddle.

Bradbury's sudden movement had given him the advantage by a few rods, but he soon realized that it would be no easy matter to maintain it. The girl was urging her horse by whip and voice, and having been the winner in many a hotly contested race, he bent to his work in true race horse style, "reaching long, breathing loud like a creviced wind blows."

Little more than one-half the distance was passed, when Bradbury became aware that his competitor was pressing hard upon his flank, and he knew that his weight was beginning to tell on the noble beast, which seemed to realize the value of the stakes for which he ran. For a quarter of a mile he held his own; Miss Boise, however, coming once or twice very near, but not maintaining her position at Bradbury's side. The goal was almost reached and he was confident of victory. But he had not counted on his opponent's skill as a race-rider. She had restrained her horse for the final dash, and now came on with a burst of speed that placed her fairly at Bradbury's side and seemed sure to give her the victory. Indeed, the victory seemed already hers, for with long and steady leaps her horse was sweeping past at the moment they were to pass the goal. At this period, however, the fore feet of Bradbury's horse went down in the burrow of a gopher, he stumbled upon his knees, the girth parted and Bradbury went over the horse's head and into the air like a rocket, landing beyond the goal and a yard or two ahead of his fair competitor. Striking upon the mellow earth he performed a series of evolutions, but regained his feet with no injury save a pretty severe shock from the abrupt manner of dismounting.

He had sufficient presence of mind to exclaim with his first breath: "I believe you're mine!" while Adaliza, reining in her steed with a steady hand, sprang lightly to the ground, and in a moment was at his side anxiously inquiring if he were hurt. His horse regained his feet and stood near with a sheepish expression, as though he were the veriest culprit on earth.

Bradbury found himself able to walk, and before he and his companion reached the house she had promised that when Christmas should come again she would become his wife, and go with him to his mountain home. And so it was settled that at that time he should come for her. With this understanding he again clasped hands in parting, and set out for his home in the Siskiyou. He found his partners eagerly awaiting his return, and all were soon busy with pick, shovel and hydraulic.

As autumn approached and the water in the creek became too low for mining purposes, Bradbury set about erecting a house somewhat more pretentious than the limited quarters occupied by himself and partners.

A pleasant site near the town was selected, and though the house was far from being an elegant or imposing structure, it was neat and comfortable, and far superior to a majority of the homes of pioneers.

Not long after he left Boise's, a young drover from Southern Oregon called at the ranch, and stopping for a day or two became quite enamored of the fair Adaliza. His attentions were not received with favor, but he persisted, and at the first opportunity proposed.

The girl frankly told him that she was affianced, and that her lover was in California. Of this he was already aware,

but had feigned ignorance. He laughed at the idea of her trusting to a miner from the mountains, saying they were like the sailors, and made love for pastime.

After some time, becoming wearied with his importunities, she told him that if Bradbury did not return by the appointed time she would talk with him, but until that time she would have nothing more to say to him on the subject. He then took his departure, not, however, until he had made an arrangement with a friend, who lived near by, to notify him promptly if Bradbury did not return by the twenty-fifth of December.

While engaged in building his house, Bradbury received an injury from a falling timber which disabled him for some weeks, and occasioned some delay in his departure, so that Christmas was already past when he set out. Crossing the mountains he stopped one night at Jacksonville, and then pushed forward as rapidly as possible, for his forced delay had occasioned him no little anxiety. On the second day after leaving Jacksonville he fell in with a traveler, riding like himself on horseback, and in the same direction. This stranger gave him name as Harkman, and after a few hours became communicative. He said that he had become tired of leading a single life and was going down to the Umpqua to change his condition. Bradbury appeared to take but little notice of his remarks, but contrived to keep him talking until he learned that the young lady whom he was going to see had been engaged to "a chap from California," but as he, the Californian, had not appeared at the appointed time, Harkman expected to step in and win the prize with scarcely an effort. They continued to travel in company, and when they came in sight of Boise's ranche, Harkman remarked with much assurance:

"There is the home of the future Mrs. Harkman!"

Bradbury said nothing, and pretended that he was journeying on to Portland or Salem. Harkman, however, invited him to call on his fair Dulcinea, and touching his horse's rein, they rode together to the house. Adaliza was at the door in a moment, and as Bradbury sprang lightly from the saddle she came to his arms as only Oregon girls can and do come to the arms of their lovers. Harkman looked on with surprise, but at length found words to exclaim:

"Enchanted! what a grouse (Oregonian for simpleton) I was not to know it!" He turned his horse's head in the direction whence he came, and no grass could even sprout beneath his horse's feet until he was out of sight.

On New Year's Day there was a wedding at Boise's ranche, and a few weeks later a horseback journey down to the Willamette, and when the early spring had come, and the skies were clear, a longer ride through the flower besprinkled valleys of Oregon, and over the fir and pine clad Siskiyou to the neat cabin at Indian Town.

My friends in that distant mining town tell me that the voices of beautiful, happy children may be daily heard around this unassuming home, but whether they are web-footed, I have never inquired.—[Portland Transcript.]

Trades of Animals.

It has been well remarked by a clever author that bees are geometers. The cells are so constructed as, with the least quantity of material, to have the largest sized spaces and the least possible interstices.

The mole is a meteorologist. The torpedo, the ray and the electric eel are electricians.

Whole tribes of birds are musicians. The beaver is an architect, builder and wood-cutter. He cuts down trees, and erects houses and dams.

The marmot is a civil engineer. He not only builds houses, but constructs aqueducts and drains to keep them dry.

The ant is a soldier, and maintains a regular standing army.

Wasps are paper manufacturers. Caterpillars are silk spinners.

The squirrel is a ferryman. With a chip or a piece of bark for a boat, and his tail for a sail, he crosses a stream.

Dogs, wolves, jackals, and many others, are hunters.

Black bears and herons are fishermen. Ants are day laborers.

Monkeys are rope dancers.

GERRIT SMITH says the dreariest day of his life was when he had to ride fifty miles in a stage coach beside a young man who parted his hair in the center.

SHUN the man whose presence makes it seem easier to do wrong.

THE worst men often give the best advice.

The North Pole the Original Garden of Eden.

Dr. Hardinger thinks that he can give good reasons for his belief that the "grand old gardener and his wife" had their first situation, and lost it, in the region about the North Pole. Several considerations led him to his conclusion. In the first place, the North Pole, hard as it is now to get to it, was originally an easy place to get away from in all directions; from no other could it be so easy, and hence the dispersion of men to all parts of the globe is more readily accounted for. Dr. Hardinger finds, what most other modern archaeologists have not, abundance of evidence of the identical origin of all races of men in language and religious beliefs and rights. The Hebrew Scriptures say, as Hardinger interprets them, that Adam and Eve, after leaving the garden, went to the south-east and dwelt there. In Siberia, therefore, we should expect to find evidences of the earliest residence of an intelligent and cultivated people. Such evidence there is, in the traditions of several Eastern nations, that their ancestors came from the north, and also in ancient remains of implements, burial places and mines worked and abandoned, many years ago. Besides these considerations which make his theory plausible, Dr. Hardinger had others, which he calls theologico-scientific proofs. Accepting the nebular hypothesis, he admits that our earth was at one time an incandescent ball, which only by gradual and other changes became fit for the abode of man. The poles, now the coldest part of the surface, must at first have become habitable, and therefore first inhabited. Moreover, we are told that when Adam was driven out, an angel with a flaming sword was set to guard the gate and prevent his return. The Hebrew word (we trust the doctor for this etymology) for flame or ice is *esh*—which is evidently allied to our word ice. The flaming or icy guarding has ever since barred the way to man's first home.

AMERICAN DREAD OF WATER.—Americans and cats are afraid of wetting their feet. To an observer of animals it is amusing to see pussy cross a wet or muddy street. Standing on the last dry spot, she hesitatingly puts one foot forward on the wet ground and suddenly withdraws it, giving it a quick, nervous shake, and gravely looks at the sole to supplement the testimony of her nerves by the evidence of her eyes, that her foot is really wet. Rendered desperate, however, by the necessity of crossing, she advances, crouching low and taking long steps, as the *felidae* do when stealing on their prey. Once across, she stops and carefully removes every particle of dirt and drop of water from her feet, and goes joyfully on her way to some game preserves which she knows of, where the game is in season before the 12th of August. There is a ludicrous similarity between Americans and the cat in their dread of water. Our boots are made more for show than for comfort; rather as groundwork for somebody's supernatural blacking than for protecting the feet. When it rains we keep within doors, if possible; if we must go out we put on waterproof wrappings and make a rush for the horse cars, feeling ourselves specially favored by Providence if, during our transit, the rain holds up, and we finally reach our destination dry. No cat dreads water more.—*Forney's Chronicle*.

WHAT an excellent practice is becoming common of using note paper with the owner's name and address stamped in blind in one corner, or printed neatly in red ink! Business houses, of course, have long done this, but if people generally knew, what we shall not tell any one of them, that they do not write their names plainly, they would spare their correspondents much painful work at deciphering. It is easy enough often to read the crabbedly written letter of a man whose name can only be guessed at, because there is an association of ideas that helps one in the letter; but a man's name, so precious to himself, is like an arbitrary symbol in many cases.

HONORABLE mention is made of a Maine servant girl who is now serving her eighty-second winter under the same roof. She has washed dishes 89,790 times and comes yet gaily to her task. Blessed old girl!

A MAN left a bony steed on the street, and coming back a short time afterwards, discovered that a funny youth had placed a card against the fleshless ribs bearing notice, "Oats wanted—inquire within."

ONLY one man is recorded as having made a fortune by minding his own business. Heaps of people have made fortunes by minding the public business.

Young Folks' Column.

Strange and Curious Birds.

The Bird of Paradise.

The Birds of Paradise are the most beautiful of the feathered race, and derived their name from the impression produced on the mind of the first beholder, by their glorious plumage. They are found nearly under the Equator, amongst the bright Indian seas, in New Guinea and the neighboring islands. The principal genus is that known as *Paradisæ*. They are found on the tops of the highest trees, living on insects and fruits. Their notes are said to be loud and unpleasant.

The King Bird of Paradise has two long, slender plumes, ending in a curled, flat web of emerald; and the male of the green species has long, flowing plumes at the side of its body, which give it a magnificent appearance. The plumes worn in ladies' head dresses are obtained from these birds, and their skins have been objects of merchandise for centuries. The red-plumed Bird of Paradise has two long filaments curling down the tail like whalebone.

The *Paradisæa Apoda*, the great emerald Paradise Bird, has a bill of a greenish color, whose base is surrounded with close set, velvet-like, black plumes, with a varying luster of golden



The Bird of Paradise.

green. The head, together with the back part of the neck, is of a pale gold color, the throat and fore part of the neck of the richest changeable gold-green, while the remainder of the plumage is of a deep chestnut. save on the breast, which is of a fine, deep purple color. From beneath the wings spring a vast assemblage of extremely long, loose, broad, floating plumes, in some specimens of a bright yellow tint, in others of a paler hue.

In its wild state, this bird flies always with its face to the wind, so that its plumes should not be disarranged, and it is said that it will not suffer the least speck to remain on its beautiful feathers. It was formerly supposed that these birds lived entirely on the wing. In New Guinea, the rare species command from \$200 to \$300. Famed for their wondrous beauty, they have long inspired the poet's pen.

"Bright in the orient realms of morn,
All beauties' richest hues adorn
The Bird of Paradise."

The Swans.

Genus *Cygnus*, are distinguished by their graceful and majestic appearance. Their leading characteristics are the following: the bill is as wide at



The Swan.

the tip as at the base; the nostrils are about the middle of the length of the bill, and the neck is very long; they swim rapidly, and their flight is powerful and long continued; they are gregarious, save at breeding time, when the separate pairs build their nests at a distance from each other. They make these nests on the margin of the water. They generally feed upon seeds, roots, and other portions of aquatic plants that are under water. It is also thought that they live on frogs, insects and worms. Their flesh is not good for food, but the skin, feathers and down are valuable. The American species is, in the adult, pure white, with the bill and legs black; while the young are brown. The Australian species are black. The swan is sometimes said to live for a hundred years. It is also said to sing its own death song. In many countries there are legends of princes and princesses being changed into swans, at the will of the enchanter; and living thus from century to century, to die when they assumed their human form.

We are indebted to the courtesy of Mr. Harry Andrews, manager of Woodward's Gardens, for the above illustrations.

SENATOR SCOTT was talking to a Pennsylvania Sundry-school a Sunday or two ago, and asked the scholars why Simon was kept in prison. One of the teachers quietly prompted a boy to say that it was for a hostage, and the youth, not quite catching the words, piped out: "He was detained for postage."

Good Health.

A Neglected Source of Food.

Ages ago when our forefathers were worshippers of Odin and the rest of the dead divinities of Northern Europe, horse flesh was accounted a delicacy fit for the gods. When a warrior died, the "funeral baked meats" were carved from his slain charger; and in all religious celebrations the horse figured, as the bullock did in the sacrificial feasts of other nations. The horse flesh and paganism were found to be inseparable when the Germanic and Scandinavian tribes were christianized by royal proclamation. The new made christian could not begin a dinner at which his favorite meat appeared without relapsing to his ancestral religion and going through the entire round of pagan rites with which horse flesh had been so long associated. As a natural consequence horse flesh became not only synonymous with paganism, but one of its defenses, we should have said butmarks if the sound had permitted. Against it the bulls of the church were hurled, and its use was prohibited under pain of eternal damnation. Gradually, as christianity gained ascendancy, the obnoxious meat passed out of use, and in process of time it became to be regarded by Europeans as "long pig" was by the christianized descendants of man-eating Fiji islanders, with an abhorrence as intense as the original liking had been.

Subsequent generations have inherited the prejudice and forget its origin. To-day the multitude stand ready "to cry unclean" the moment horse flesh is mentioned as an article of food, though it would puzzle them to give one substantial reason for so regarding it.

The truth is that no meat can be cleaner. The horse is one of the nicest of feeders, and as choice in his drinking as in his diet; and, as has been abundantly proved by the experience of modern Europe, where horse flesh has lately become an important element in the food, snappy, the meat which we reject is at once wholesome, nutritious, and nearly, if not quite, as savory as beef. As we are no longer in danger of relapsing into paganism with the taste of it, the only sanitary reason, moral or otherwise, for avoiding it is done away with.

There remains the economical reason for its disuse arising from the fact that good horses are worth more for other purposes. But the time comes when the best of horses cease to be profitable for service. What then?

Occasionally a favorite animal is provided for in his old age, and allowed to end his days in all the comfort that nature will permit. The majority, however, are turned over to the tender mercies of the cruel to be used up, more or less speedily, in rough and ill-requited labor. To guard their favorites from this unhappy end, it is becoming a common practice among considerate people to shoot their horses when no longer fit for the carriage, though they may still be far from worn out. Of the nine million horses in the United States, a million might fitly be disposed of in that way every year, to make room for younger and more serviceable animals. In other words, our food supply might be augmented by something like a thousand million pounds of good meat annually. We throw it away—for a prejudice.

That this prejudice will be overcome in time, we have not the slightest doubt. The tendency of our civilization is to multiply food consumers while lessening the relative number of producers. As a natural consequence we must be more and more careful to avoid unnecessary waste. Every available source of wholesome food must be husbanded, and this among them. Unfortunately those who would be most directly benefited by the addition of horseflesh to our lists of meats are just those whose prejudice against it is most intense. Here, as in Europe, it must first gain a place on the tables of the well-to-do.

Perhaps as simple a plan as any for effecting this would be the following: We have noticed the growing custom of shooting horses when their term of profitable service has come to an end by age or accident. Instead of burying the carcasses or giving them to the renderer to be converted into soap grease and fertilizers, the flesh might be properly dressed and distributed among those who, from curiosity or conviction of its wholesomeness, might desire to give it a trial. If pains were taken to announce this intention before hand, and to prove to intending eaters that the horses were in good condition and free from disease, there would be little difficulty, we imagine, in disposing of the choicer cuts. All that is required is a beginning, and this course would ensure it with the least amount of trouble and cost.—*Scientific American*.

HOW THE EYE IS SWEEPED AND WASHED.—For us to be able to see objects clearly and distinctly, it is necessary that the eye should be kept clean. For this purpose it is furnished with a little gland, from which flows a watery fluid (tears) which is spread over the eye by the lid, and it is afterwards swept off by it, and run through a hole in the bone to the under surface of the nose, where the warm air passing over it while breathing, evaporates it. It is remarkable that no such gland can be found in the eyes of fish, as the element in which they live answers the same purpose.

If the eye had not been furnished with a liq-

uid to wash it, and a lid to sweep it off, things would appear as they do when you look through a dusty glass. Along the edges of the eyelids there are a great number of little tubes or glands, from which flows an oily substance which spreads over the surface of the skin, and thus prevents the edges from being sore or irritated, and it also helps to keep tears within the lid. There are also six little muscles attached to the eye which enable us to move it in every direction; and when we consider the different motions they are capable of giving to the eye, we cannot but admire the goodness of Him who formed them, and thus saved us the trouble of turning our heads every time we wish to view an object.—*Ex.*

Torturing the Human Foot.

Science, in its comprehensive range of subjects, has at last condescended to direct attention to promoting the comfort of the human foot—to pointing out the deformities of the shoes we wear. Mechanical ingenuity has exhausted itself in the construction of machines which turn out shoes automatically, their whole object being rapidity of production after rigid models, to which the foot is compelled by painful experience to conform itself, corns and bunions to the contrary notwithstanding. Civilized communities wear the worst-fitting shoes and suffer the most from them. The Indian undergoes no suffering from his loosely made moccasins, nor does the Oriental cultivate corns in his sandals. But the hard, rigid, tight-fitting shoe of the European and American has, from time immemorial, held its place as an instrument of torture. Yet, when compared with the shoes in use a century ago, those of modern manufacture when made by hand do give evidence of some amelioration, though the best of them are still deficient in what the comfort of the foot requires. Dr. Hermann Mopar, a Swiss philosopher of the humanitarian school, has taken the subject in hand, and presents some considerations deserving attention from intelligent men at the head of great American shoe factories. He denounces the workman who produces a shoe that will pinch, and demands the production of one which will afford to a foot distorted by the pinching it has already undergone, a fair chance of returning to its proper shape, and the full possession of its power for carrying the body forward. He places great emphasis on the proper accommodation of the great toe, alleging that it is of prime importance to keep it free from all constriction or distortion. Upon this toe, in walking, the weight of the whole body turns at every step in a natural foot; therefore, in such a foot it is in a straight line with the heel. The doctor ascertains that a central straight line drawn from the point of the great toe to the middle of its root, if continued, would pass very exactly to the middle of the heel. But our modern misfitting shoes destroy this natural anatomical arrangement, so distorting it as to force the point of the toe inward and the root outward. No shoe, for a foot already injured by wearing such as are ill-fitting or constrictive, should ever be made of the exact size of the injured foot.—*Ex.*

What the Microscope Reveals—With a Moral.

Lewenbeck tells us of insects seen with the microscope, of which 27,000,000 would only equal a mite.

Insects of various kinds may be seen in the cavities of grains of sand.

Mold is a forest of beautiful trees, with branches, leaves and fruit.

Butterflies are fully feathered.

Hairs are hollow tubes.

The surface of our bodies is covered with scales like a fish; a grain of sand would cover one hundred and fifty of these scales, and yet a scale covers five hundred pores. Through their narrow openings the sweat forces itself like water through a sieve.

The mites make five hundred steps a second.

Each drop of stagnant water contains a world of animated beings, swimming with as much liberty as whales in the sea.

MORAL.

Have care as to the air you breathe, the food you eat, and water you drink.—*Health and Home*.

INTERMITTING LAMENESS.—The *Doctor* remarks: "A very curious thing has been described by Dr. Sabourin, namely, that lameness may ensue from obliteration of arteries. Horse lameness is often so obscure that any light proves desirable. It is not, however, confined to the horse, but extends also to man. The cause, as observed, is owing to obliteration of the aorta and iliac arteries. Commonly, in previous good health, the subject begins to limp, in one or two limbs to tremble, and finally to fall. Rest is commonly productive of relief. MM. Bouley and Goubaux long ago pointed out the nature of the affection in horses, while M. Charcot first pointed out its occurrence, comparatively rare, in man. Arteritis has been supposed to be the occasion in horses, owing to the violent efforts they have to make, and embolism in men. In any case, the occurrence affords a favorable illustration of the advantages of the study of comparative pathology."



PUBLISHED BY

DEWEY & CO.

A. I. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:
Saturday, May 2, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—The Black-billed Cuckoo; A New Sensation in the Poultry World; Effects of Deep Tillage; Another Awkward Position, 273. Present Condition of the Reclaimed Tule Lands; Five Millions of Dollars for our Sugar Annually; Tea Culture, 290. Agricultural Colleges; Orange Culture; Extension Steps for Railway Cars, 281. Patents and Inventions, 284.

ILLUSTRATIONS.—The California Cuckoo; Bad Enough, but it Might be Worse, 273. The Bird of Paradise; The Swan, 279. Albert's Extension Steps for Railway Cars, 281.

CORRESPONDENCE.—Cheese Factory Wanted; More about Graham Flour and Gems; A Hint for Orange Growers, 274.

THE DAIRY.—Raising Cream; A Letter from Hon. Harris Lewis, 274.

THE ORCHARD.—Pruning at Midsummer; Transplanting Large Trees; Hastening the Ripening of Fruit, 274.

THE SWINE YARD.—Growing and Fattening Hogs; Scurvy; An Inquiry, 275.

THE FLOWER GARDEN.—Fish Geraniums; A New Floral Ornament; Compost for Flowers; Training Petunias, 275.

THE VINEYARD.—Training the Grape; Grapes and their Culture, 275.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 276-7.

HOME CIRCLE.—White Lies (Poetry); An Orchardist's Views on Eve's Apple; A Bit of Romance; Trades of Animals, 278. The North Pole: The Original Garden of Eden; American Dread of Water, 279.

YOUNG FOLKS' COLUMN.—Strange and Curious Birds, 279.

GOOD HEALTH.—A Neglected Source of Food; How the Eye is Swept and Washed; Torturing the Human Foot; What the Microscope Reveals—With a Moral: Intermitting Lameness, 279.

USEFUL INFORMATION.—Cremation and Intermittent in regard to the Cycle Metamorphosis of Organic Bodies; Sugar and Salt, Pickles and Peppers; Composition for Cakes, 282.

AGRICULTURAL NOTES from various counties in California, Oregon, Washington and Nevada, 284.

MISCELLANEOUS.—Gold Hill and Virginia City; Co-operative Ship-building to be Tested; Improved Machine for Assembling Potatoes, 275. Pullman Cars and Air Brakes in England; Improved Wheel for Vehicles; Safety Raft; Visit to a Great French Painter, 283.

Present Condition of the Reclaimed Tule Lands.

[Written for the RURAL PRESS by C. H. D.]

Taking the Stockton boat from San Francisco, our first stopping place was at Webb's Landing, on the Contra Costa side of the river. Here we found evidence of progress since our last visit. A hotel and store have been erected and are carried on by Mr. R. V. Snodgrass, who is also postmaster and express agent. The landing is in the reclamation district, which is known as the Lower Webb. It comprises one of the finest tracts of tule land in the State, but several of the large owners are non-residents, and seem to be doing little in the way of developing the resources of their property. A few garden spots show the wonderful productivity of the soil when properly cultivated. Mr. A. G. Kimbell, the veteran tule pioneer, has growing thriftily a variety of vegetables, berries and fruit trees. His strawberry bed, in particular, shows masses of blossoms and green fruit that could hardly be excelled. We found here also experimental patches of several species of grass and clover. Kentucky Blue Grass, Meadow Soft Grass, Timothy, Red Top and Orchard Grass seem to be perfectly at home, as are also Red and White Clover and Alfalfa. The Blue Grass and White Clover give the closest sod, while Timothy and Orchard Grass promise to be the favorites for hay.

Andrus Island,

On the opposite side of the river, was next visited, and found in excellent condition. Mr. Worsham and his sons came out from Kentucky last year, and have several hundred acres of grain that promises a fine crop. It was sown in the ashes on burnt land, and tramped in by sheep. The sheep were brought on the island and turned loose in the fall, no further care

being given them until they were wanted for use in January or February. When driven up they were found to be much improved in condition, and but a small number had been lost out of a flock of several hundred. When tramping in grain the sheep were worked but half the day, and with good feed do not seem to suffer from this novel use.

Natural Meadows.

On parts of Andrus Island and other portions of the tule lands there are beautiful meadows of fine grass and native clover. The old trappers say that the tule which formerly covered these spots were burnt off by the autumn fires, and the seeds of the better kinds of vegetation brought on by the waters of the rivers when they overflowed their banks. We trust that this hint from nature will be generally acted upon by the settlers, and that they will cultivate the best grasses until their pastures green surpass even those of Kentucky, where so many of them left pleasant homes to try their fortunes in a new country.

The district of which we are speaking comprises the southern portion of Andrus Island and Brannan Island; having a frontage on both the San Joaquin and Sacramento rivers, and sloughs connecting them. The levee was built by the Tide Land Reclamation Company, and very much improved by the present owners. It has well withstood the severe trials of the past winter. On Brannan Island, Dr. Zeile, of San Francisco, owns a large tract, and is making very substantial improvements and cultivating extensively. Besides several farm houses, the doctor is finishing off a really elegant country house for his own use.

Elevated Stock Barns.

Mr. Worsham insured his stock, and set a good example for his neighbors by building an elevated floor adjoining his barn, and large enough to accommodate all of his animals, and keep them above even a '62 flood. It is reached by an inclined plane, and surrounded by a substantial fence. Dr. Zeile has improved on this plan by adding another story and a roof, thus securing room for an ample stock of hay. With green feed all summer and such a barn as we have described filled with hay, a tule farmer is certainly in a very independent position. He is not so likely to use his hay in the winter as those who are on the upland, and what he has on hand in the spring can be cheaply shipped to the city when the prices are highest.

We were sorry to see that Twitchell Island was suffering from a break in the levee, which will keep back farming operations for some time. The owners hope, however, to raise crops of barley, vegetables, etc., in the latter part of the season.

Hospitality Among the Tules

Seems to be universal. There is always a bed, and a seat at the well-furnished table for the stranger. After spending a day or two in this singular region, you feel that every man you meet is an old friend, and that this is the place to farm after all. Even when the highest floods come, once in ten years or so, one can wait for the waters to subside with more hope of a good season than the upland farmer watches for clouds in a dry year.

Returning to Webb's Landing we prepared for a new departure. Wishing to visit the Upper Webb Tract, legally known as District No. 107, we secured passage with "Captain Jake." The captain runs a small sloop up the west branch of the San Joaquin, there commonly called Old river. He makes three or four trips a week, and carries passengers, small packages, letters, etc., to the farm houses for about 16 miles, as the river runs.

As we ascended the river, the Lower and Upper Webb Tracts were on our right, Mandeville and Bacon Islands on our left.

We did not have time to land on the islands, but could see fine looking pieces of grain on them, at various points.

Two Distinguished Farmers.

We met Col. J. C. Hays, who is one of the principal owners on Mandeville Island. He told us that the breaks in their levee, which occurred in the early part of the season, had been mended, and that his land was in fine order.

The Colonel already has over seven hundred acres of grain growing finely, and will continue to sow barley for some time to come, putting it in with a drill.

Col. Hays became familiar with the tulelands while holding the position of U. S. Surveyor General of California. The same may be said of General Sherman Day, who is interested in a thousand acres on Bacon Island. Both of these gentlemen have been very earnest in calling attention to the value of these lands. About three years ago they showed their faith by buying largely, and have spent their time and money freely in the work of reclamation. We are pleased to hear that they are promised a handsome reward for their enterprise, in the way of fine crops and rich pastures.

Substantial Improvements.

Bacon Island receives its name from Mr. H. D. Bacon, of Oakland, who has a large interest there, and is one of the most energetic cultivators in that region. He has erected a substantial wharf and several well built houses and farms. This is the first year that his land has been ready for a crop. We cannot say just how many acres he has in, but believe that they count up well into the hundreds. Mr. Bacon is also setting a good example by sowing the finer grasses on a large scale.

The Upper Webb Tract

Is connected with the mainland of Contra Costa

county, so that no levee is needed on one of the long sides of the district. This, of course, diminishes the expense of reclamation and danger from overflows. The majority of the settlers came to this State from Kentucky; but we find among them natives of the various States of the Union, as well as England, Germany, Poland and Russia.

The houses are, for the most part, on the river bank, though some considerable tracts are owned by parties who are living and farming on the adjoining upland. The farmers in this district have a good reputation for energy and enterprise. The levee is a fair one for the money spent on it, and is to be much improved within a few weeks. As this is the first season of cultivation, only a portion of the land in the district will be in crop—as near as we could learn, from 4,000 to 5,000 out of about 18,000 acres.

In places where the tule sod has not been subdued, either by burning or cultivation, the grain that has been sown will give a very light return at best; but where the seed is buried in the rich, moist soil, and the native growth killed off, a heavy crop may confidently be looked for. Most of the growing grain looks healthy and vigorous. We were glad to see also a considerable field of timothy and clover on the land of Messrs. Beatty & Phillips, and which had evidently been recently irrigated from one of the ditches.

There will be little wheat sown this year after this date, but the tule farmers will continue to put in barley for several weeks to come; in fact, barley seems to do well there without reference to the time of sowing. We saw a small piece that was put in as an experiment by Mr. O. F. Miner, in August last. It gave a crop of hay in the fall, and from the same roots the ground is now covered with as fine a stand of grain, headed out, as could be asked for. Buckwheat, planted at the same time, was very fine, as were also several kinds of vegetables.

This year a trial is to be made of tobacco, and we think that the only serious obstacle in the way of its culture will be the frosts, which of course are felt earlier and later on these low lands than elsewhere.

Should the Levees Stand Close to the River?

For the region under consideration, we should answer this vexed question in the affirmative. Experience has proved that, at a short distance from the bank of the stream, the peaty soil is not firm enough to bear up such a levee as is required, while close to the river the sediment adds much to its strength.

The general sentiment now seems to be in favor of dredging the bottom of the river, for the material with which to build the levees.

While it is argued, with reason, that it is well to set the levees back, so that the river may have room for some of its surplus water, this is not so necessary on the lower part of the San Joaquin, where there are several channels, as it is above, where there is but one.

Difficulties and Advantages.

In farming on the tule lands that lie along the rivers that are much affected by the tides, the great difficulties are to keep off the water, and to subdue the natural growth of tules, reeds, coarser grasses, etc. Experience has shown that both can be accomplished, in most cases, by a comparatively light outlay of money and labor, depending on the form and situation of the land. We say comparatively light, for there is no richer land in the world, and we believe there is none like it that can be so easily reclaimed. The highest figures that we have heard of, as the cost of a levee here, was about \$28 per acre. On the Upper Webb Tract only \$5 per acre has yet been assessed. In New Jersey \$185 per acre was expended on similar land, and considered a good investment. To subdue the coarse native sod, burning has been the favorite, because the quickest, method. Our own experience and observation favors stocking closely with cattle, or better, sheep or swine. When the swamp growth is deprived of water, and subjected to the constant cropping and tramping of animals, it soon dies down and decomposes, making a fine soil that can be easily plowed or sowed to grass. Among the advantages may be enumerated the rich soil, abundance of good water for domestic use and irrigation, the cheapest water transportation in the State, plenty of fish and wild fowl for the taking, and a healthy climate.

Willow and alder wood are each worth about \$4.00 per cord, and good peat can be made almost anywhere. With proper care all kinds of domestic animals, including fowls and bees, thrive wonderfully.

On the whole we know of no section of the State that offers a better yield to those who possess a reasonable amount of capital, and a stomach for thorough work. We trust that this season may fulfil its promise and be a good one for the tule as well as the upland. We heard favorable accounts from Sherman Island, and, from what we saw from the steamer, judge that it is in fine order.

Sau Francisco, April 22d, 1874.

THE Santa Barbara Times of the 23d inst., speaks thus of crop prospects in that county: "From all parts of the county the crop reports are excellent. Barley is already being cut for hay, and the prospects for an enormous yield of the ripe grain, as well as of wheat, oats and corn, is equal to anything known for many years. Our farmers are all in high spirits over the promised return for this year's labor."

The Santa Barbara Index is advocating the erection of a first-class hotel, as a necessity to the interests of the town.

Five Millions of Dollars for our Sugar Annually.

This is the amount of money paid annually for sugar entering the State through the port of San Francisco. The money for this sugar all goes to foreign countries, instead of remaining here as it might do, if our people had the will to inaugurate a beet sugar factory in one certain county in the State, and we mean Los Angeles county. We have just returned from a visit to that county, made for the express purpose of judging of the suitability of the lands there for the production of the sugar beet, and the facilities presenting for the successful prosecution of the beet sugar industry. We find in the valley of Los Angeles a tract of land so nearly limitless in extent, of such superior excellence for the growth of beets, so favorably situated for purposes of shipment of anything that may pertain to an establishment of the kind, their proximity to exhaustless beds of excellent peat, and mountains of asphalt available for fuel, the ease with which artesian water can be procured for factory purposes or irrigation, all point to the irresistible conclusion that it is the place where every pound and every dollar's worth of sugar needed for the supply of the entire Pacific coast of the United States can be easily and profitably produced.

The bare inauguration of this industry upon a limited scale, anywhere within the broad sweep of that great and luxuriant valley, would at once add a ten-fold value to thousands of acres, and would alone amply reimburse the proprietors of the soil for making the necessary outlay. Appropriate a body of land to this purpose, reserving yet other acres by the thousands, to be eventually incorporated into one grand concern for the manufacture of beet sugar on a scale commensurate with its importance, and, under proper management, the same could be made so largely paying as to astonish even its most enthusiastic projectors and supporters.

Two crops of beets in a year from the same ground, the seeds for which can be planted with success every month of the year; no provision necessary to secure the winter's supply of beets from frost, and the constant operation of the works during the whole year—instead of only six months, the extreme length of the sugar campaign in Europe—give to Los Angeles county advantages possessed by few, if any, and excelled by no other country in the world.

Tea Culture.

We have been talking of coffee, wild coffee and coffee culture of late, and we have pretty nearly established the fact that we have an indigenous coffee or something very closely resembling genuine coffee, in general appearance of the bush on which it grows, the form of the berry, its color, taste and smell; and numbers of persons will experiment with the product, whatever it may be, the present season.

Now we want to revive no undue excitement, but a moderate interest on the subject of tea culture—the genuine tea of China or Japan; for though past attempts have been anything but satisfactory, in fact have been failures as regards its culture in California, yet the project should not be abandoned, for we are perfectly confident that it can be successfully grown here if we give it the proper climate, altitude, exposure, soil and cultivation.

We have been studying these points carefully, and we have arrived at the following conclusions: That it is time lost to attempt its growth in any of the interior, intensely heated valleys. It is a mistake to attempt its culture among the foothills of the Sierras, wherever the air is excessively dry in summer, though the frosts of winter would be in no wise detrimental. Tea should have a thick, meaty, pulpy leaf, to enable it to carry the requisite amount of theine and tannin which all tea leaves must contain to render them of the least commercial value.

Grown in a hot and dry atmosphere, the leaf is so thin as to be nearly valueless, and the same to a great extent affects the leaf of the mulberry, injuring it for silk-worm feeding. We have been seeking for a climate in California, not too humid and yet sufficiently so to grow tea, and we believe we have found it in the most of the middle and western portions of Santa Cruz county, not too nearly adjacent to the sea. Take the highlands of that county, the redwood section, receiving the cool ocean air, laden with moisture so that nightly dews are the rule and not the exception, and if there is any place in California where tea can be grown with success it is there, and we hope renewed attempts will be made by some enterprising horticulturist of that district to establish our position, and add to the agricultural wealth of the State by the introduction of a new and important product.

THE WILD PLANTAIN AS PAPER STOCK.—The Belgian Consul-General in British India reports that the fiber of the wild plantain, found in great quantities in the Andaman Islands, has been successfully used in paper making. The directors of the Bally paper mills, in the above mentioned country, state that the material is worth \$40 a ton, and that they are purchasing quantities at that price.

Agricultural Colleges.

Whatever be the estimate placed upon the worth of agricultural colleges as at present conducted, there is, we think, no difference of opinion as to the possible value of such institutions. When the idea was first promulgated, only a few years ago, of founding colleges which should give a thorough, practical and theoretical education in farming, besides furnishing a fair amount of general instruction, in branches not immediately connected with agriculture, it was at once believed that from the laying of the first corner-stone of such a college there would open an entirely new era in the science and practice of soil cultivation.

The disappointment at the actual results has been the greater because of the inordinate expectations which were aroused at the outset. Farming goes on pretty much as it did before. Of all the students at agricultural colleges only a portion ever turn their attention to real farming; and if all did, they would still be in a very small minority, among the hundreds of thousands who persist in farming according to their own ideas, and not "according to Hoyle." It would be absurd to expect very grand results at the very initiation of the new educational movement. It has taken a long time for students to find out what they desired to learn, and it will probably take much longer to find professors capable of teaching what is needed. The whole machinery is too new to work smoothly yet, and so far, in fact, it has only been shown what a well adapted system of agricultural training is able to accomplish, when fully tested and carried to a reasonable stage of development.

There are at present, so far as we have information, thirty-eight schools of the class known as "industrial institutions" in the United States, which have been aided by national endowment. These belong to thirty-five different States. They are all in operation, and were last year attended by upwards of 3,000 students, a large proportion of whom were pursuing agricultural studies.

The Massachusetts agricultural college, at Amherst is one of the leading farming schools, and perhaps the most successful. If we state what is the plan of instruction, and what was accomplished there in one year, 1872—we have not received the report for the last year—we shall have an example of the usual course of proceedings at similar institutions.

The farm of this college contains 384 acres, 123 of which are cultivated with plowed crops; 125 are in mowing, 120 in pasture, and the remainder in wood, timber, etc. The objects had in view in the purchase of the farm were to impart practical instruction to students in the different processes of agriculture, to furnish them the means of acquiring skill in the production of crops, in conducting farm-experiments, and in the use of farm-implements; also to provide for the college a botanical garden, green-house, arboretum, apple, pear and peach orchards, a vineyard, market-garden, small-fruit garden, an experimental station, a veterinary hospital, a parade-ground, and pasture and hay for stock-raising. The most of these objects have been carried into operation, and are being perfected as rapidly as the means of the institution will permit. The students labor six hours on the farm each week, during the intervals of study, and perform the labor of planting, cultivating and harvesting the crops; feeding, milking and care of the stock and barns, and the training of the colts and bulls. The large bulls of the farm are broken to the yoke, and used in the place of oxen. The students have also performed considerable labor in grading, in constructing roads, culverts and fences, and in digging up and removing useless and unsightly trees, stones and hedges; in digging and laying drains, in setting fruit and ornamental trees, and in otherwise improving and beautifying the estate. Four teamsters are hired on the farm and employed principally with the teams. All the rest of the work not done by these is performed by the students.

There were raised on the farm 480 bushels of shelled corn and 20 tons of stover on 8 acres; 500 bushels of potatoes on 4 acres—crop considerably injured by wire-worms and the rot; 48 tons of sugar-beets on 4 acres; 110 bushels of rye and 6 tons of straw on 4½ acres; 50 bushels of barley and 2½ tons of straw on 2½ acres; 300 bushels of oats and 10 tons of straw on 11 acres; 2 tons of millet on one acre; 3 tons of fodder-oats on 1½ acres; 200 quarts of strawberries on 1 acre of vines, which had been badly winter-killed; 150 quarts of small fruits, from plants mostly planted the preceding year, on 2½ acres; 1,000 pounds of Concord grapes on 2 acres; 300 bushels of apples on 3 acres of old orchard; 208 tons of hay on 125 acres; and a variety of vegetables from the vegetable-garden.

In the cultivation of the farm the system of rotation of crops has been pursued, the first year usually being occupied with a crop of corn; the second with sugar-beets, mangel-wurzels or potatoes; the third, with oats or barley, and grass-seed. In the management of the corn-crop the following plan has been pursued the past year with satisfactory results: The manure made by the stock during the winter was hauled out in the spring and spread on the greensward at the rate of eleven cords to the acre, and plowed in six or eight inches deep, after which the land was harrowed, and superphosphate spread on at the rate of 300 pounds to the acre. It was then cross-harrowed, and planted with corn with a two-horse dibble-machine, imported by the college from Germany. This machine plants 25 acres a day, making

eight rows 18 inches apart at a passage, and dropping the corn, two or three kernels together, at intervals of 18 inches in the rows. The land was harrowed just as the corn was breaking ground, with a smoothing-harrow, and again when it was eight inches high. When it was a foot high it was thinned to 18 inches apart in the rows, and in a few days was cultivated with the two-horse "Ruben Hack-Maschine," or root-cultivator, also imported from Germany in 1871, which cultivates five rows in a passage. The land received no other cultivation, and yielded 80 bushels of sound shelled corn, 10 bushels of unsound ears, and 3 tons of stover to the acre. The total cost of raising the crop, exclusive of manure, was \$18.54. The course pursued in the cultivation of the rotation-crop of the second year, the sugar-beet, is to apply 400 pounds of commercial phosphates, and in favorable seasons a yield of 20 tons to the acre will be obtained. In the third year of the rotation the ground is sown with oats or barley, and grass-seed, without additional manure, from which a good crop of oats or barley is obtained the first year; and for the next three years three tons of hay per acre at two cuttings.

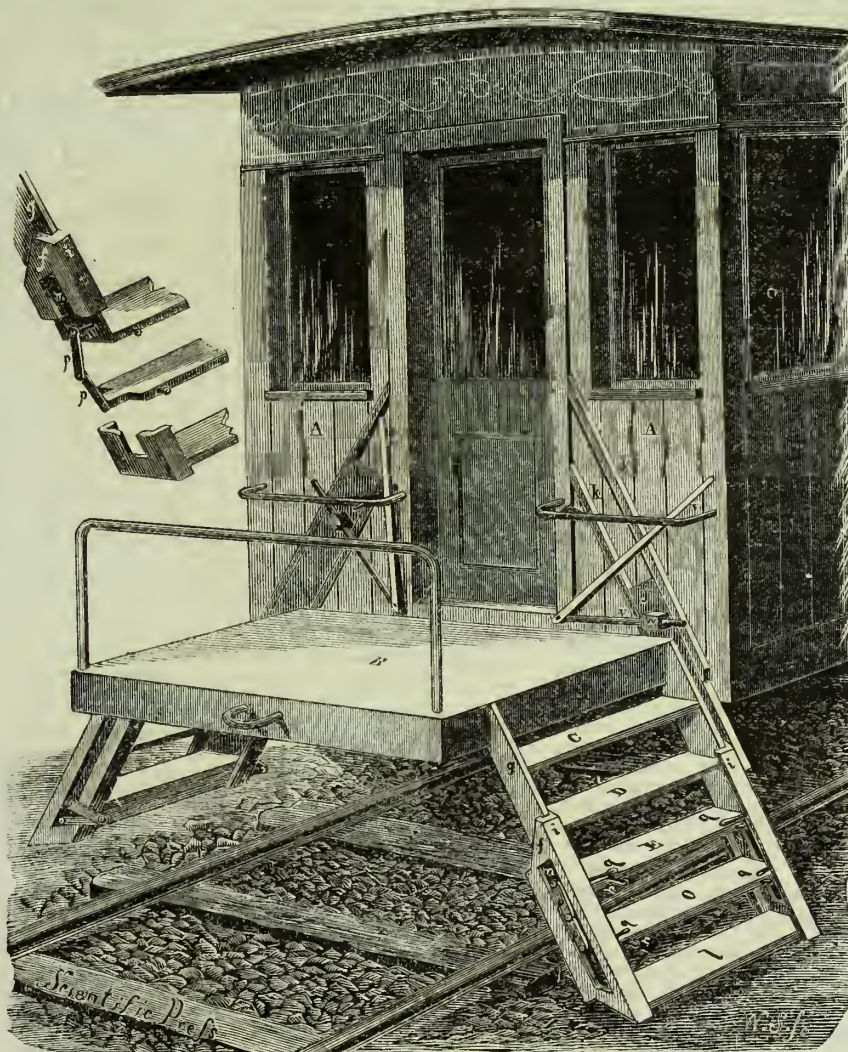
Great attention has been paid to top-dressing

serving roots and the leaves of the sugar-beet. The horses are kept for work on the farm and for the college; the stock for the four-fold object of profitably consuming and converting into manure the hay, grain and roots raised on the farm, of furnishing milk, beef, pork, poultry and eggs for the use of the college, of keeping up and improving the races of pure-bred stock, and of affording illustrations of the principles and instruction in the practice of breeding and raising domestic animals.

Since the opening of the college in 1867, 69 students have graduated, and a large portion of them have engaged in agricultural and horticultural pursuits. Others would have done so if they had possessed the necessary capital to purchase a farm and commence the business for themselves. The number of students in attendance during the collegiate year was 171.

Orange Culture.

We notice now and then an article in the papers of the rural districts, cautioning the growers of fruits against relying altogether upon the statements of those having trees to



ALBERT'S EXTENSION STEPS FOR RAILWAY CARS.

mowing-fields, and experience has proved the course to be satisfactory and profitable. When the supply of top-dressing made on the farm has become exhausted, and the land is so completely run out as to be incapable of yielding a paying crop, it has been plowed in April, sown with oats and red clover, 10 pounds of the latter to the acre, and at the same time 300 pounds of good superphosphate were harrowed in. This course has always given a good crop of grain and straw, and also a good crop of clover the second year to cut for hay, and a second crop to turn under for manure. In this way two paying crops are obtained during the two years, the land is improved by the process, and prepared for planting the next year.

Important experiments have been conducted by the president of the college in the cultivation of trees, grapes and plants; in making plaster-casts, executed by the students, of different fruits and roots, for the botanical museum; also, by the professor of agriculture, in the making and use of hot-beds, the culture of garden-vegetables, and the manufacture of phosphatic manures; and by the professor of chemistry, in determining the actual and comparative cost and value of farm-yard manures and commercial fertilizers, and in the culture of the sugar-beet for seed. Under the direction of the professor of veterinary science and the farm-superintendent, the students have made experiments in deep and shallow cultivation, especially in subsoiling; in manuring with home-made and commercial fertilizers; in surface, stone and tile draining; in cutting and curing hay at different stages of growth and by different methods; in breeding, feeding and care of stock; in the yield of milk and the growth of different breeds under similar conditions, and of the same animals under varied conditions; in attending animals during parturition and in sickness; in dissecting and preparing subjects for the veterinary museum; and in the effectiveness and economy of different methods of pre-

sell, of the enormous yield that can be expected from orange trees of a certain age, placing it as high as a thousand oranges to the tree; and from this making certain deductions, as conclusive of the profit to be derived from the culture of this fruit.

We do not think the number of oranges to the tree has been in the least over rated.

We see from a correspondent of the *Rural Southland* that he has trees, many of which have yielded 5,000 in a season, and is confident they will do so this year. He remarks further, that on Grand Cheniere there is a tree on old Mr. John Miller's place, from which 8,000 oranges were sold in 1872.

Of course these trees are more than eight or ten years old, but that is to be expected in a country where this fruit has been long grown, and yet it is not overestimating the yield of orange trees twelve or fifteen years old, as producing a thousand oranges.

The matter of profit from orange culture in California will depend much upon the acres devoted to their production. The question of yield per tree is established and known to be as reliable as that of any other fruit tree grown. Already this fruit is cheaper in the market of San Francisco than apples or pears, or indeed any of the fruits of the so called temperate climes, and the enormous increase of the orange orchards all through the great valleys of the State, can hardly be expected to increase largely the value of the orange crop.

The mistake that many will make in the culture of this fruit on a large scale, will be the growing of small, inferior varieties, that will barely pay the cost of picking, packing and shipment to the market, with no margin for profit. Growers who would make the business a success, should look carefully to the size and quality of their varieties.

THERE are 100,000 sheep on Los Palos Verdes rancho, Anaheim.

Extension Steps for Railway Cars.

Henry Albert, a young man of evident inventive genius, whose present address is Bodega, Sonoma county, has procured a patent, through the SCIENTIFIC PRESS Patent Agency, for an improvement in extension-steps for railway cars, the plan of which is shown in the engraving on this page. The steps are constructed so that they may be extended down near the ground, when the cars stop at a station, in order that the passengers may easily mount to the platform; but when the cars are ready to start, the steps can be drawn up to the ordinary length, and thus be out of the way of any obstruction on the road.

In the engraving, A is the end of a railroad car, and B, the platform; C, D, and E, are the three steps ordinarily attached on each side of the platform. These permanent steps only reach half way to the ground, and are always inconvenient, especially at stations where there are no platforms. To remedy this, Mr. Albert arranges side-boards, F, to slide up and down along the side-boards, G, of the permanent steps; suitable guides, I, being provided. The sliding side-board, F, which is next to the end of the car, extends upward along the side of the car at the proper angle, as at J, and this upward projecting portion also moves between dovetailed guides, K, K, on the side of the car. The lower ends of the sliding side-boards, F, are connected by a step, L, so that they will move together. Each of the boards, F, is provided with a longitudinal slot, M, which is as long as the distance which it is desired to extend the steps, and a pin, N, projects from opposite the end of the lower permanent step, through the slot.

Between the lower permanent step, E, and the connecting step, L, of the sliding portion, is another step, O, which has a square tenon on each end. This square tenon is of a proper size to fit snugly in the slot, M, and move up and down along it when required. Two links, P, P, shown in the step, and in detail in the sectional view, are joined together at one end, while one of their opposite ends is attached to the projecting pin, N, of the permanent steps, and the other to a pin projecting from the end of the tenon of the sliding steps. These jointed links are just long enough to support the sliding steps at the proper distance between the connecting step, L, and the lower permanent step. On the inner end of each of the upper guides, I, of the sliding boards, a pin or lug, Q, is provided, at a point which will be opposite to the step, O, and also other pins, Q', will be opposite the lower permanent steps when the sliding portion is extended. Other projections, R, are secured to the step, O, and also to the lower permanent step at right angles to the lugs, Q, so that when the sliding steps are lowered into position, the lower pins, Q, will first strike the pins, R, of the step, O, and carry it down to its proper position, or until the hinged links are fully extended.

When fully lowered to this point, the upper pins, Q, will have come against the pins, R, on the permanent step, so as to aid in supporting the extension. To accomplish this movement properly, the lower projections, Q, on the guides, are shorter than the upper ones, Q', so that they will pass the projections, R, on the permanent steps, without striking; and, as a consequence, the projections, R, on the steps, O, are closer to the guides than those on the permanent steps, so that the short pin will strike it, in order to force it to its proper position. When the steps are extended, the step, O, will be held firmly in its position by the square tenons which fit in the slot at each end.

When the steps are drawn up, the lower connecting step forces the step, O, upward until it strikes the lower permanent step. The steps can be extended or contracted by a lever, V, which fits closely against the end of the car. This lever can be a single bar, or of a V-shape, as represented in the drawing. In the latter case, one arm of the V-lever will be secured on a swivel block, W, which is attached to the sliding extension, J, of the sideboard, so that the brakeman, or other person, can, as soon as the cars cease moving, lower the steps.

By this arrangement the inventor provides telescopic or extension steps, which can be either lowered or elevated as necessary, thereby avoiding trouble and annoyance to passengers getting on board or leaving railroad cars. The steps on one side of the cars, shown in the cut, are down, and on the other side are represented as up. The cut to the left shows the operating mechanism more in detail.

The inventor proposes to connect his invention with the air brakes at present generally used on passenger trains, so that the putting on and taking off the brakes will raise and lower the steps. This will be quite convenient, as the steps will be lowered automatically, whenever the brakes are applied to their full power; or, in case he should find it preferable, separate steam pipes could be applied beneath the car for the purpose of operating the extension steps.

W. WADSWORTH has resumed his chair in the sanctum of the RURAL PRESS, after several months of respite. Our readers will be pleased to know that his health, thus sufficiently restored, is still improving.

SEWING MACHINES.—We would direct the attention of the RURAL readers to the advertisement of the new and Improved Florence Sewing Machine, in our columns this week.

USEFUL INFORMATION.

Cremation and Interment in Regard to the Cycle-Metamorphosis of Organic Bodies.

[Written by Dr. L. THIES.]

Cremation.

The burning of dead human bodies, was a usage among some ancient nations and is yet in use among some few unchristianized, or rather heathen, populations. It was and is still there the belief, to send the bodies of the deceased by the action of the sacred fire, the trusted messenger of nearly all their sacrifices, living or dead, bodily and directly to the gods and therefore direct to the place of their future abode. Bodies of criminals, of hated foes and infected were thrown on the field and served as food for ravens, vultures, etc.

Interment

Of the bodies is also a very ancient usage; among some nations we find graves, bones and other relics in graves and caves many centuries old. In all cases it was more or less a desire of the bereaved relations or people, to know and mark the resting place of the beloved or mighty one, to visit the now sacred place, to cherish the remembrance and love and nurse the soil which covered the form of the body, man, woman, child, or often only a pet animal.

In the more recent time of the Christian Era, the burning of the bodies was gradually abandoned for burying. The principal reason, therefore, may be found in the implicit belief and adherence to the bible and its very words, which promise to its believers a day of judgment, when they will be awakened, and some of them perhaps astounded, by the sound of tremendous trumpet blasts, which will call them up from their so long occupied resting place for the last and general meeting.

This Faith.

In the words, is perhaps one of the reasons which create opposition to the seemingly entire destruction of the body by fire. Added to this belief also are the instinctive love and affection, which in old times, as well as now, built monuments over the resting place of the body.

We live in an age when all the words of tradition, no matter from which source, are and will be in the end powerless against the flood of enlightenment which burst the clouds of darkness in which we were living.

The fertile brain of man goes always onward and figures no longer with fiction; it defines the truth by the slow logical means acquired by facts, gathering these as it moves along, and shows the fallacy of those doctrines, which once it was a crime to doubt. Above all the sciences is the

Science of Chemistry.

The never resting one; and it is this science alone which teaches and learns, and learning finds new stations to locate a new marked era for and in the progress of the scientific world.

To our times were the greatest strides of this science reserved; no more a single science, but associated and combined with the new progressing arts and mechanical contrivances, not fruitless in its researches, not egotistical, following the trail for individual benefit; but disclosing before our eyes and senses every day new experiences, new facts, and opening the widest field for appliances in commerce and agriculture, a benefit for each and all. With reasons and proofs, it narrates to us the hitherto unreadable hieroglyphics of the creation, the composition of bodies; nay, it tells us with unerring certainty the nature of gases which surround other terrestrial globes millions of miles distant from our own, defines to our astonished ears the laws of all the creation on our globe, and last, but not least, proves that the process of resurrection is going on. For this bright light of absolute truth, we thank the genius of the eminent chemist, Liebig.

But may we ask, what has this to do with cremation and interment? His researches and others prove to us that metamorphosis of matter, which our organic bodies, animal as well as vegetable, are subjected to, end at last in one and the same result, no matter whether the seeming destruction is performed by stow combustion, (decay, oxidation,) as in the case of interment, or by actual, perfect and rapid combustion, as is done by the proposed cremation. The processes give back to the inorganic world what was taken from it by the action of life, for the building and the keeping of the body and in turn expelled again, as long as life lasted.

We have here only to do with the matter, and leave the power of life, soul or spirit, as a subject of belief, to the doctrines of the church.

Inorganic and Organic Creation.

But matter is nothing of belief; it belongs to realities, and is subject to proof. We divide this matter into inorganic and organic creation. The first comprises the foundation of our globe, — a body without inhabited life, lasting without apparent alteration, centuries after centuries, produced by inorganic forces, by chemical affinity and cohesion, existing by themselves, and as passive tools of the totality.

The principal bodies, and those which come under contemplation in regard to the above metamorphosis, are the systematic, endowed with

the organs of life or activity; and these again we divide into animal and vegetable bodies. Composed of more or less organs, and forming a relatively independent individual, they exist for a certain time, not only by physical and chemical laws, but also by the vigor of life, more or less clear to our senses.

Their being is subject to constant alteration of substance; arising, growing and decaying are the cycle they perform. They die, but other similar beings take their place, only to go through the same procedure. The exchange which perpetually gives new material to them and takes away the expelled, is, next to the life power, their chief condition for existence. In these regards, they are the counterpart of the before named inorganic bodies, and show by comparison more distinctly opposition to, than harmony with these lifeless masses; and yet they consist, in the principal composition of their chemical ingredients of well known inorganic elements, principally water and mineral salts, joined to a singular organic matter, without which there is never an appearance of life. The difference is, therefore, not in the simple constituents themselves; these are identical, but it is the adaptation of a few elements to the harmonious structure of the organized body, and this is the condition of existence.

Decay.

A principal faculty is absorption of oxygen to saturation and, therefore, aptness for combustion and final redistribution of the accumulated inorganic elements to their sources. Water, ammonia, carbon, etc., go back, whence they came, to the atmosphere. Sulphur, phosphorus, iron and alkalies are left in the residue, the ash; and are again ready to be used anew for building up of new structures in organic bodies.

We see, therefore, no matter which was the destroying agent, the same results appear from the slow decay, or the rapid combustion; it is in each way destruction of the mold, but destruction of the matter itself is an impossibility. The one is slowly preparing for future use, the other is ready with the same material, in a rapid way.

Let us see now how this newly prepared raw material passes through the metamorphosis to its starting point.

By aid of root and leaves, the plant absorbs from soil, water and atmosphere, these immense warehouses of inorganic matter, all necessary elements for construction, keeping and developing in form of carbon, water, ammonia and mineral salts. In the organs of the leaves, it absorbs by the assistance of sunlight, the carbon, etc., from the atmosphere, retains the carbon and returns the oxygen; it forms with the carbon, and with the help of water, ammonia, new combinations; builds with these as material, fiber on fiber and vessel on vessel; fills these again with juice and sap, inorganic in origin, but now organic, with wonderful harmony and free from oxygen, so long as life lasts—a laboratory in itself working and creating; unknown in its actions and its working process, a mystery like its principle, the life.

Materials of Growth.

What we know and have to contemplate, is the result of this co-working of life and body, and this is ours by "encheiresin nature," and open for our researches, giving to us the Ariadne thread in hand to follow through the labyrinth of errors back to the beginning, with unerring certainty. The perfect counterpart of the plants is the animal system in its actions. It needs for its structure, as a condition of sustaining its life, the already formed organic substance; it has not the faculty to extract and form from simple organic elements those organic substances which it needs for sustenance. Only in vegetables are the required funds for its structure and life, and only there it finds the sources in form of carbon, hydrogen, fat and albumen, either directly, or indirectly by devouring other animals, which were themselves living on plants.

But besides these, it needs also some inorganic matter and finds this in the water and mineral salts, partly prepared in the plants, partly directly in the organic creation. Among these, the oxygen, above all, is a condition for the functions of its body and preserving of life. Like the leaves of the plants, the lungs are here the never resting feeders on the atmosphere, acting in an opposite manner to the leaves, by keeping the oxygen and expelling the carbon. The oxygen penetrates through the surface of the respiratory organs and comes in contact with blood and fluids in the vessels of the body, distributed and penetrating not alone the animal structure, but also acting a principal part in the nutritive substances, which modified by digestive process are divided through the whole body. And here already this organic combined substance undergoes a gradual oxidation and passes over from simple to higher and more oxygenated combinations, till they are saturated and expelled and leave their former combined, but now separated inorganic elements, to the warehouse of nature; ready again to be used for new structures and metamorphoses.

This is the cycle of the household in the nature and clearly and distinctly do we see the boundaries, conditions and laws of not alone our existence, but also those of more or less life-endowed creation; and these are as significant of the end and beginning. No truer words than from dust to dust on to eternity!

Is Cremation Preferable to Interment?

And by what reason? The answer must be: Most positively! Slow combustion, or decay, by slow absorbing of oxygen, as by interment,

produces and gives in a slow way to the inorganic creation, what life-endowed energy took and used from there, for building and constructing, in a space of a few years. It redistributes the elements, but in an imperfect way, holding back essential parts and retarding by this the recreation of new bodies, impoverishing, nay robbing, the store-houses of nature of a part of their dues. It does still worse: made from simple and originally healthy elements, the structure of plant and animal is a model of beauty and health, an edifice appropriate and worthy for its inhabiting soul, pure and good as nature itself. But as impoverished, poor, or poisoned soil will starve, cripple and poison the plant and bring it to an early decay, so will thus, as an unhealthy poisonous or adulterated food, vice, bad habits, abuse of body create more or less diseases and sickness in the animal world; and more, in our human body, as in other animals, it poisons the body and makes from the temple of purity a miserable wreck, often deserving the worthy house of a miserable soul; often innocently, and then a loud lament and accusation from the guilty ones arises. Premature decay is the result, and its results, again, are the undestroyed modified and spreading germs, inoculating with an increased progress new victims. Plague and pest reap with usurious interest from the capital of negligence and improvidence.

All this would be avoided by the rapid and actual combustion, which dissects the constituents of the body into its original elements, but rapidly and perfectly, and also purifies and disinfects; it destroys the organic germs, and gives the inorganic elements back, pure and healthy, for further healthy structures.

In the century in which we live—a century of intelligence and research, but also often of mercenary principles—we may expect much opposition to the proposition of cremation. But there never was a better and more useful proposition made for warm climates, over-crowded countries, cities, and also here for our particular locality, San Francisco, where the influx of foreigners from all parts of the globe is steadily increasing its population, and where, besides, is kept and nursed, in its very heart, the best established and most ingeniously planned breeding place and hot-house for plague; but where it would be, if properly executed, the only remedy against its spreading among that class of inhabitants, who, too improvident or otherwise, do not belong to the proprietors of one or more of the above-named nurseries, and can therefore not afford to live across the bay or further off. For these and their families cremation would be a feasible protection; and it is to be wondered at that the Board of Health did not before this order the cremation of the bodies as well as of the straw and clothes (provided these were not stolen before). The destruction of contagious germs, and, therefore, preventing the spreading of these diseases, would be the result. And in this case cremation should be compulsory by law, at least for those who have died from contagious diseases in public institutions.

Sugar and Salt, Pickles and Peppers.

The following is from a paper furnished by Dr. Wetherbee to the *Hearth and Home*:

Sugar and its kindred substances, molasses, honey, etc., are very liable to abuse; still they are very useful as a portion of our daily food, on account of the carbon which they contain, and which has been termed "the food of respiration." On this account aged persons and those who habitually suffer from a feeling of cold, by reason of a low temperature of the blood, require much more of the saccharine principle than the young or middle aged. It is also considered a good remedy for those who are afflicted with lung and throat complaints. Those who are daily employed in various branches of sugar-refining, the manufacture of confectionery and its kindred branches, are seldom attacked with consumption, and are generally remarkable for the plump, smooth appearance of the flesh and skin.

Sugar when in solution, and exposed to the oxidizing influence of the atmosphere or otherwise, first passes into the vinous fermentation, by which alcohol is generated; and afterward by further oxidation, or by the acetous fermentation, produces vinegar, or acetic acid, the qualities of which will hereafter be discussed. The sources of sugar are very numerous, but the greater proportion in use is derived from the sugar cane, the beet-root and the sap of the sugar-maple. Molasses is the liquid uncrystallizable portion which is drained from the sugar, and on account of its various impurities, is sometimes apt to cause bowel complaints, if used in too great quantities. Besides these sources, sugar may be obtained by a chemical process, from linen rags, paper, etc., but of course this method is too expensive to be employed except as scientific experiments.

Salt preserves animal and vegetable substances from decay through its strong attraction for water, depriving them of their greater portion, so that a sufficient quantity does not remain to induce putrefaction. Its use to the animal economy is to furnish hydrochloric acid, an ingredient in the gastric juice; also soda to the bile. But it is doubtless used among us in by far too great excess, for while its proper use is to preserve from decay, its action when taken in excess in the system is to impair digestion, and to produce an excess of its elements, resulting in the disease known as scurvy.

The inhabitants of some of the South Sea

Islands employ no salt in their food, and salted fish is to them even more disgusting and sickening than its entire absence in animal food is to us, thus proving that the habit of using it is only an acquired one. Even among us, we find persons who can never use it in any perceptible quantity without symptoms of violent fever, which sometimes lasts for several hours.

Vinegar, or, as it is termed in chemical parlance, diluted acetic acid, is one of the most efficacious antidotes against the injurious results of the excessive use of salt. Its direct action is to convert the substance of the salt into the acetate of soda, thus producing a gentle alterative effect upon the bowels, and a cooling, anti-febrile effect upon the blood. When too strong, or when taken in too great quantities, it may produce an acid reaction in the system, or corrode the coats of the stomach, and therefore should be used, like all other condiments, in moderation.

Its usual adulteration is with sulphuric acid, a substance which, though it is occasionally useful as a medicine, should not be employed as a general article of diet. Acids of all kinds affect the digestive organs in various ways, though they do not directly contribute to the nourishment of the system.

Pickles may to a certain extent be nourishing, since the vegetables of which they are composed frequently possess more or less nutriment, but they should be used sparingly. The most dangerous adulteration of pickles, especially when it is desirable to have them of a bright green color, is verdigris, or other salts of copper, all of which are highly poisonous. Even when the vinegar is boiled in a copper or brass vessel, it acts upon the metal, producing an acetate of copper, or verdigris. Glazed earthen-ware is also improper for holding vinegar, as the glazing is a compound of lead, which is soluble in vegetable acids, in which state it gives rise to colics and other dangerous symptoms.

As an anti-scurbutic, or preventative and cure for scurvy, pickles should form a part of all army and marine stores; and in mining districts where salted provisions constitute the greater part of the animal food in use, their value is so much appreciated that almost fabulous prices have been paid for a single gherkin, or for a pickled onion not bigger than a walnut. During the past few years the tomato has become a popular fruit for pickling, and is, no doubt, quite as wholesome as any other.

Spices mostly act as stimulants to the coats of the stomach, on account of the essential oil which they contain, and they form an important class in the list of useful medicines. Used in excess, they are apt to heat the blood.

Allspice, in small quantities, is a very powerful adjunct to medicines for the cure of dyspepsia, etc., the essential oil, as well as that of cloves, etc., is often used to allay tooth-ache.

Ginger is also used as a stimulant in food, and as a remedy against colds, colics and vomiting, and has been found to be an excellent antidote against sea-sickness.

Black pepper is sometimes employed with good success as a cure for nausea, dyspepsia, certain forms of gonorrhea, or as a stimulant in paralysis. In India it is much used as a remedy for vomiting, in cholera morbus, and in some localities, when mixed with spirit and water, it is a popular preventive against the return of a paroxysm of intermittent fever. In this country it has often been known to relieve a sudden attack of bilious colic, when taken in doses of half a teaspoonful or more in a glass of hot brandy and water.

Many of the most expensive spices are adulterated to an enormous extent. A single firm of druggists in the city of New York recently sold in one year many thousand dollars' worth of black pepper, from which the oil, and the peculiar principle called piperin had previously been extracted; and the refuse portions of other spices yielding essential oils are dried, ground, and mixed with the genuine articles, for which they are invariably sold to the unsuspecting public.

COMPOSITION FOR CASKS.—The object of a newly-patented process is to render casks and other vessels air-tight and water-tight, and prevent their becoming moldy, sour or stinking, and thus better suited for keeping their contents in a sound condition. The improved composition consists of gum sandarac or colophony, either alone or mixed with gum sandarac, or other resin capable of being dissolved in spirits, to which is added for the purpose of giving body and hardness either carbon, calcined ochre, or burnt clay, or a mixture of these in a pulverised state. The composition is applied to the heated cask or vessel with a brush, after which the spirit is blazed off and the cask or vessel again heated, until the preparation has thoroughly penetrated the fibers of the wood; or the composition may be applied in a heated state.

EXPERIMENTS made to test the vitality of frogs, in relation to the fabulous accounts of frogs found embedded in rock in deep workings of mines, in England and elsewhere, showed that frogs frozen up in blocks of ice for over eight hours were alive and breathing normally as soon as they were thawed loose from the ice.

SEVEN minor planets have been discovered during 1873, all in our own country. Four of these were detected by Prof. Watson, of Ann Arbor; three by Dr. Peters, of Clinton, New York. Seven comets were discovered during the year, all in Europe.

Pullman Cars and Air Brakes in England.

The English journals of recent date contain numerous articles complimentary to the railway systems of this country. They refer more directly to the Westinghouse air brake and Pullman palace cars. A great number of careful and accurate trials were made with reference to the efficiency of the air brake system, the results of which proved in every way satisfactory. It seems rather strange that this system was not before adopted in England, since it has been in use with such success in this country. However, some of the more conservative individuals in that conservative isle did not believe in anything new or anything American, on general principles, and it was not until the efficiency of the apparatus was forced upon them that they consented even to try it. As Englishmen are, however conservative, willing to adopt any economical arrangement, after it is once proven to their satisfaction, the Westinghouse brake will probably be extensively used. They do not like the idea of a proposed change, but when it is once effected and is advantageous, they allow themselves to be overcome.

The latest trials have been with the Pullman palace cars, something which Englishmen with their love of ease ought all to appreciate. They have been placed on the Midland Railway, and judging from the reports in the English papers, satisfy even the fastidious Britishers with their ease of motion and elegant fittings. Still the cars are as yet only considered as an "experiment," as the following item from a prominent London paper will show: "The manager of the Midland line, Mr. Allport, has always shown that innovations—if they are but improvements—have no terrors for him; and as he was the first railway manager to run third-class carriages in all trains, so he is the first to recognize the undeniable advantages offered by the use of the Pullman cars. As we learned by personal experience of the most gratifying kind, the passenger in the Pullman car has comforts beyond those of the best first-class carriage ever made; and, in spite of the vexatious smallness of our island, which prohibits journeys of a length which is common in 'the greatest country on earth,' we venture to predict a very fair amount of success for this new experiment on the Midland Railway."

The reports go on to describe the cars in detail, size, build, adornment, etc. They speak of the greatest novelty being the facility afforded for passage from one car to another, and they also speak of the ease with which they start up when steam is turned on the locomotive, attributable to the "Miller platform." Of course there will eventually arise something to grumble about, or it would not suit the British public, and this something will most probably be the charges for riding on these cars. However, as Englishmen usually travel with elaborate outfits, calculated to be conducive to personal comfort, all of which is expensive and troublesome, they ought not to growl about paying a little extra for increased comfort and better accommodations. Those journeying about the "tight little island" can in a short time do so with greater ease, the only hindrance being that the distances are so short. "Tip" Dorrit, Little Dorrit's scape-grace brother, when traveling in Switzerland was possessed of an equipment so elaborate and extensive, that, as Dickens expresses it, the only fear was that the world would not afford a proportionate amount of travel. This may be the case with the Pullman cars in England, as the shortness of the routes prevents full justice being done to the cars.

IMPROVED WHEEL FOR VEHICLES.—Upon the end of the axle is formed an axle arm, made octagonal or of other polygonal form. A short cylinder has a hole formed through it of the same shape as the axle arm, and its outer surface forms the journal of the hub. The cylinder is placed upon the middle part of the arm, and upon said arm, upon each side of the cylinder, is placed a flange, made somewhat conical in form, which is secured in place upon said axle arm by a linch pin. A ring, which forms the hub proper, is made with a ring groove to receive the tenons of the spokes, which tenons are separated from each other by thin partitions, which may be V-shaped. The outer edges of the ring have flanges formed upon them, which overlap the edges of the flanges first mentioned. The spokes may be further secured in place by bolts passed through the flanged outer edges of the ring.

SAFETY RAFT.—An extraordinary safety-raft, the invention of Mr. J. A. Fontaine, is about to be presented to the consideration of the French society for saving lives from shipwreck by Admiral La Ronciere le Noury. This raft is described as large enough to support from 400 to 600 person, as neither encumbering, nor requiring any alteration in the arrangement of vessels, and requiring only a minute or two to inflate and launch it. It is an air-tight mattress, with a surface of eighty square metres, inflated in one minute, it is said, from a reservoir fixed in the engine room and always charged with air under a pressure of fifteen atmospheres. When not in use, it is rolled up, and takes no more room than a boat. When inflated it falls over the side of the vessel, against which it is retained by means of ropes till all the persons on board are transferred to the raft. Three strong spars, passing through tubes the whole length of the raft, keep it flat and solid.

Visit to a Great French Painter.

Gustave Dore is a short, stout man with a large head, a fine brown chevelure, a broad forehead, a handsome face, very bright beaming eyes, and a peculiarly frank and winning smile. There is something indescribably animating about his frank and cordial manner. He is rather more than 40 years of age, but the look much younger; and he has been so short a time, comparatively, before the world, that one is surprised to learn that he has even attained his fortieth year.

On a bright and beautiful afternoon of September last, I had the pleasure of visiting his studio. It was something of a change from the almost glaring brightness of everything outside to enter that large, cool, solemn room. M. Dore lives and works in one of the avenues leading out of the Champs Elysees. His studio (on the ground floor, as we should call it in English) is at the back of the house, and is, as I have said, a large and almost a vast chamber. It is tapestried, if I may say so, with the records and trophies of that wonderfully fertile genius which has filled Europe and America with such prodigious proofs of its rapid skill. More than one wild Dantesque scene may be looked on there, and recognized as an old acquaintance by all eyes familiar with the illustrations to the "Inferno." There is a copy made by the artist himself of "Christian Martyre," which at present is on exhibition in the Dore gallery in London. Only think of the artist's capacity for labor, who, still young, has a gallery of his own paintings in London, another in New York, and a third in Paris! On the walls of Dore's studio are some grim and pathetic figures illustrative in various ways of Alsace and her suffering; the artist is a native of Strasburg. He was born in January, 1832, and when very young was brought by his father to Paris, where his education was finished. Dore's mother is still living, a woman of the most attractive manners, always delighted to welcome and entertain the circle of friend and visitors that her own genial ways and the renown of her son have brought about her. Another of her sons is, I believe, a banker in Paris, and is married. Gustave Dore still remains a bachelor. The life of an artist has seldom much tell, and Gustave Dore's has hitherto been naturally somewhat uneventful, unless in so far as artistic enterprises and achievements may be considered events. The great event in his life was when the public first became conscious of the new and strong power that was growing up in art.—Justin McCarthy.

An inventor has perfected and patented a process by which raw hides can be utilized for harness, belting, and in many other ways without the process of tanning. His claims in favor of it are greater durability and cheapness.

COLORING PLASTER.—A delicate cream color may be given to plaster by mixing with it a little yellow ochre.

San Francisco Employment Office,
NO. 606 CLAY STREET,
Crossett & Co., Proprietors.
(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.
Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. ap18-tf

HEALD'S BUSINESS COLLEGE
BRYANT & STRATTON
24 POST ST. SAN FRANCISCO
OPEN TO ALL
SEND FOR CIRCULAR

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,
245-tf President Business College, San Francisco.

OUR SPECIALTY: "BEYOND THE MISSISSIPPI!"
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required? Nerve and Honest Industry!
THE FARM WEST!
The Great Treasure Chamber of America!
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chromo,
"AMERICAN PROGRESS,"
free to each subscriber.
Two sample WOUNDS sent for 10 cents. Agents wanted.

SANTA BARBARA COLLEGE,
SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 8th, 1874.
Write for Catalogue to
226-tf ELWOOD COOPER,
President Board of Directors.

PURCHASERS please say advertised in Rural Press.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of
Stoves and Metals, Tinners' Goods, Tools and Machines,
111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of
Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,
For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.
This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

WAKELEE'S

Granulated Squirrel Exterminator.

[CAVEAT FILED IN U. S. PATENT OFFICE.]

A NEW & EFFICIENT POISON

For the Worst Pest of California.

If the new squirrel law is passed, farmers will be compelled to comply with its requirements and

Poison all the Squirrels

On their lands. Whether it is or not, the squirrels should be destroyed, or they will be the destroyers. This new compound has all the merits claimed for it. Is convenient and cheap. There is no danger from fire in using it. It will kill every time.

Put up in packages of one or five pounds, convenient for sending by express. Cost, \$1 per pound, ready for use. Very economical. Is scented so that the squirrels like it. Testimonials from reliable parties who have tried it, will soon be published. Reasonable discount for large orders. Directions for use on packages.

Owing to the chemical composition of the Exterminator it can be used without the slightest danger fire.

JED. T. HOYT, Agent,

Is now soliciting orders, which will be filled from the establishment of

H. P. WAKELEE,

140 & 142 Montgomery St., San Francisco

Who may also be addressed.

3v7-3m

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.
San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,
Subscribed, \$3,000,000. Paid in, \$1,500,000.
Remainder subject to call.

DIRECTORS IN LONDON.—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Schollfield, Isaac Seligman, Julius Sington.

MANAGERS:
R. G. SNEATH and IGNATZ STEINHART,
SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v27-eowbp

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,
36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools add Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7

JOSEPH SEYMOUR & SON,

12v7-3m

Syracuse, N. Y.

LANDS & HOMES FOR SALE

FARMING AND GRAZING LANDS

FOR SALE by YOUNG & PAXSON.

Solano County—4,000 acres highly improved, having the Sacramento river for one of its boundaries; \$25.00 per acre.

Napa County—3,500 acres rich valley land, \$10 per acre.

Santa Clara County—Fruit orchard of 92 acres in full bearing; including all the buildings and machinery for carrying on a large business. Price, \$80,000; one-half cash.

Monterey County—10,000 acres bottom land on the Salinas river, well watered. Price, \$12.50 per acre.

Stanislaus County—2,000 acres wheat land, improved; \$12.50 per acre.

Contra Costa County—160 acres farming lands; \$20 per acre.

Santa Clara County—3,000 acres farm and grazing land, ten miles from San Jose, well watered; \$10 per acre.

Merced County—6,320 acres wheat land; \$11 per acre.

Fresno County—3,200 acres wheat land; \$5.00 per acre.

Also, large ranches in San Diego and Los Angeles counties. Full particulars on application at our office, No. 424 Montgomery street, San Francisco. ap18-1m

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,

542 MARKET STREET,

N. E. Cor. Montgomery.

ap25-tf

FOR SALE OR EXCHANGE.

For San Francisco, Oakland or Alameda property—200 acres in Napa Valley, adjoining Yountville, enclosed and cross fenced with substantial board fence; small vineyard and orchard of selected Vines and Fruit; a large amount of Live and Red Oak Timber; accessible at all seasons, being within a stone's throw of railroad and country roads on two sides; 130 acres within a mile and a half of Vallejo; well watered by running stream and living springs; desirable place for many purposes. A Cottage in South Vallejo near the railroad terminus and steamboat landing; has fine view of San Pablo Bay; it is provided with outbuildings, barn, well, cistern and city water; the lots are covered with Shrubbery, Vines, Fruit and Shade Trees. A span of mares, (Morgan and Fatchen), good stagers; drive singles or double; perfectly gentle. A Concord built Buggy—shifting seats and top, pole and shafts. A new 3 1/2-inch thimble skein Wagon, patent brass bearings, hanging brake; Clapp & Bro., makers, Michigan. Harness, Saddles, etc. The above mentioned, as well as that not included, will be sold or disposed of in part or as a whole, as may be required or desired. Apply or address, at South Vallejo

ap11-4t-12p

G. C. PEARSON.

STOCK AND GRAIN FARM FOR SALE.

IN SUISUN VALLEY, SOLANO COUNTY, within one mile of a railroad station and one mile and a half of a landing for vessels, comprising 140 acres good grain land; 100 acres now seeded to wheat and looking well, and 40 acres of barley, also very promising. Also, 300 acres of good tule land, excellent pasture and hay land. Has a good house, barn, corrals and fences, and full assortment of agricultural implements, etc. Price moderate. Terms easy. Apply to BERRY & CAMP, 418 Montgomery st., Real Estate Agents and House Brokers

14v7-1m

FARM FOR SALE.

165 Acres 1/2 mile from the town of Windsor; 1 mile from depot; 2 1/2 miles from the famous Russian river. The place is beautifully situated; land all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and outhouses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2,500 cords of black oak timber; and wood brings \$5 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to JOSEPH DIMMICK, P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap18-tf

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

ap18-tf

P. H. SUMNER,

311 Montgomery street, San Francisco.

TO RENT.

An improved Farm—including a Vineyard—about one mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

FOR SALE.

100 Acres of Good Land,

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-4t

P. H. SUMNER.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

For the very best Photographs go to BRADLEY & RULOFSON'S GALLERY, with an "Elevator" 429 Montgomery street, San Francisco. 2v7-6m

AGRICULTURAL NOTES.

CALIFORNIA.

ALAMEDA.

Plumdealer, April 23: J. R. Stratton, the energetic forest tree culturer, has started another plantation of fifty acres near those already started.

CHERRY, pear and other early fruit trees are now in full bloom.

The roads throughout this portion of the county are in splendid condition.

MERCED.

COTTON.—*Tribune*, April 18: The season for cotton planting is now upon us, and a very large acreage—over one thousand acres—will be planted with this staple in this county.

SHORT CROPS.—*Tribune*, April 25: From Mr. McGlashen, just from the west side of the San Joaquin river, in this county, we learn that the crops in that vicinity will be short, and that a great deal of late sowed grain is already beyond help. Land that has been irrigated will, of course, produce good crops, but unfortunately, but a small portion, comparatively, of the land on the west side of the river has had irrigation facilities. Three weeks ago, Mr. McGlashen informs us that crops in that section gave promise of an abundant yield, but two weeks of drying north winds has counteracted the promises of a splendid winter. This state of affairs has, of course, a depressing influence on the agricultural interests in that section. On the Merced river, and on Mariposa and Bear creeks, the crops are looking well. More rain is needed to insure good returns from the late sowed grain.

MONTEREY.

LATE SOWN GRAIN DAMAGED.—*Enterprise*, April 25: We regret to learn that some of the late sown grain near the foothills in this valley exhibits the damaging effects of the late dry winds. We hope, however, that a timely shower may yet bring it out. The great majority of the grain of this valley was sown early and is not likely to be affected even if no more rain falls. Disastrous reports concerning the growing crops of the San Joaquin valley come to us. We can only trust they may be exaggerated. A failure of crops in that section this season would be almost fatal to its future prospects, and greatly damage the interests of the present population of that valley.

NEVADA.

CROPS.—*Union*, April 24: The crops in this part of the country never looked better. All appearances indicate that the farmers of this vicinity will be able to supply the home market with all the hay that may be needed through the feeding season. The prospects for large peach and pear crops are splendid. The apple crop here is always sure. We understand that the winter wheat in the valleys is not very promising.

Tidings, April 25: The crop prospect in this county, notwithstanding the unfavorable winter, is said to be excellent. Since the weather became warm everything has made rapid growth, and with a few more showers, will get so far ahead as to defy the dry weather. Fruit crops of all kinds now promise to be very abundant, and if some way were provided for utilizing it all for market—an Alden Dry House, for example—large profits would accrue to the fortunate owners of orchards.

Republican, April 21: Joseph Averon, of Sequel, is planting about 25 acres of bottomlands in hops, 1,500 pounds of the roots of which he obtained in San José. They are eight feet apart.

PLACER.

Argus, April 25: The grain crops of the county are maturing too fast, and the farmers want some rain soon.

SANTA CLARA.

ORANGE CULTURE.—*Advocate*, April 25: Mr. Wm. Buck, of San Felipe, is now engaged in setting out a large number of orange trees on his place, near the tobacco plantation. He has purchased about \$500 worth of large trees from Los Angeles, and will thoroughly test the adaptability of the climate and soil of that region for the production of the orange. There are undoubtedly localities in and about here where the orange and other tropical fruits will grow to perfection, and we are glad to see this move made to test the matter. About San José large tracts are being set out with orange trees; and as the business of growing this fruit has been found highly profitable in Los Angeles, we suggest that some of our farmers near the western foothills try the experiment.

Crops are still looking splendidly, and farmers are rejoicing.

SANTA CRUZ.

Mercury, April 24: The crops throughout the country are very forward and heavy, grain in many places being as high as the fence tops and heading out. The present dry weather is a perfect Godsend, as otherwise the grain would inevitably fall down, rust, and become almost worthless. The previous growth has been too rapid. The present weather allows it to strengthen its stalk.

A STALK of barley, grown on Dr. Rawlin's farm on the Los Gatos, was brought to this office yesterday, which stood five feet and eleven inches high. It is from seed sown since Christmas.

STANISLAUS.

BAD EFFECTS OF THE WIND.—*News* April 24: Our latest information from the west side of San Joaquin is to the effect that the severe

northwest winds of the past week, have already, in a great many localities, begun to tell severely upon the young grain. Especially is this the case in most exposed localities, and where not properly cultivated. The grain is said to be twisting severely in all such localities. The damage, however, is not as yet very serious. Cool, calm weather, with a light shower would soon restore what has apparently been lost. All, however, agree that the summer-fallowed fields are still looking well and healthy. In the central and eastern portions of the county we have not as yet heard any complaint.

SOLANO.

Chronicle, April 25: A heavy north wind sprang up this morning, and considerable anxiety is felt as to its effects on the crops.

SUTTER.

GOOD CROP FROM DRY FLOWING.—*Banner*, April 25: Tuesday morning Mr. P. L. Bunce brought into town a bundle of new barley from his farm below town, which excels anything we have seen this spring. The average height of the stalks are five feet six inches, being very large, and the heads in proportion. He has fifty acres of this barley, of which the bundle is a fair sample. Our merchant, Jonas Marcuse, whose experience and judgment of the quality and condition of grain in this section has placed him as the best of authority, was so highly pleased with the sample that he took it along with him to San Francisco, where he was going that morning. Mr. Bunce has also sixty acres of wheat in an equally good condition. Barley and wheat grew on the same ground last year, and Mr. Bunce dry-plowed the ground with the intention of plowing the entire piece to wheat. But the barley and wheat came up so promising that he concluded to let it make a crop. The promise is that he will harvest close on to eighty bushels of barley to the acre.

NEVADA.

PLANTING AND FLOWING.—*State*, April 23: Gardeners are busy plowing and planting. These are about the only indications of Spring yet apparent in this latitude.

HEAVY FROST.—*Reveille*, April 20: This morning the ground was covered with a thick coating of frost and the face of nature was shrouded in a dirty-white mantle.

SHEEP SHEARING.—The shearing of sheep has commenced on the neighboring ranges, and the yield of wool is expected to be up to the average of former years.

Enterprise, April 23: The ranchmen in all our valleys are busily engaged in plowing and making preparations for planting their spring crops. A good and productive season is anticipated by all our tillers of the soil.

WINTER.—*Enterprise*, April 21: A snow storm set in last evening, and this morning the ground was covered to the depth of about an inch. The weather to-day has been cloudy and cold, resembling December more than April.

OREGON.

Moundaineer, April 18: Our town at this time presents a beautiful aspect; peach, plum, and all kind of fruit trees are in bloom and the air is fragrant with their odor. The bees are busy gathering honey from every fragrant flower; the green grass on the hills is appreciated by the hungry beasts.

Oregonian, April 18: Peach, apple and plum trees are in full bloom.

WASHINGTON.

WHEAT HAULING.—*Union*, April 11: There are now large quantities of wheat being hauled from town and country. The most of it is placed on the cars at the Touchet. After a short time it is not probable that any will be hauled in wagons further than the railroad.

San Jose Farmers' Club.

The Club met at the usual hour, April 25th, and was called to order by President Casey.

"The best stock for this valley" was selected as the question for next week's discussion.

The Secretary presented the by-laws of the San Francisco Society for the prevention of Cruelty to Animals, and on motion a Committee consisting of Erkson, Mrs. Herring, C. C. Stephens, G. W. Pentress and Oliver Libby was appointed to call a meeting of the citizens for the purpose of organizing a society in this city.

Mr. Holloway stated that a meeting of the residents of Evergreen would be held at their school house on next Saturday evening for the purpose of taking into consideration the practicability of establishing a cheese factory at that place.

It was the sense of the Club that such an institution would be a success, and would prove of incalculable benefit to this valley.

Mr. Bergland addressed the Club under the head of the fifteen minutes speech. He was glad that the President had exhibited the pluck to veto the Inflation Bill. We were standing on critical financial ground, and the sentiment of the European press had shown that the right position had been taken. The country now was safe.

The following resolutions for presentation to the National Agricultural College, which meets at Atlanta, Georgia, on May 13th, were adopted and ordered sent forward.

On the subject of horse races:
Resolved, That trials of speed, as usually conducted by pool-selling and gambling jockeys, are no part of legitimate agricultural industries or interests, and should not be encouraged at agricultural exhibitions by any Agricultural Society.

On the subject of temperance:
WHEREAS, Fermented and distilled alcoholic liquors

of all kinds are not the product of Nature, and can only be produced by the destruction of the nutritive constituents of food, and

WHEREAS, The manufacture, sale and use of alcoholic preparations as a beverage is a curse instead of a blessing to mankind, increasing crime and taxation to a fearful rate, therefore

Resolved, That alcohol no longer be saddled upon agriculture and horticulture as a legitimate interest.

Resolved, That agriculturists and horticulturists everywhere be requested to no longer recognize wine, beer, brandy, whisky, or other alcoholic preparations as worthy of their encouragement.

On the subject of compensation:

WHEREAS, In all civilized communities agriculture is the foundation of all other industries, therefore

Resolved, That compensation for all services rendered, both public and private, should be reckoned with reference to the average earnings of the prudent and industrious agriculturist.

On the subject of equalization:

Resolved, That the successful tiller of the soil should and must be counted as a skilled workman of the highest order.—*Mercury*.

The Valley of Los Angeles.

We have just returned from a two weeks' trip to and through portions of Santa Barbara and Los Angeles counties. It was our first visit to that beautiful and interesting section of Southern California. To say that we were pleased with what we saw and felt but feebly expresses the delight enjoyed while wandering from the path of editorial life, and the wind and dust of the busy metropolis of the Pacific coast, to and among the lime, lemon and orange groves and semi-tropical fruits, plants and flowers of mild, balmy Los Angeles.

In speaking of the valleys of our State, it has been quite usual with us to associate them with the existence of some river of the same name, and which has given their own name to the valleys through which they run; and we have usually certain well defined limits to most of our valleys, and within these limits the smaller rivers from the adjacent mountains are often entirely drunk up by the greedy drouth of the summer months. But the valley of Los Angeles is the valley of a great country—rather than of a single river—and through which course numerous rivers, and all leaping and sparkling from mountain cañons through vast plains—rather than a valley—of luxuriant vegetation, to the sea, during the whole year.

And it is this feature of "leaping to the sea," with a fall of from four to eight feet to the mile, through the entire length and breadth of this great valley-plain, of more than five thousand square miles extent, making their waters available for irrigation everywhere, that gives to these rivers their great intrinsic value, and which will eventually make the valley of Los Angeles the pride and glory of Horticultural and Pomological America.

We were disappointed in not finding it as early in the production of many of our summer fruits as several of the more northern interior valleys; but to offset this, the climate is infinitely more desirable, because more equable; never rising to an extreme heat, and seldom sinking to the degree of frost, and never to the injury of the fig, orange, lime or lemon. Tropical plants in beautiful perfection are everywhere seen in the gardens of those partial to their culture. The apple, pear and peach seem equally at home with the more tropical fruits; while Los Angeles has ever been noted for its delicious table grapes.

If we leave the fruits of this beautiful valley, and pass to its cereal and coarser vegetable productions, we find it the great corn growing district of the State, always producing a sure and abundant yield on suitable soils and without irrigation; and there are thousands upon thousands of acres of these lands, for sale at very reasonable prices. Oats and barley are sure crops; wheat usually so, but sometimes liable to damage from rust, owing to the prevalence of moisture from the ocean, and nightly dews. But of all places to produce beets for sugar making, the valley of Los Angeles is the place. The seed can be planted and the growth perfected every month in the year. Not that the growth is completed in a month, but that there is no month in the year in which their growth is not as fully secured and as certain as during the best of the summer months in the more middle and northern parts of the State, making it easy to grow two crops a year on the same land; and if there is not seen there, within a very short time, the nucleus of what will eventually be one of the largest beet sugar establishments in the world, it will be because the owners of lands and capitalists do not fully appreciate the advantages possessed by this unequalled country for the prosecution of this important and highly profitable industry.

THE ORIGIN OF MAN.—We admit another article on this subject, in to-day's issue, which we propose shall close the discussion, for the present at least, so far as the *RURAL PRESS* is concerned.

PEA-FOWLS.—M. Eyre, of Napa, advertises for sale, in our columns, a pair of birds, the male of which is unquestionably the proudest animal—on account of its tail—in all creation. Peacock.

The wheat and barley fields on the Santa Cruz, Arizona, are beginning to head out, and give promise of an excellent crop.

Oro Lewis is the man who kept a Utica audience until 10:30, explaining to them the good results of going to bed promptly at 9.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., April 28, 1874.

FOR WEEK ENDING April 14, 1874.

LEATHER SHAVER.—Augustus H. Beschormann, S. F., Cal.

REFLECTING LAMP.—Emil Boesch, S. F., Cal.

MACHINE FOR RIVING SHINGLES.—Daniel Shankland, Watsonville, Cal.

ORE CONCENTRATOR AND WASHER.—Jonas B. Wilder, Sonoma, Cal.

CAR COUPLING.—Alexander Wonderly, Pali-sade, Nevada.

MACHINE FOR BLUESTONING SEED GRAIN.—John Wilkie, Yuba City, Cal.

WINDMILL.—Corydon A. Fargo, Modesto, Cal.

AUXILIARY HEATER FOR STEAM FIRE-ENGINE.—Absalom B. Hallock, Portland, Oregon.

STEAM MINING PUMP.—Andrews M. Rogers, Central City, Colorado.

SHAFT COUPLING.—Wm. J. Silver, Salt Lake City, Utah.

PUMP VALVE BOX.—Wm. J. Silver, Salt Lake City, Utah.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.



EACH ISSUE CONTAINS

Sixteen well filled pages.
Original and Choice Engravings.
Editorials on Home Industries.
On various kinds of Stock-rearing.
On Horticulture and Gardening.
Correspondence from Farming Districts.
Answers and hints to Correspondents about Local Farming.
Good Health and Useful Information.
Reports from Granges and Farming Clubs.
Mechanical and Scientific progress.
Agricultural Notes from all quarters.
Domestic Produce Markets.
Home Circle.
Domestic Economy.
Mechanical Hints and Domestic Receipts.
Home and Farm Matters.
Affording, in all, more of real instructive and profitable matter for general readers than any other weekly on this side of the Continent.

DEWEY & Co.,

Publishers, No. 338 Montgomery street, S. F.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

L. P. MCCARTY—General Agent.
A. C. KNOX, City Soliciting and Collecting Agent.
W. H. RATTENBERRY—California.
CHAS. W. OTIS—Marin County.
C. M. DALY—Solano, Sacramento, Yolo, Sutter and Colusa Counties.
CHAS. T. BELL—Alameda, Santa Clara and Santa Cruz Counties.
J. D. CAREY—Sonoma, Mendocino, Lake, Humboldt and Trinity Counties.
J. W. ANDERSON—Orange and Santa Ana, in Los Angeles County, Cal.
W. S. DAY—Nevada County.
W. J. STAFFORD—Monterey County.

IN EDITORIAL HARNES AGAIN.—The *PACIFIC RURAL PRESS* is a well filled, illustrated agricultural journal, published in San Francisco. It is the leading periodical of its class on the Pacific Coast. A piece of good fortune has recently befallen this journal in the engagement of Mr. Henry Barnum, formerly of Utica, upon its columns. Mr. Barnum will be remembered as an agricultural writer on the *Observer* and a regular contributor to other portions of this paper. He has resided for some time in Grass Valley, Cal., but has now removed to San Francisco.—*Utica, N. Y., Observer*.

PESCARO, CAL., Aug. 28, 1873.

MESSES, TREADWELL & Co.—Gents: The *Etna* I purchased of you is a Mower and Reaper that cannot be beat. I have tried it in almost every kind of grain and grass, oats, barley, wheat, clover, and even in squirrel grass that was not eight inches high, up hill, and the wind blowing it over as I went. I cut it close to the ground. It is the best I have ever run. I have run the Buckeye, Ball's, Wood's, Champion and Kirby Clipper, but the *Etna* beats them all. Yours truly,

C. TREASHEAR.

THE NEW U. S. MINING LAWS.

The new Laws of 1872, governing the location and purchase of Placer and Quartz Mines and Agricultural Lands in Mining Districts of the U. S., printed in circular sheet, for sale at this office. Single copies, 25 cts.

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

N. GILMORE.

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

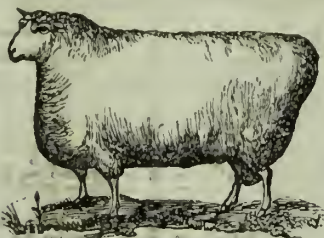
ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado county,
California.

11v6-cow

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

Angora Goats at Auction.

ON WEDNESDAY, MAY 6th, AT 2 O'CLOCK P. M., I will sell to the highest bidder Seventy Head of Thoroughbred Angora Goats, imported by their owner, Mr. A. Euytchedes, from Asia Minor. Sale Positive. Terms cash, in U. S. Gold Coin. ROBT. BECK.

I have also the best imported Alderney, Jersey and Ayrshire Cattle; Spanish and Silesian Merino Sheep at private sale. R. B. 11v7-6t
Sacramento, March 10, 1874.

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

U. S. LIVE STOCK EXCHANGE,

S. E. Cor. Fifth & Bryant Sts.,
SAN FRANCISCO.

Cattle, Sheep, Milch Cows and Horses sold on commission or bought on farm for cash. Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State.

WANTED Milch Cows, Cattle and Work Horses. Address, DAWSON & BANCROFT, 449 5th St., S. F. ap18-tf

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,

17v7-3m San Rafael, Marin Co., Cal.

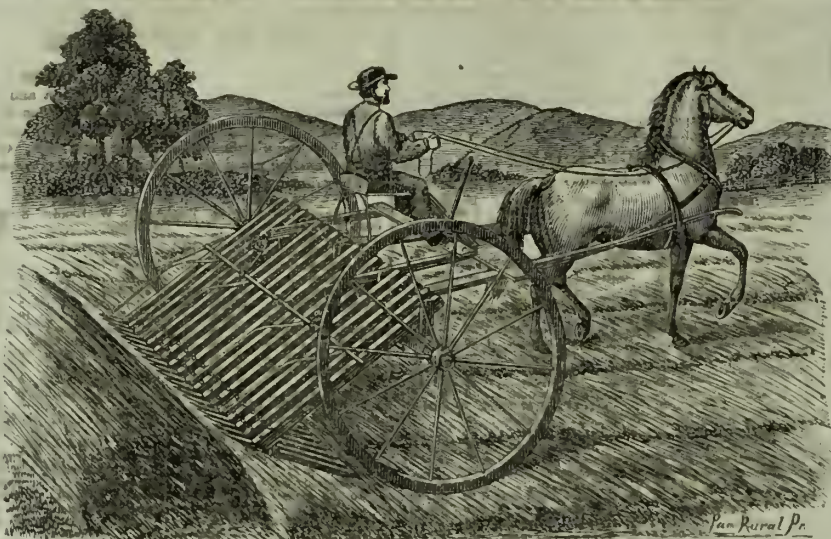
JERSEY CATTLE.

A few head of very choice Jersey Cows—Heifers and Bull Calves—for sale. Apply to R. G. SNEATH, Menlo Park. 15v7-3m

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F. 1v7-3m



BONNEY'S PATENT EXTENSION TOOTHED HAY RAKE.

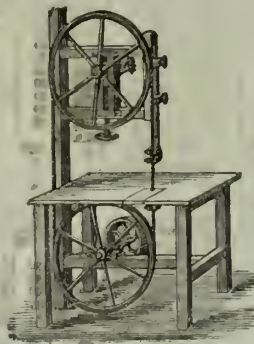
The only rake that gathers all the hay upon rough as well as smooth ground, free from dirt and dust, and does not roll or wad it together. The teeth can be used any length, and replaced without delay when worn out.

PATENT IMPROVED BAND SAWING MACHINE.

EQUAL TO THE BEST EASTERN, FOR LESS THAN HALF THE COST.

PATENT ADJUSTABLE GRAIN LIFTER.

The best in use, light, strong and durable. Can be run at any inclination to the ground, as seen at D in cut. Parties can save additional the cost of a set in one day's run of Header.



Also. HEADER APRONS, GRAIN BELTS and FARMING IMPLEMENTS Generally.

O. BONNEY, Jr., Manufacturer,

No. 221 Mission Street,

14v7-1am-3m

SAN FRANCISCO.



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the



THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

10v7-cow

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

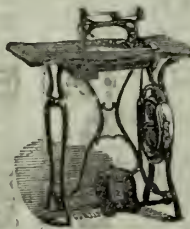
Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST Sewing Machine

FOR ALL KINDS OF WORK

THAT WAS EVER PUT BEFORE THE PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

ARE YOU GOING TO PAINT?

THEN USE THE BEST.

THE AVERILL CHEMICAL PAINT WILL LAST THREE TIMES AS LONG as the best lead and oil, without CHALKING; is of any desired color. It is prepared for immediate application, requiring no Oil, Thinner or Drier, and does not spoil by standing any length of time. It is equally as good for inside as outside work; over old work as well as new; in fact, where any paint can be used the AVERILL CHEMICAL PAINT will be found superior to any other. Any one can apply it who can use a brush, which truly makes it the FARMER'S FRIEND.

IT IS JUST THE PAINT FOR THE AGE.

IT IS SOLD BY THE GALLON ONLY.

One gallon covers 20 square yards 2 coats.

For further information send for sample card and price list.

HEALY & JEWELL, Agents.

Office—Corner Fourth and Townsend streets, San Francisco. 16v7-cow-hp-3m

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The New A1 Clipper Ship

FRIEDLANDER.....1,638 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,
San Francisco.

New Patent Cheese Vat and Heater,
Manufactured by G. HARRIS & SON, Petaluma,
Sonoma County, Cal.
Warranted to give satisfaction. ap25-1m

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



Peerless Self-Rake Reapers,
World Self-Rake Reapers,
World Mower and Reapers, with Dropper.
World Reapers, and Mowers with Dropper and Hand Rakes—side delivery.
Clipper Mowers and Reapers, with Dropper.

Cayuga Chief Mowers and Reapers.
Sulky Rakes—Furst & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

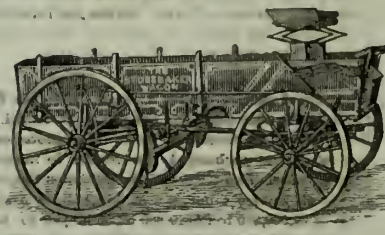
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps;
Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators,
Mortise Head Hay Rake, Scythes and Snaths,

Soule, Ketsinger & Co.'s First-Class

Farming Tools,

Gold Medal Forks, Hoes and Rakes,

Batchelor's Forks,

Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,

Road Scrapers,

Canal and Garden Barrows,

Hay Cutters—Burdick's

National, Belcher & Taylor's

Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Hoadley Engines, Russ' End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & Co., San Francisco.

McLAREN, PILCHER & BELL,
MANUFACTURERS, DEALERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.
MANUFACTURERS OF
CURREN'S PATENT HARVEST SHARPENERS,



[PATENTED JANUARY 20TH, 1872.]

The only successful Grinding Machine in existence for Harvesting Machines. No farmer who has a Reaping and Mowing Machine can afford to be without it. It is simple, cheap, quick, durable and portable GRINDING INSTRUMENT, which is adjustable to any kind of knives, so that it will sharpen the section immediately, without removing the cutter or unhitching. For particulars call on or address,

McLAREN, PILCHER & BELL,
605 Clay street, San Francisco.
Agents wanted. 15v7-6w

MATTESON & WILLIAMSON'S

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m **MATTESON & WILLIAMSON,**
Stockton, Cal.

THE CELEBRATED MITCHELL WAGON

WM. ZARTMAN & CO.,
CARRIAGE AND WAGON MAKERS,
COR. ENGLISH & HOWARD STS., PETALUMA.
Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate.
SPECIAL RATES TO GRANGERS. 12v7-3m

O. CREGO.

S. O. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:
Charles S. Ooffrey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.
Also, a large assortment of single and double Harness, of the most celebrated makers:
C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.
Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,
24v6-3m San Francisco.

H. C. SHAW,
STOCKTON, CAL.**Agricultural Implements,**

201 and 203 El Dorado St., Sign of "Webster Bros." General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Geared Headers.

The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW,
14v7-3m Box 95, Stockton, Cal.

GRANGERS,**TAKE NOTICE.**

WE ARE SELLING

FRENCH CHINA, GLASSWARE,**PLATED WARE, ETC.,****CHEAPER THAN ANY OTHER HOUSE****ON THE PACIFIC COAST.****O. LAWTON & CO.,**

MARKET STREET,

Under the Grand Hotel, SAN FRANCISCO.

14v7-eow-3m

NOTICE.**To Farmers and Grangers.****LAIRD'S PATENT SEAMLESS BAG.****WM. LAIRD & CO., Manufacturers.**

ELLIS READ, Agent.

10v7-3m

304 California Street.

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,

OIL CAKES AND MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.
Office, 3 and 5 Front street,
Works, King street, bet. Second and Third. fel5-eow

H. H. H.**HORSE MEDICINE.**

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.
WILLIAMS & MOORE, Prop'rs.
3v7-3m Stockton, Cal.

NURSERY NOTICES.**Fruit, Shade and Ornamental****EVERGREEN TREES AND****Plants for Sale,**

At the old stand, corner Oregon and Battery streets,
Directly opposite Post Office, SAN FRANCISCO.

I NOW OFFER FOR SALE

The Largest and Best Collection of Fruit, Shade and Evergreen Trees and Plants Ever offered in this market, and at Reduced Prices. Persons laying out new grounds would do well to call and examine our stock before purchasing elsewhere.

Orders from the Country

Promptly attended to and packed with care.
Send for Price Catalogue.

AGENT FOR B. S. FOX'S NURSERIES, SAN JOSE
100,000 Ramie Plants for Sale Very Low.

Address

THOMAS MEHERIN,

516 Battery Street,

SAN FRANCISCO.

P. O. Box 722.

24v6-3m

O. W. CHILDS,**Horticulturist—Los Angeles, Cal.**

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.
Send for priced Catalogue. 24v6-6m

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypressess, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrus Deodare, or Deavine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubbs' Hotel.
Send for Catalogue. jal0

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

Or

C. J. CLAYTON,

10v7-6m

Clayton, Contra Costa Co., Cal.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address,

W. H. & G. B. PEPPER,

21v6-1y

Petaluma, Sonoma Co., Cal.

PEACH AND PLUM TREES.**15,000 IN DORMANT BUD;**

SEVEN OF THE BEST VARIETIES
Of Peaches and five of Plum. The Tinley Peach, Georgia Freestone Seedling, the first offered in the State. Its flavor being richer and superior to the finest of the old varieties. It is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

4v7-2m

BRYAN & DOMINGOS,
P. O. Box 157, Sacramento, Cal.**THE ALDEN****Fruit Preserving Company**

OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.

W. M. WHERRY, Vice-President.

FRANK PYLE, Sec'y and Sup't.

BANK OF CALIFORNIA, Treasurer.

11v7-6m

H. K. CUMMINGS.

1858.

H. H. BALSTON.

1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,
ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have interests that will conflict with those of the producer.
4v23-1y

OUR SEEDSMEN.**ALFALFA!**

NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN ALFALFA, in lots to suit, for cash, at market rates. Our Seed, unlike that imported from Chile, is fine and free from Mustard or other foreign seed. Vegetable, Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,

425 Washington St., - - SAN FRANCISCO.

SEND FOR CATALOGUE. 21v6-1y

JUTE SEED! JUTE SEED!**NOW IS THE TIME TO PLANT.**

Just received, an invoice of FRESH JUTE SEED, which will be sold in quantities to suit. Also, just received a full supply of

EGYPTIAN CORN,

(Chicken Feed,) which is in fine condition. Orders respectfully solicited.

R. J. TRUMBULL, Seedsman,

ap25-3t

427 Sansome street, San Francisco.

SUPERIOR CHILE ALFALFA SEED,

EX "ETA" FROM VALPARAISO,

For Sale by

CROSS & CO.,

316 California street.....San Francisco.
19v6-1y

LOOK!

Buy your Eggs where you can get them from the Best Imported Stock.



I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdans and Black Spanish, at \$5.00 per dozen; White Leghorns, Game Bantams, Creve Coeurs, Rouen and Aylesbury Ducks, at \$6.00 per dozen; Silver Spangled Hamburgs, Golden Penciled Hamburgs, (first premium at Buffalo, 1873), Silver Spangled Bearded Poland, Golden Bearded Poland, Black Poland, White Crests, Brown Leghorns, White Sultans, La Fleche and Silver Gray Dorkins, (first premium at Buffalo, 1874). Also,

Game Imported Direct from Belfast, Ireland.

At \$8.00 per dozen. I claim to have the finest fowls in the State, and cordially invite inspection of the same at my yards. I have taken extra pains to procure the best of stock selected for me by my agent in the State of New York, who cannot be excelled as a judge of fancy fowl. Birds of the above mentioned varieties will be furnished at very reasonable rates. Also, a fine variety of Fancy Pigeons on hand. Send in your orders for Eggs, they will be carefully packed to carry safely any distance. Also, send for Price List of Fowls to

ALBERT E. BURBANK,

43 & 41 California Market.

Yards at Oakland Point, on Chase street, near 8th, on the premises of L. Blanchard. No Eggs or Fowls sent C. O. D.
6v7-1y

IMPROVED POULTRY.

Brahmas, Cochins, Leghorns, Hamburgs and Houdans. Bronze Turkeys, Aylesbury and Rouen Ducks.

Fowls and Eggs for Sale.

I have without doubt the largest and finest birds of their respective kinds to be found on the coast. For price list and circular send to

C. W. WILSON,

P. O. Box 1874.

14v7-1m

San Francisco, Cal.

J. Y. BICKNELL,

WESTMORELAND, ONEIDA COUNTY, N. Y.

40 Varieties Land & Water Fowls.

I have shipped fowls to California annually for many years past and they have given entire satisfaction. Circulars with prices and practical hints free. Reference—Editor PACIFIC RURAL PRESS. apl1-4t

SOMETHING NEW.

NO MORE BROKEN EGGS.
Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street,
Agents for the Pacific Coast. 11v7-3m

**The New Wilson SEWING MACHINE**

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market.
G. A. NORTON, Gen. Ag't for the Pacific Coast.

337 Kearny St., S. F.

PRICE, \$50.

ap25-1y

CO-OPERATIVE MARBLE WORKS.**JOHN DANIEL & CO.,**

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and

Kearny, SAN FRANCISCO.

21v2-1y



DEWEY & CO..

American & Foreign Patent Agents,

OFFICE, 338 MONTGOMERY STREET, S. F.

The best, speediest, and surest method for you to obtain patents, file caveats, or transact any other important business with the Patent Office at Washington, or with foreign countries, is through the agency of DEWEY & CO., PUBLISHERS OF THE MINING AND SCIENTIFIC PRESS, SAN FRANCISCO, an able, responsible, and long-established firm, and the principal agents on this side of the continent. They refer to the thousands of inventors who have patronized them, and to all prominent business men of the Pacific Coast, who are more or less familiar with their reputation as straightforward journalists and patent solicitors and counsellors. We not only more readily apprehend the points and secure much more fully and quickly the patents for our home inventors, but with the influence of our carefully read and extensively circulated journals, we are enabled to illustrate the intrinsic merits of their patents, and secure a due reward to the inventor, besides serving the public who are more ready to give a fair trial, and adopt a good thing, upon the recommendation of honest and intelligent publishers.

To Obtain a Patent.

A well-constructed model is generally first needed, if the invention can well be thus illustrated. It must not exceed 12 inches in length or height. When practicable, a smaller model is even more desirable. Paint or engrave the name of the article, and the name of the inventor, and his address upon it. Send the model (by express or other reliable conveyance), plainly addressed, to "DEWEY & CO., MINING AND SCIENTIFIC PRESS OFFICE, SAN FRANCISCO." At the same time, send a full description, embodying all the ideas and claims of the inventor respecting the improvement describing the various parts and their operations.

Also send \$15 currency, amount of first fee of the Government. The case will be placed on our regular file, the drawings executed, and the documents made up, and soon sent to the inventor for signing.

As soon as signed and returned to us with the fees then due us, it will be sent straightway to the Patent Office at Washington.

When the invention consists of a new article of manufacture, a medicine, or a new composition, samples of the separated ingredients, sufficient to make the experiment (unless they are of a common and well-known character), and also of the manufactured article itself, must be furnished, with full description of the entire preparation.

For Processes, frequently no model or drawings are necessary. In such case, the applicant has only to send us an exact description, and what is desirable to claim.

For designs no models are necessary. Duplicate drawings are required, and the specifications and other papers should be made up with care and accuracy. In some instances for design patents two photographs, with the negative, answer well instead of drawings.

For further information, send a stamp for our illustrated circular, containing a digest of PATENT LAWS, 112 illustrated mechanical movements, and HINTS AND INSTRUCTIONS regarding the RIGHTS AND PRIVILEGES of inventors and patentees, which will be furnished post paid. Also a copy of NEW PATENT LAW of 1870.

Address **DEWEY & CO.,**
PUBLISHERS, PATENT AGENTS AND ENGRAVERS,
No. 338 Montgomery street, S. F.

HINTS FOR INVENTORS. We will send on receipt of stamp for postage, FREE, our 32-page Circulars containing 112 Illustrated Mechanical Movements; a digest of PATENT LAWS; information how to obtain patents, and about the rights and privileges of inventors and patentees; list of Government fees, practical hints, etc., etc. Address DEWEY & CO., Publishers and Patent Agents, San Francisco.

EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz; Buff Cochins, \$3 per doz; White Faced Black Spanish, \$4 per doz; White Leghorns, \$5 per doz. Buff Cochins and Light Brahma Fowls for sale. Address: **G. A. DEAN, Pacific Straw Works,** 12v7-3m-16p 335 Bush St., San Francisco.

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS. White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. **P. J. PHILIPS,** 11v7-1m 608 Clay street, S. F.

FRANK MILLER & SON'S

MOWING MACHINE OIL,
IN PATENT CANS, ALREADY FOR USE
IN THE FIELD.

NO FARMER should be without it, as the season for mowing and reaping comes on. For sale by **Baker & Hamilton, M. C. Hawley & Co., E. S. Whitcomb** and other agricultural implement dealers. m2-1m

THE PEOPLE'S PUMP.

THE ONLY RELIABLE PUMP FOR

Farmers, Stockmen and

Stable Keepers,

BEING A

NON-FREEZING FORCE PUMP,

Working in Wells from

6 to 100 feet deep.

Suitable for either Hand or Power use.

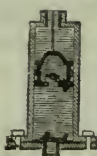
RATE IN PRICE, FROM \$12 UP.

Send for Circular.

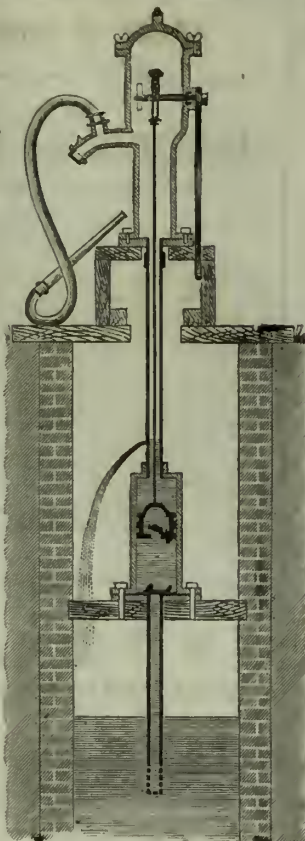
Depot for Pacific Coast,

CONROY, O'CONNOR & CO.,

SAN FRANCISCO.



13v4-2amly



STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID & ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot-Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

The STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kane's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Blueing, Harrow Soap, Thomas' Cool Water Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Cologne, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street,
16v7-3m SAN FRANCISCO, CAL.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock: one of the oldest and best yards of pure bred poultry in the United States.



M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls: Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California. ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS. 7v6-tf-16p2

TIPTON & BURTT'S

MEDICINAL

SHEEP PREPARATION,

Warranted FREE FROM ALL POISON. A sure and positive cure for SCAB, TICKS and LICE, and a sure promotion of the growth of the wool. It has been used in Tehama County for the past two years, with most gratifying results, and we have the pleasure of referring to the following gentlemen as to its merits, viz.: H. A. Rawson, Jas. Gooch & Bro., J. W. Montgomery, J. Eby, Curtiss & Brown, H. Bossuka, Jos. Cone, J. W. Gates & Sons.

It is a liquid and put up ready for use in 2 1/2 gallon tins, four tins in a case.

WHITIER, FULLER & CO., Sole Ag'ts,
21 Front street.....SAN FRANCISCO.
28 K street.....SACRAMENTO.
18v7-3m

FRESH MILCH COWS,

FOR FAMILY USE.



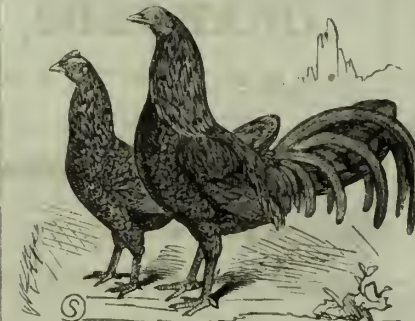
Thoroughbred Jersey Cattle for Sale.

Inquire at Room No 7, No. 411 1/2 California street.
18v7-tf

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than Poor Ones!

OAKLAND POULTRY YARDS,
COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.



GAME FOWLS!

Warranted to Stand Steel.

Prize winning strains of the following varieties, just received from the East: Earl Derby Games, Red Pile Games, Blue Pile Games, Heathwood Games, White Georgian Games, Black Breasted Red Games and Silver Duckwing Games. Eggs, \$12 per doz; guaranteed to reach the purchaser safely.

For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the country, to

GEO. B. BAYLEY,

Importer and Breeder of Blooded Fowls.

Box 659, San Francisco.

Purity of all Stock and Eggs sold absolutely guaranteed

The Sewing Machine

—FOR THE—

GRANGERS.

NO COMBINATION! NO MONOPOLY!

The New Improved FLORENCE,

Side Feed and Back Feed. Agency established on the Pacific Coast in 1863. The lightest running, most simple, and most easily operated Sewing Machine in the Market. Always in order and ready for work. If there is a Florence Sewing Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner. Samuel Hill, Agent, 19 New Montgomery Street, Grand Hotel Building, San Francisco.

Mr. I. G. Gardner, State Agent for the California Grangers, is authorized to make liberal terms to all Grangers who purchase the FLORENCE. No combination against favoring the Grangers has ever been joined by Florence Agents.

SAMUEL HILL, General Agent.

18v7-3m

W. M. BRANDON.

JACOB W. ROGERS

BRANDON & ROGERS,
California Land Agency,
535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.

SEEDS!

SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,

ENGLISH RYE GRASS,

RED TOP,

ORCHARD GRASS,

TIMOTHY,

MESQUITE,

RED CLOVER,

WHITE CLOVER

FOR SALE AT WHOLESALE OR RETAIL.

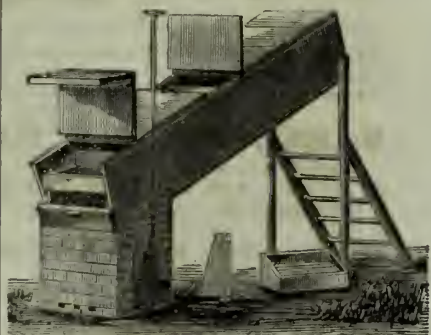
GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

Ryder's American Fruit Drier.

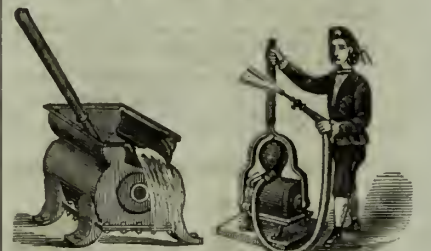


This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars, Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent,
306 California street, San Francisco

THE CELEBRATED

SLUTHOUR PUMP.



Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING AND THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from 1/4 to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.

Agents for Eastern Manufacturers, 306 California street, San Francisco.

BRONZE TURKEYS.

Largest and Finest Collection
on the Pacific Coast.

EMDEN GESE.

58 pounds to the pair, at maturity.

Eggs for Sale Now.

BRAHMAS, LEKHORNS, HOUDANS, HAMBURGHS,
COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.
Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address:

M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.

PEA-FOWLS.

A FINE PAIR OF PEA-FOWLS, BETWEEN ONE AND TWO YEARS OLD,

For Sale. Price, \$30.

Address,

M. EYRE, Napa, Cal

m2 4t

PACIFIC RURAL PRESS

Volume VII.]

SAN FRANCISCO, SATURDAY, MAY 9, 1874.

[Number 19.]

Pure Blooded Angora Ewe.

We feel a pleasure in introducing to our readers "Nellie," a pure bred Angora ewe, imported by Wm. M. Landrum, in August 1867. At two years old "Nellie" was one of three ewes that won the sweepstakes prize at the late State Fair at Sacramento, 1873. Entered and owned by Landrum & Rodgers. She shears seven lbs. of clean, beautiful mohair, of high luster and quality; the curls when straightened down touch the ground in front of her fore legs; she can be seen at Woodward's Gardens. Landrum & Rodgers have many others that shear over 6 lbs. and rival this one in beauty. Their best bucks shear eight to ten lbs. each. The old Hornless Costamboul sheared ten lbs.; Andy, sired by Hornless, dam a pure ewe bred by Peters from the Davis importation, sheared ten lbs.; Hureules, a very favorite buck imported from Angora, shears eight lbs., and is, perhaps, as fine a breeder as there is in America; his fleece is free from any kemp, measures longer on the breast than anywhere else, and nearly as long on the belly as on the sides; has no mane or hip lock; has curls on his legs, to the hoof, and a tuft of fine fleece on the forehead, and breeds everything up to the finest points; some of his kids had fleece on their bellies at one year old this spring, that measured from seven to nine inches long. By breeding to points, with such stock we may expect to see the same progress in the improvement of pure bred Angoras, that has been made in the short-horns and various breeds of sheep.

The Angoras seem to be doing well in every locality, from Washington Territory to Arizona, and reports come encouragingly even from Nevada and the snow-topped Sierras; but few small losses to note in any locality.

Landrum & Rogers, of Watsonville, write us: "Our goats are doing well, generally; our pure breed kids, at Watsonville, will swell the pure breed band to about 200 head; they are looking finer than ever before. Our flocks at Peach Tree are looking finely, not over 40 kids lost out of 1,400. The San Buena Ventura flock is also doing well, and the men on the Guadalupe island report 25,000 to 30,000 common ewes, with half-breed kids, shining like snow-balls all over the island, the result of 50 fine bucks—work since May last. We deferred putting on a force to clean up the island until June next, in order to complete a large enclosure, which has been done. Also, the men have slaughtered 1,200 head of old common bucks, and cured the pelts nicely, and castorated 800 head of young bucks, as a starting point, to put things where they belong and clean off the island, which will be done the ensuing season, leaving nothing but wethers and ewes of the plebian stock to run with the fine Angoras belonging to the company, now numbering near 2,000 head, with at least 100 fine bucks.

The feed on the island is ample at present for 100,000 head, and the men on the island say that, from the white kids that show on the island, a man would think the Angoras did nearly all the work; that they cleaned out the common stock wherever they came in contact. The wethers of the grade stock now breeding on the island, will be utilized to better advantage; the hams dried, the mats canned, pelts and tallow properly handled, will, all combined, make them very profitable.

Mr. A. S. HALLIDIE, who recently resigned from the Board of Regents of the State University, is nevertheless, still one of that body. The President of the Mechanics' Institute is *ex officio* a member of the Board of Regents, and as Mr. Hallidie intended resigning his position in the Institute, and his presence was required in the Board of Regents, he was appointed a special Regent by Governor Booth, in anticipation of his resignation as President of the Mechanic's Institute. But being persuaded to remain in the Institute as President, he resigned his special appointment which he had received in place of Mr. Butterworth, and is now a Regent *ex officio* as before. Mr. J. M. Hamilton, Master of the State Grange, has received the appointment and fills Mr. Butterworth's place, which Mr. Hallidie held under the special appointment.

The First Fruits.

Who that has grown fruit has not been disappointed with the first products of their trees? The size and beauty do not correspond with the owner's expectations. It is not the quantity of the yield with which he is dissatisfied; he merely wanted a fine sample, and even this he has not obtained. Perhaps he expected too much; for the partiality which a man feels for trees of his own planting and nursing is akin to that which he would feel for his own offspring; and he is quite apt to over-estimate their ability. But he may have toned down his expectations to the most reasonable level and still be disappointed; that is, if he has not made proper allowances for the immature condition of the trees. The first fruit is not a fair sample of what may reasonably be expected from the tree, as it approaches nearer to maturity. It lacks development in size, homeliness and flavor, and does not keep good. In our experience we have found that it takes even



PURE BLOODED ANGORA EWE—ENGRAVED FROM PHOTOGRAPH.

more than one season for the larger fruits to do themselves justice.

The most experienced of nurserymen, and of fruit-growers also, advise the picking off the fruits of the tree at an early period of its growth, and only allowing a very moderate amount to mature for several seasons. If this advice were followed it would no doubt add to the longevity of the trees; and if we would add to this system the practice of thinning the fruit, even during the trees' prime of bearing, we should have better fruit, and less alternating between super-abundant and scarce seasons.

The impatience to have a sample of the fruit of trees which the owner has succeeded in bringing through to a bearing age is very pardonable; and it is not expected that it will be corrected by anything that we can say on the subject. Our principal object here is to modify the disappointment which arises from the lack of that perfection which was expected from the trees' first products, and to moderate the charges of "swindling" which are too frequently hurled at the nurseryman when the first fruits are not up to its represented character.

A PINE TREE GROWN FROM A SLIP.—A very interesting occurrence of a pine tree (*P. insignis*) grown from a small slip. In the yard of Prof. Henry Durant, of Oakland, there is a pine tree which is now over 25 feet high, and over one foot through, near the ground, which was grown from a small slip, from the end of a limb, put in the ground by Mrs. Durant, about eight years ago. At the time it was put in the ground it was kept damp for some time, and soon it commenced to grow, and it is now as fine a tree as any in Oakland of its size.

The Grape Prospect.

We have received advices from several of the principal grape-growing districts, and from all come the same gladdening report of a splendid prospect, from which we are safe in saying that the yield of grapes this season, and of course the vintage, will far exceed any former one in quantity of product if not in quality, the latter depending upon the conditions of climate nearer the season of the ripening of the grape.

The largely increased number of new vines coming into bearing, will add greatly to the acreage of production; and as there has been no loss or damage of the grape crop from frost, and as the danger from this source is now past, we can confidently look forward to the largest grape yield for the production of raisins and wines, that California has ever given. There will be an opportunity for more experimentists to try their skill in the curing of raisins than ever before; and we expect also the largest and

Cut Your Hay Early.

The practice of waiting until grass is thoroughly ripe before cutting, and after cutting allowing it to remain in the field until the little juice that is left is dried out before it is put into the stack or bale, is simply a relief of agricultural barbarism. This system of hay-making was evidently founded on the mistaken notion that more growth was secured by allowing the grass to stand until it was thoroughly ripened; and from a fear that it would heat and mold if put away before being thoroughly dry; but the first supposition is now proven to be false, and the fears in regard to the latter point have vanished before the light of experience.

One of the most sound and orthodox tenets of agricultural faith is the belief that if grain is not cut even before it is perfectly matured, it loses in substance. Our oldest and most experienced farmers, those whose judgment has not been biased by book farming, will assure us that if wheat is not cut before it has thoroughly ripened, a portion of it "goes back into the ground." And so it does—that is, a portion of this portion; the rest of it going abroad upon the wings of the wind from whence it came. In growing Indian corn also, if the stalks are not cut before the ears are perfectly ripened, there is the same loss of substance. This loss is not confined to the stalks which, as all know, are rendered almost worthless by remaining uncut through the ripening season; but the ear also loses in weight and richness.

It is an inevitable law of vegetation that when the plant is matured the powers that have brought it to maturity having fulfilled their mission, they are withdrawn and dispersed among their original elements. The great effort of nature in the vegetable kingdom, (and in the animal kingdom also, though our consideration must be confined to the former at present,) is to insure propagation; and when it has bestowed upon plants their full reproductive power, thoroughly ripened them, it recalls its forces. It is gratifying to us to suppose that the rich juices were sent flowing through the stalks and blades of grass for the special benefit of our stock, and we certainly have the satisfaction of appropriating them to this purpose, but when these juices have accomplished their great object of giving reproductive power this efficient army is disbanded without considering the needs of our cattle.

The most advanced condition of farming now recognizes the advantage of arresting this return of the vital juices to the earth and to the atmosphere from whence they came, in hay-making as well as in grain harvesting. Fruit growers are also beginning to realize that they too must adopt the same practice in gathering their crops in order to secure the whole of the richness and nice flavor of the fruits.

In regard to the excessive curing of hay, the farmers of the East, who have far more cause to guard against hay spoiling in the mow or stack, than those of California, give less time than formerly to the curing of it, and now store it away in a condition which would have shocked the sensibilities of the hay-makers of twenty years ago. The result is more hay and that of a better quality. Here in California where the atmosphere has none of the mold producing properties that endanger the hay while in the barn or stack, there is still less excuse for over curing. As a general rule grass cut in the morning should not be allowed to remain in the field over night.

PIONEER WOOLEN FACTORY.—We have received a price list of goods manufactured by the San Francisco Pioneer Woollen Factory for 1874. These goods consist of family blankets, colored blankets, overshirts, underwear and sundries; blanket overcoats, ladies' shawls, gents' shawls, childrens' square shawls, etc. The prices of goods are such as would induce us to believe this factory can successfully compete with any other, as we know the quality of their goods to be unsurpassed.

PURISSIMA RANCH.—Will some one of our readers at Half Moon Bay inform us who we can address, as the proprietor of the Purissima ranch near Half Moon Bay? We want to have a talk with him on the subject of growing beets for sugar making.

finest display of vineyard products at our State and District Fairs than ever before witnessed.

As more table grapes will be grown than can be consumed or sold at home, at remunerative prices, it will be an inducement to many to make the venture of shipment to the Atlantic States and the limitless mining interior. The heaviest grain crop, with the largest wool and wine crop the State has ever produced, secure to us a more prosperous season than any which has preceded it.

CALIFORNIA RICE CULTURE.—Mr. J. H. Taylor, of Livermore, has some three acres of upland rice now growing and looking finely. He sowed 100 pounds of seed obtained in New York, and two pounds from the Agricultural Bureau, at Washington. Several years since, Mr. T. sowed one pound of seed, which grew well until two feet in height, when it was destroyed by stray stock, that devoured the straw with avidity. Mr. T. has sowed this experimental crop broadcast, but recommends sowing in drills, 18 inches apart. He believes the upland rice will grow on any good barley land. We invite him to furnish us the result of his pioneer efforts in rice and cotton raising at Livermore.

THE SILVER FLEECE.—We have received from Landrum & Rodgers a beautiful sample of Angora hair over 12 inches in length, fine and soft as the silks of the Orient, and with a luster of silvery whiteness. The prospect for the successful growing of the Angora goat in California, its adjacent States and coast islands, continues to be most encouraging.

CORRESPONDENCE.

Crop Prospects in Santa Clara County.

EDITORS PRESS:—I have just returned from a day's observation of the country—its condition and prospects between this city and the summit of the mountains, skirting this valley on the southwest. After leaving the beautiful alameda with its stately old trees, its magnificent residences and lovely gardens, we were whirled along a well macadamized highway, on either side of which, as far as the eye could reach, we beheld vast oceans of verdure, broken only here and there by the neat houses and inviting surroundings of the farmers. Never, I believe, in the history of this county have the grain prospects been as flattering as at present; heavy, strong and of a deep bluish green color in the full vigor of healthy growth. The crop, with scarcely any variation for a distance of ten miles, is unexceptionable and will gratify the fondest anticipations of its owners.

Beautiful Trees.

The general absence of shade trees along these almost endless lanes is painfully noticeable. How much it would add to the beauty of these roads and the pleasure of these drives, and how much it would lend to the attractiveness of these farms if each farmer would invest a little money and spend a few spare hours in the business of ornamenting the highways skirting his lands. The blue gum appears to thrive best on these highlands. I noticed in one instance a beginning had been made and quite a number of blue gums had been transplanted, which looked as well as any I ever saw.

Almond Growing.

Further on, on what is known as chaparral land, I noticed a large plantation of almond trees embracing several hundred acres—having been planted during the winter just past—and barring the very awkward and unworkmanlike manner in which the transplanting had been done, they looked remarkably well. The good people of this neighborhood appear to have been attacked universally with

Almond on the Brain

Very much. It seems to be about "all the talk" and pretty nearly every one who glories in the ownership of a few rods of land, has it either already set to almonds or intends doing so next season. Your correspondent therefore took pains to search up all the facts possible touching this matter, for the special benefit of the readers of the RURAL.

I visited one almond orchard which had been planted four years. The trees were quite large, very healthy and growing vigorously. The land on which this orchard stood has a gentle slope to the southeast. The soil is composed of sand, gravel-loam and shale or a kind of rotten slate. I noticed but little fruit and this was not uniform in size. I regret that I could not see the proprietor of these trees, as I am sure I missed some valuable information in failing to meet him, he being absent from home during my visit. I am satisfied, however, that the bloom or embryo fruit of these trees has suffered either from frost or blighting winds, and notwithstanding the excellence of the locality and the adaptability of the soil, the size of these trees—without fruit and the irregular appearance of what little fruit does remain—leads me to conclude that something is wrong. What is it, if not frost or blight? There is no question but almond trees will grow on any of these soils and that without irrigation, but their productiveness remains an unsolved problem. On the premises of Hon. W. S. McMurtry, I was shown some half-dozen old trees, fifteen or sixteen years of age, which were quite laden with healthy looking almonds, particularly on the south side of the trees, but these trees were well sheltered from winds and frosts by being surrounded by other varieties of trees and buildings. I noticed also a number of

Orange and Lemon

Trees on this gentleman's place, which by their favorable appearance give evidence that fruits of this class may be grown successfully in this locality. The village of Los Gatos—in the immediate vicinity of which I have been taking the foregoing observations—is a thrifty little manufacturing town, situated just at the entrance of what is known as the "Santa Cruz Gap," and is about ten miles distant from San José. The inhabitants are industrious, enterprising and social. The scenery hereabouts is beautiful, and the future of all interests here is hopeful. Proceeding up the cañon over an excellent turnpike road, we left the village of Lexington, (of which there is but very little left but the name,) to our left and westward, made the ascent of the mountain to the summit, from which point fine views of a very large extent of fine country may be had. During our homeward trip, we made collections of several varieties of fine plants, natives of the hills, the most attractive of which was the beautiful gold leafed fern, (*Gymnogramme Sulphurea*), of which we obtained some fine specimens. And now, dear RURAL, I wanted to tell your many readers more about the conditions and resources of these mountains as well as something of interest we encountered on our home tramp we, to wit: an artist, a botanist, a scribbler—

but I see that this letter has reached in length already more than my allowance of space, therefore I desist. A. KAMP.

San José, April 30th, 1871.

We are confident our readers will be pleased to hear further from "a scribbler."

Letter from Minnesota.

EDITORS PRESS:—I received two RURALs of March 7th and 14th, and am very much obliged to you for them. They are very interesting to us, and show your State to be far superior to any of the Atlantic States, in all points as far as I can learn. One year ago this month, two of us commenced arguing the question of emigrating to California; all the people laughed at us for leaving Minnesota. On the first day of next month there are thirteen more calculating to start for California, and some twenty families more will start in September, that will make thirty odd within six miles of here. We intend starting the first of September next, and if all the farmers could sell that want to, there would be a general emigration to California. Nine-tenths of the people would sell, and mighty cheap too for cash and go to a warmer climate.

I have been having a number of letters from the good people of California and Oregon; they all tell me about the same story concerning health, etc., but most people say a man without money is better off in Minnesota than in California if he depends upon labor for a living. Now I can't see why a man that depends upon labor for his living can't do as well or better in California, than he can in the Eastern States or here in Minnesota. Here he can only get work, if a farmer, at most six months out of twelve, unless he goes off into the lumber woods. How do the California farmers plow their land, sow, harvest and thrash their grain if they don't hire a share of this work done? Some say the Chinamen do all this labor for a song and board themselves. If that is the case, the most of the Minnesotians had better content themselves to stay at home and put the money that they would pay the railroad companies, into sheep and cows, and improve their farms, but I can't see it in that way, although it may all be true.

Six months to-morrow the snow fell and froze up the ground, and last Monday I was drawing hay on sleighs. The most of the fields are getting the snow off, but all along the fences there are two and three feet of snow; the ground is thawed about three inches deep away from the snow drifts. It takes us about six weeks to put up hay for twenty head of stock. We put up about three and one half tons of hay per head, and then it takes one man seven months to feed that hay out to the stock in winter and spring, and lots of snow to shovel after every storm. It would have tried Job's patience to have lived on these bleak prairies. We generally get about five to six months to work on the land, and so much winter that it uses up all the farmer can raise, and all we can depend upon is wheat. I have never yet received ninety cents for a bushel of wheat and have raised and sold a great many bushels of wheat since I have been farming in Minnesota. We might as well expect to raise oranges in a snow drift as to raise fruit in northern Minnesota. I write this to show you what Minnesota is, and I have left out a score of tornadoes, hail storms, thunder and blizzards that greet us in summer. But my opinion is that a man or men can make a living much better where there are at least 10 months in the year to work on a farm than to work five or six months, while on the Pacific coast nearly all kinds of fruit can be raised. There are people inquiring every few days what common farm hands get per month the year round, or through harvest and plowing, and also of tradesmen, but I can't tell them as I have never seen a statement of labor rates in California, but I have prices of all these things from Portland, Oregon, and would be very much pleased to get such a statement from California. When I emigrate from here I want to go until I can find a place where there is no ice or snow in winter.

MARK D. JUDKINS.

Elmwood, Minnesota.

Letter From Washington Territory.

EDITORS PRESS:—Our country is very new. Have quite a large amount of tide marsh lands that when dyked are very productive. Oats last year yielded from 65 to 100 bushels per acre, and weigh very heavy. Everything yet tried on them that is suitable to this climate succeeds finely. Weather the past four weeks has been glorious and farmers have been making the most of it. Quite a large Grange will soon be organized here. As most of the settlers began here with little means, and reclaiming the lands is expensive business, money is very scarce. Prospects are good for a large crop this year, which it is hoped will make times easier. A grain or feed mill is very much needed. Our young cattle and dry cows have wintered well, with but a very few feeds, and I think they would have done very well without any. Our stock range is quite limited however, the land being timbered with the exception of the tide lands. About thirty inches of rain annually, much more as you go south. Delightful weather, but most too many rainstorms from June to September.

Should any of the foregoing items be of sufficient general interest, you are at liberty to use any or all of them. R. E. WHITNEY.

La Conner, Whatcom Co., Washington Territory, April 13th, 1874.

San Luis Obispo County.

EDITORS PRESS:—Your correspondent arrived yesterday from San Francisco, per steamer *Constantine*. The boat is a small one, capable of accommodating about ninety passengers; but as there were more than twice that number on board and it was of course intolerably crowded, there were not sleeping apartments for half who had paid for them in advance. The cabin was jammed and the deck was covered with mats on which many spent the night out in the damp fog and heavy air. Twenty-four hours of plowing through the billows brought us to the landing where a stage was waiting to convey us to this place, ten miles inland.

San Luis Obispo.

If there is a more beautifully located place on this coast than San Luis Obispo, your correspondent has not seen it. It lies amid the hills and mountain spurs of the Coast range, far enough from the sea to avoid the unpleasant fogs that so often beat the sky out in San Francisco, and render the air heavy and unwholesome to breathe. It is where the ocean and the inland breezes meet and make a compromise. The country adjacent to the town is very rich in soil and fertile in products. Barley seems to be the staple. Wheat promises an abundant harvest this year. There have been heavy rains here, as elsewhere throughout the State this season, giving the crops a good fresh start.

The town is improving. There is a steady healthy growth here that you do not see in other parts of the State. The place is very old, but the corporation is yet in its youth. More improvement has been made within the last five years than ever before. The place was formerly an old Spanish Mission and has had existence for more than a hundred years. The old church is a grey with years. Its walls are bent over with the weight of a century upon them. It is a piece of antiquity, a link that connects us with the time before the republic was born, before steam was utilized or thought was made to ride upon the wings of lightning. It is a relic of the past, and ought to be left to stand as a post or marker along the road of history.

Father A. Ronssel, a French priest, formerly of Watsonville, where he resided for many years, is at present in charge. He is assisted in his labors by two other younger priests and service is held every Sabbath. This old mission is worthy of a more minute description than I shall be able to give. The enclosure comprises a whole block about 80 yards square. It was erected for a place of defence as well as worship by the old Spanish missionaries in 1772. The main wall is of stone and, of course, solid, to stand the changes of an hundred sold revolting years. The wall is somewhat dilapidated but the buildings within, including the pretty residence and chapel, are yet preserved in all their original design and antique architecture. The buildings are of adobe, covered with tile. It is wonderful how they have stood the rains and winds of so many years. Some of the citizens here think "the old rickety thing," as they call it, ought to be removed; but it is, to me, the most interesting thing except the mountains, in this part of California. I would enter a protest to its defacement or removal. It is old, so let it be. It is the garden spot where the first seeds of Eastern civilization were sown on this coast. This seed has germinated and its fruits may be seen everywhere to-day in the track of christian progress and enlightenment. It is the work of the old Franciscan fathers. Let it stand as a monument to them and their labors in behalf of humanity.

There seems to be plenty of money here. Everybody's face wears a smile. Real estate is rapidly advancing and a general prosperity is over all. The means of transit are abundant. Two steamers arrive at the landing every week, and a stage leaves every morning, connecting with the bay city by way of the railroad. The nearest point to the railroad is about seventy miles distant. The population of the town is about three thousand, and that of the county seven thousand. Emigration is pouring in from all parts and well it may, for, from all accounts, no parts of the coast offer better advantages to the settler.

The Patrons of Husbandry.

This organization, which although in its infancy has already fretted and influenced legislation in national assemblies, has a firm footing here. There are six Granges in the county, all in good condition. Mr. Wm. Jackson is Master of the Grange in this place, and M. D. Miller the Secretary. It has a membership of nearly 100 of the influential farmers about here and is a very prosperous. The Patrona mean business down here. They seek but their rights and these they will have. The hand that rocks the cradle rocks the world. The hand that holds the plow holds in its grasp the bread of humanity. It also holds the power to defend itself against monopolies and all abuses that may grow out of them. The farmer is the trust of all public benefactors. He does the most and says the least about it. They now speak in tones of thunder to our legislators.

Above the rattle and din of the battle
A voice cries from the skies
To the men that sow and reap and mow
"Beware of monopolies!"
From a thousand fields the thunder peals:
"Arise! strong men arise!"
And the men below that sow and mow
Hear, heed, and open their eyes.

That may be poor poetry but it expresses the idea conveyed in this Grange movement. The men of this county have a wish to do their

share of the work and the manner in which they have gone to work evinces their earnestness and sympathy in the cause.

The RURAL PRESS gladdens the homes of many in these parts and the Grangers express their approbation of the position it has taken as an advocate of their interests in this movement. ALSTON.

May 1st, 1874.

Pen Strokes.

[Written for the PACIFIC RURAL PRESS.]

In redemption of my promise, I tender the following: In passing through Los Angeles county, I found the prospects for good crops of both grain and fruits very promising, Alfalfa is luxuriant, barley promises a large yield, while wheat is regarded as better than an average.

The San Gabriel, in its great latitude of rise and overflow, has confiscated largely of the very fertile soil of the Monte, seriously damaging certain land owners, and thus much discouraging future proceedings.

Notwithstanding the occasional severe and damaging wind storms, the enterprising and intelligent proprietors of the "Cocomungo" (vineyard) ranch, have everything in ship-shape, and marked evidences of high and proper culture, are, in its every department, observable.

Passing the broad plain—semi-desert—that intervenes between this ranch, and the very attractive, and to a small extent, fertile valley of San Bernardino, we (or the weary travelers) are much relieved by the great contrast.

We find an industrious, moral, contented people—not that they are over-enterprising—sturdy, comfortably circumstanced, sociably harmonious—that is comparatively—the make-up elements of good society and fraternity.

Too great a per cent. of the land and labor have been hitherto devoted to the cultivation of the cereals, and much too small to the culture of fruits, semi-tropical, etc. Many of the farmers are beginning to realize this truth, and are changing accordingly. While both wheat and barley look now encouragingly well, some dolefully hint at uncertainty, as they recall the effects of former "northers," having just experienced a severe one, which has sported in the destruction of some gardens, and applied more or less freely its withering, wilting influences to a few of the most exposed barley fields. Yet, owing to the great amount of acreage in the valley, a very ample crop will doubtless be harvested.

The planting of cottonwood, etc., trees along streets and roadsides is a judicious and commendable enterprise; everywhere in California towns and suburbs should this tree planting be more generally and systematically resorted to.

San Bernardinoans have made, and are making, their town and its suburban surroundings most beautiful by tree and shrubbery planting.

Incident to several newly discovered mines, excitement is rampant, and symptoms of monomania on "rock" and "feet," are observable. Incredible tales of fabulous richness are industriously circulated, disturbing the equanimity of not only the credulous, but of some of the more deliberate class. Yet few, if any, of the readers of this, will be so injudicious as to forsake their agricultural, or other paying interests, for the uncertainty attendant upon such wild goose chases, as such diggings are going to prove to many. Farmers and sons of farmers stay at home and mine in the fertile soil of your valuable home place, and leave to experienced miners and homeless men the profits and hardships of mining life. Doubtless some few will make fortunes, more do well, most lose by going to these new El Dorados.

Conflicting reports are now reaching us as to the extent and merit of the San Jacinto placer diggings, located within thirty miles of here. Not much gold will come from there. This county contains no extensive placer diggings.

The RURAL PRESS is much liked here, among and by its patrons, while none are found so poor as to do the "reverence"—it is regarded as a good Fossil—the General a good "49er." R. T. LOCKWOOD.

San Bernardino, April 18th, 1874.

Ojai Valley.

EDITORS PRESS:—Here in Ventura county, the crops are all that the farmers could wish, and if they have no back-act from this on, Ojai will show to the world that we are a farming community, though most of us have started our farms from the Grosing ranch this season, and now have as fine wheat, just in head, as can be found in this State.

Corn, potatoes and beans just up and our orchards of fruit trees, which most of our farmers have, are doing well, though 900 feet above tide water.

We have a Grange in working order, with 23 charter members. Also, a new town started by the name of Nordhoff; with a fine hotel, store, post-office and blacksmith shop, with a good opening for a shoe-maker, 15 miles from Ventura. Yours, G. T.

Notes of Travel in Colorado Territory.

[By Our Traveling Correspondent.]

EDITORS PRESS:—Colorado Territory, geographically, is the most symmetrically shaped of any of the States or Territories. It runs exactly on the lines of latitude and longitude. It is bounded on the north by Wyoming and Nebraska Territories; on the east by Kansas; on the south by New Mexico, and on the west by Utah Territory; it extends from 37° to 41° north, and from 102° to 109° west. It embraces 100,800 square miles, and contains about 125,000 inhabitants. It is divided into twenty-one counties—Denver, the capital of the Territory is also the county seat of Arapahoe Co., and located near the center of the Territory east and west, and about 100 miles south of the northern boundary; and distant 110 miles from Cheyenne, Wyoming Territory, the point of vergence from the line of the U.P.R.R.

Denver, Colorado.

Contains about 15,000 inhabitants. It is situated at an elevation of 5,317 feet above the level of the sea. The climate is very salubrious, and by many that I conversed with who went there afflicted with asthma this atmosphere is considered a remedy for that disease. It is also very beneficial for pulmonary affections; but to those afflicted with catarrh I would advise to give that country a wide berth, as that climate will certainly aggravate the malady. Denver supports four daily, and some ten weekly periodicals; of the dailies the *Tribune* and *Times* are evening, and the *News* and *World* are morning publications. There are in the city four banks; and a branch of the U.S. mint is also there. Commercially it has its proportion of mercantile houses, hotels, etc. The principal hotels are the Grand Central, American House, and Inter-ocean. Their charges are from \$2.50 to \$4.00 per day.

The interests of Denver at this writing are neither agricultural nor mining; but being the center for supplies, to the mining districts, and grazing districts of the south and north valleys, its commercial interests are first. However, the real support of Denver at this time is its invalids, every third house being a hotel or boarding house.

Colorado Altitudes.

As your readers may be interested in knowing the altitude of the prominent places in the Territory, I append a short list: Denver is 5,317 feet above sea level; St. Vrain, 5,256; Greeley, 4,779; Boulder, 5,536; Cheyenne, 6,041; Golden City, 6,226; Colorado City, 6,342; San Luis valley, 6,400; Mt. Vernon, 6,421; Plum Creek, 6,840; Estes Park, 7,528; Divide, 7,554; Idaho, 7,800; Central City, 8,300; Georgetown, 8,452; Twin Lakes, 9,442; Pike's Peak, 14,216; Long's Peak, 14,056; Mount Lincoln, 14,190; Grey's Peak, 14,245; Colorado Springs, 5,975.

How to Reach Colorado from the East.

Tourists can reach Colorado from Boston, New York, Baltimore or Philadelphia, by way of Chicago or St. Louis to Kansas City. Thence take the Kansas Pacific Railway to Denver; distance from Kansas City, 639 miles. At Denver, the tourist connects with the Denver and Rio Grande Railway for Colorado Springs, 76 miles south, passing along some of the noblest mountain scenery in the north, along Plum Creek and the Monument valley to Colorado Springs, at the base of Pike's Peak. From Colorado Springs to Pueblo the distance is 43 miles, reached by the Denver and Rio Grande Railway. From Pueblo, stages run south daily, connecting with all important points in Southern Colorado, Old and New Mexico. From Colorado Springs to Cañon City, 86 miles. From this point tourists can visit the famous cañon of the Arkansas, the Iron mountain, Salt Springs, Twin Lakes, Mountain valley, San Luis valley, and other points of interest. At Colorado Springs, 76 miles south of Denver, tourists can visit the famous Cheyenne cañon, which exceeds in grandeur and magnificence both the Weber and the Echo cañon, having a waterfall estimated at 300 feet.

Railroads of Colorado.

The Kansas Pacific railway company, of which E. S. Bowen is general superintendent at Kansas City, and E. W. Fisher is assistant superintendent at Denver, Colorado, own 639 miles of railway between Kansas City and Denver, and are operating the Denver Pacific railroad, with all its branches, under lease (for 99 years), aggregating some 160 miles more. The Denver Pacific railway is located between Cheyenne, Wyoming Territory, and Boulder City and Denver.

The Denver and Rio Grande railroad runs south from Denver to the Cañon City coal mines, distant 155 miles, with as much more projected railway. This company own, and are at the present time working, one of the finest coal mines in the Territory, situated at Cañon City.

The Colorado Central railroad company, of which H. M. Teller is President; Oliver Ames, Vice-President, and P. J. Nichols, Superintendent, are operating the following lines of railway, with distances and officers as follows:

Denver branch, 17 miles; Golden and Julesburg, completed to Longmont—42 miles. Golden to Black Hawk, 20½ miles. Golden to Floyd Hill, 17½ miles. Total—97½ miles.

Golden and Ralston railroad is just starting, and is seven miles long.

Golden and South Platte railroad is nearly finished and is 20 miles long.

The officers of the Golden City and South Platte railroad are C. C. Welch, President, E. D. Bertrand, Secretary and Engineer. Golden and Ralston railroad—President, E. D. Bertrand; Secretary and Treasurer, L. J. Smith. L. P. Mc.

Notes of Travel in Stanislaus and Merced Counties.

Leaving Turlock on Saturday morning, a pleasant ride of 14 miles through thousands of acres of flowing grain brings your correspondent to Dry creek, where descending an elevation which you gain on the route, we cross the line into Merced county.

In this vicinity there is open to the view the richest of bottom land, while in the distance the verdant and rolling hills present an aspect truly beautiful. A few miles farther and you reach Hopeton, Merced county, a prosperous little village and surrounded by a wealthy class of farmers. Here, too, nothing strikes the view but fields flowing with grain, and ranges abounding with sheep and all kinds of stock. From Hopeton to Snelling, six miles through the most beautiful country on which the sun ever shone, we reach the old county seat of Merced county, and it is indeed a desirable location for a county seat. The town does not now present as busy an aspect as it formerly did, most of the business having moved to Merced city. But the old residents seem not at all dissatisfied, for instead of dram shops, club rooms, and houses of prostitution, peace and quietness reign—the former generally the appendages of a county seat. They are glad it is so.

Fording the river a ride of 18 miles brings you to the seat of Merced county, Merced city. This portion of Merced from Hopeton to Snelling, thence to Merced city, may be called the garden of the county. Everywhere the eye is greeted with the most enchanting scenery, improved farms, luxuriant vineyards, delicious fruit trees and nutritious ranges. Afar off in the snow clad Sierras may be seen quite plainly the mountains of the Yosemite, especially the Twin Brothers, which rear their heads to the naked vision. You find nothing but cheerfulness, thrift, comfort and contentedness here in this God-blessed region. Coming in sight of Merced, after winding around the hills for some hours, the first things which attract the attention are the beautiful mirages, with which this country above all others is blessed. At first view to the unexperienced eye it seems like a vast lake of water, spread between you and your destination, but as you approach it gradually passes away. Arriving in Merced city, we were struck with astonishment to behold a city reared so quickly and with such a business capacity in so short a time as a couple or three years.

Every thing here gives it the appearance of a live, energetic business city. Its business men are of the first order, and its farming community thrifty, intelligent and industrious. Its buildings are of the first order and it can boast of the finest hotel in this part of the State. From Merced City to Hill's Ferry, with few exceptions, is one vast sheep range from which the numerous bands of sheep pluck and prosper on the nutritious herbage which grows up spontaneously in abundance. Reaching Hill's Ferry we are again in Stanislaus county. This portion of the county is largely sown with grain and an abundant return is sure. In a ride of 25 miles to Grayson, in the same county, like indications stretch out on all sides. Here, we had the pleasure of visiting the Brongomarte manor, the residence of Thomas Wilson, a great friend of the *RURAL*, who has used his endeavors in showing his neighbors its great value and benefit to the farmer. Mr. Wilson is one of the most extensive stock men in California. His stock consists of thoroughbred Spanish Merino sheep, of which he can boast of 3,000 of the finest kind, having a range of 2,000 acres. This communication ends our travels in Merced and Stanislaus; and our experience in those counties is, wherever you see an intelligent farmer, one who is interested in his business and ripe for improvement, in his house you will find the *RURAL* PRESS. Wherever you find one blessed enormously with what they call the big head, one who thinks he knows all about it, one whose head would be split if a new idea happened to enter it, as quick as a streak of lightning would split a pumpkin, look into his house, you find nothing in the form of information, and in his head, less. Yours truly, C. M. D.

THE CALYCANTHUS.—EDITORS PRESS:—Can you tell me where and at what price I can get the seeds of the Calycanthus; known by the names of Carolina Allspice, Sweet-scented Shrub, etc.? Also where can I get dates for seed, and whether cocoanuts can be had for seed in San Francisco? OSCAR E. MACK. Binghamton, Solano Co., Cal.

[We do not find the seeds of the Calycanthus at any of our seed stores. Dates will grow from the seed obtained from the preserved fruit as found on sale everywhere. Cocoanuts when they first arrive from abroad often have a chit or embryo sprout on them, and are easily propagated. All that is wanted is to obtain the nuts before they have become much dried; abundant in San Francisco.—EDS. PRESS.]

HORTICULTURE.

Seed.

EDITORS PRESS:—It is with some reluctance that I venture to occupy a portion of your columns again. There are so many subjects of general interest to the numerous readers of your valuable paper that should be discussed, that I fear that the "Seed Question" will prove itself wearisome rather than attractive. Hence I feel called upon to beg your and your readers' pardon for "this once."

"Sonoma," in his letter, which appeared in your issue of April 25th, is evidently familiar with the culture and value of the carrot. He writes intelligently, and I admit that he understands it; but I am not generous enough to admit that the carrot seed I sold him a year ago was bad, nor would I acknowledge it as bad, if a hundred persons equally as intelligent as "Sonoma" had tried and failed in growing it; this I could not do, when, as stated in my previous letter, I took of the seed sold to "Sonoma" last year, and sowed it in my own garden with the most satisfactory results.

Last fall, before the seed season commenced, I took over 100 varieties of vegetable seeds, embracing carrots (samples of seeds laid in for the season's trade), and tested them. The carrot seeds purchased by "Sonoma" on both occasions this season were tested at the same time, and proved themselves good; hence I sold the seed to him and to others. If "Sonoma" and a thousand others should fail after a thousand trials, my mind would not be changed on the subject, after my own proof. I have no grades of seeds (vegetable), such as first, second and third qualities. Seed is either good or bad, and the latter I neither purchase nor sell. If it were possible for a seedsman to follow his seed, and give his personal attention to its culture, I am of the opinion that not one complaint in a thousand instances would be made. But this cannot be, and as it is, when the seed leaves his hands, it is at the mercy too often of those who know as little of its composition as they do of the stones that the plow throws on the soil's surface. No honest, or even half-honest, seedsman will knowingly sell bad seed; for he is too well aware that the best of seed is none too good to fight the battle it is generally obliged to before it reproduces itself.

I regard "Sonoma" as a remarkably successful grower of the carrot, if, as he states, in ten years' culture of this root he has had but one failure. In the vegetable line, carrot and parsnip are the most delicate, the seed requiring to be absolutely fresh and the conditions, soil and weather favorable to the germination of the seed and a good crop. It is probable that failure will result with the best seed, the conditions wanting. I am of the opinion that if "Sonoma" had saved a portion of the first seed he purchased this season, and sowed it at the same time he did the last, the seed would have germinated equally well. I know of no reason why it should not, for it was from the same line of seed, and was of the same quality.

A customer wrote me a few days since of his experience. He sowed seed from the same packet in two places in his garden, the soil being the same and uniformly worked. In one place "it came," and in the other it did not. He thought the case very singular, and being a gentleman of more than ordinary intelligence, and disposed to ascertain why this was so, he turned up the soil in the drill, but could not detect anything, and finally took up a handful and examined it closely, when he discovered a small worm, no larger than an ordinary needle, and at the same time found that the seeds which came to his notice had holes in and through them of the same size as the worm. The cause and the effect were apparent. May it not be that minute worms or insects, in certain localities, invisible to the ordinary eye, prey upon good seed to their destruction, and at the same time upon the reputation of the seedsman who furnished them? Would that we had more intelligent amateur farmers, like Rev. Dr. Baker, of Plano, Tulare county, to whom we are indebted for the discovery of the destructive character of the "needle worm." Will he suggest a remedy against its ravages?

R. J. TRUMBULL.

San Francisco, May 2, 1874.

Soaking Seed Wheat.

EDITORS PRESS:—In your paper, of February 28th, I find an article upon "Smut," by "A Subscriber," of Livermore, California, with many points in which I must take issue.

1st. He says: "Soaking the seed wheat too long will kill the seed." I have at times left the seed in a strong solution 36 hours with no bad results.

2d. "If the germ starts its growth and afterwards dries up, the grain will never grow again."

I have sown wheat that had been left in a pile after soaking, until the roots were so matted that the masa had to be pulverized between the hands, and the wheat left on the dry surface in the hot sun until those roots were dried and dead before covered by harrowing; and that wheat grew well, much to my surprise. I have also seen wheat grow after being soaked in a solution of concentrated lye until the skin would slip.

He says the roots of a smut plant are very different from those of a wheat plant. How

about those stools, some stalks of which bear wheat heads and part smut head, and some heads of which are divided between wheat grains and smut grains, as is often the case? H. B. W.

Bitter-Root Valley, M. T., April 12.

[It is possible that our Livermore correspondent, when speaking of the roots of smut plants, has reference to the roots of smut and not to the roots of wheat-bearing smut heads.]

Smut itself is a plant, that attaches itself to and insinuates itself into the kernels of wheat, and has its own minute roots, independent of the roots of the wheat.—EDS. PRESS.]

Puddle Walls.

A correspondent writes for information relative to making a fish pond in a valley by constructing a dam across from one side to the other. The essential idea in a dam is its capacity for holding water. To this end it must be of sufficient substance, so that its weight shall counteract it from being overturned or pushed away by the pressure of the water. It must also be constructed so as to be watertight.

To secure this last requirement the most effective method is to include within the dam a puddle wall. The correct method of puddling, so simple in itself, is not always practiced. The popular ideas in regard to this important part of the work are erroneous. By many persons it is supposed that the best material for the purpose is clay. This is an error. Pure clay is, in some respects, the worst. Again, it is supposed that the work must be compacted by a rammer. Ramming is not effective in compacting it. There are still other erroneous notions entertained on the subject, but we will perhaps best expose the objectionable methods by simply stating the correct one. If the puddle is to extend across a valley, commence by removing from the surface, where the wall is to stand, all rubbish, brush, grass, roots and other perishable material, as well as all surface soil down to the solid natural gravel or ground. In doing this, excavate a trench equal in width to the thickness of the wall. Make the bottom of the trench level across the bottom of the valley, and extend it into and up each side hill in level benches or steps, so that at all points the wall shall have under it a level surface to stand upon.

Next, the material. This should be a gravelly loam, taken from a bank where alternate layers of gravel and loam, or clay, are found. Screen from it by a rake all stones larger than an egg. Spread it to an even depth of four inches in the lowest trench. Sprinkle water over the whole surface by a hose or buckets until the material is soaking wet, when another layer of dry material four inches deep is to be spread over the first one. A convenient method of regulating the depth is by setting up at frequent intervals stakes projecting eight inches above the bottom of the trench with notches cut four inches from the top. In placing the first layer, the workman is guided by the notches. The second layer is to be carefully graded to the top of the stakes. Now place a plank, equal in length to the width of the trench, across it near one end. Standing at one end of this plank with a shovel, hold it upright, the back from you. In this position push the shovel to the bottom of the trench by aid of the foot on top of the blade, and then push the handle horizontally from you with force. Withdrawing the shovel, move along the plank the width of the shovel; and placing its point in a line with the position it before held, again press it to the bottom of the trench and horizontally from you. Continue this operation until you have moved along the entire length of the plank. In doing this, you have formed a wedge-shaped opening across the trench.

In returning along the plank, slice off, in the same manner, about an inch in thickness from the edge of the opening nearest you, pushing it compactly upon the material previously packed. Continue this process, cutting slice after slice, until the edge of the plank is reached. Turning the plank over gives room for more work. Follow this operation until the whole of the material is cut and compacted. In making these cuttings, the water which was put upon the lower layer of four inches, is squeezed up through the whole of the upper layer, and the whole thickness of material is rendered of the consistency of putty. The next morning the puddle will be found sufficiently hard to walk upon freely. Then repeat the entire process of spreading the two separate layers of four inches each, watering the first layer and cutting and compacting as before. By this method, double layer upon double layer is to be laid until the top of the wall is reached. Some parts of the operation may appear unimportant and thus be neglected, but many who have so thought and acted have found to their sorrow, after the completion of the work, the necessity of adhering strictly to what experience has shown, in some of our largest engineering works, to be the true method of making puddle walls.

The thickness of the wall should be in proportion to its height and length. For small ponds, a wall four feet broad at top and gradually widened downwards at a rate of one and a half inches per foot of height on each side, or three inches on both sides, will be of ample strength. The puddle wall must be covered from the air on all sides by the filling and stone work used to form the dam.—Sci. American.

BOAT PLUG.—A new invention consists of a ball-valve so placed in the bottoms of boats or other vessels as instantly and automatically to close on being placed in the water.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

California State Grange.

OFFICERS:

Master—J. M. HAMILTON, Guenoc, Lake Co.
 Overseer—O. L. ABBOTT, Santa Barbara.
 Lecturer—J. W. A. WRIGHT, Borden, Fresno Co.
 Steward—N. L. ALLEN, Salinas, Monterey Co.
 Assistant Steward—W. M. JACKSON, Woodland, Yolo Co.
 Chaplain—L. G. GARDNER, Grayson.
 Treasurer—W. A. FISHER, Napa City, Napa Co.
 Secretary—W. H. BAXTER, 320 California street, S. F.
 Gate Keeper—R. R. WARDER, Waterford, Stanislaus Co.
 Grease—MRS. G. W. DAVIS, Santa Rosa, Sonoma Co.
 Poenour—MRS. S. C. BAXTER, Napa City, Napa Co.
 Flora—MRS. R. S. HEGLER, Bodega, Sonoma Co.
 Lady Assistant Steward—MRS. S. M. GARDNER, Grayson, Stanislaus Co.

Executive Committee:

J. M. HAMILTON, W. M., Chairman, of Guenoc, Lake Co.
 I. G. GARDNER, Grayson, Stanislaus Co.
 J. C. MERRYFIELD, Dixon, Solano Co.
 H. B. JOLLY, Merced, Merced Co.
 THOS. A. GAREY, Los Angeles, Los Angeles Co.
 G. W. COLEBY, Nord, Butte Co.
 A. B. NALLY, Windsor, Sonoma Co.

List of Organizing Deputies.

COUNTY.	DEPUTY.	POST OFFICE.
Alameda.	A. T. Dewey.	Oakland or San Fco.
Butte.	Wm. M. Thorp.	Chicago.
Butte.	G. W. Colby.	Nord.
Colusa.	J. J. Hick.	Grand Island.
Contra Costa.	R. G. Dean.	Antioch.
Lake.	J. M. Hamilton.	Guenoc.
Los Angeles.	Thos. A. Garey.	Merced City.
Merced.	H. B. Jolly.	Hollister.
Monterey.	J. D. Fowler.	San Francisco.
Napa.	W. H. Baxter, (Gen'l Dep.)	Sacramento.
Sacramento.	W. S. Manlove.	Sacramento.
San Francisco.	L. G. Gardner.	General Deputy.
San Francisco.	John Hegler.	Ellis.
San Joaquin.	E. B. Stiles.	Moro.
San Luis Obispo.	A. J. Motherhead.	Pescadero.
San Mateo.	B. V. Weeks.	San Jose.
Santa Clara.	W. G. Henning.	Suisun.
Solano.	R. C. Hale.	Dixon.
Solano.	J. C. Merryfield.	Santa Rosa.
Sonoma.	Geo. W. Davis.	Windsor.
Sonoma.	A. B. Nally.	Woodland.
Stanislaus.	J. D. Spencer.	Woodland.
Yolo.	Wm. M. Jackson.	Los Angeles.
Los Angeles.	Thos. A. Garey.	Santa Barbara.
Santa Barbara.	O. L. Abbott.	San Buenaventura.
Ventura.	Milton Wesson.	San Buenaventura.

Farmers desiring to organize Granges, can apply to J. M. Hamilton, (W. Master), Guenoc, Lake Co.; J. W. H. Baxter, (W. Sec'y), 320 California St., S. F.; J. W. A. Wright, (Lecturer), Borden, Fresno Co.; or to the nearest Deputy to their locality. Thos. H. Merry, (W. Ex-Lecturer) of Healdsburg, is also deputized to organize Granges.

The Grange—Its Lessons and its Work.

No literary exercise can be more beautiful or instructive than the initiatory and degree works in a Grange, especially when that work is well done, and with a full understanding and application of its spirit and meaning. No matter how often it is witnessed and heard, each time it is rendered new beauty will be developed to the reflecting mind. But to produce the best effect each officer should study and become familiar with his or her part. Not only should the words be read or spoken, but their intonation and accent should be carefully studied and considered. It would be all the better if the book could be dispensed with entirely, or at most employed only as a prompter.

The music of the Grange should also receive especial attention. Nothing adds more to the beauty of our work than music and singing, and nothing is more elevating or more harmonizing to the mind. No Grange can be well conducted without it. All Masters should urge the importance of these matters upon both officers and members. The utmost decorum should always be observed in the Grange.

The observance of decorum by members is not only due to themselves and to one another, as ladies and gentlemen assembled together to deliberate and act upon matters of common interest, but it is also essential to the regular and harmonious proceedings of a Grange. The Grange is the place where we should learn not only how to transact public business, to familiarize ourselves with parliamentary usage and public speaking, but it should also be made a school of manners, where our children may learn how to behave both in public and in the family.

Fraternal duties should never be forgotten. In the Grange, fraternity has been placed at the very base of society, and has been made the corner stone of every human effort. We should feel that we are in reality what we profess to be—a band of brothers and sisters. If a brother or sister is sick or in distress we should be ever ready and prompt to offer all needed assistance; and whenever, in the last event, it meets the views of the relations of a deceased brother or sister, the funeral services should be conducted according to the usages of our Order, and in the presence of as many of the members of the bereaved Grange as can make it reasonably convenient to attend.

The Grange is a democratic institution in the highest and widest sense of the term. The rights and duties of the members, as regards one another, are founded in and derived from the principle of absolute equality and fraternity. Every member, male or female, however humble he or she may be, has the same right with each other to speak, act and vote.

No association of any age or character has ever before occupied a field of labor so wide or so comprehensive as that now improved by the Order of Patrons of Husbandry. The working abilities are as broad as the wants and needs of the human race, while at the same time they are eminently simple, practical and

effective. The work of the Order may extend from the planting of a vine to the construction of a continental railroad—from the procurement of the simplest want of an individual member to the purchase of a house or farm. It is expected to undertake the settlement of all disputes between its members, and between them and all others. If need be it can exert a controlling influence, by moral power alone, in the election of every officer in the land from a Justice of the Peace to the President of the Republic. It has business agents wherever they are needed—in the country and in the metropolis, on both sides of the continent, and on both sides of the ocean. Beneath its protectiveegis, wives and husbands, brothers and sisters, rich and poor, meet in harmony and on equality; to labor, to learn, to teach, and to sing praises to Him from whom cometh every good and perfect gift.

Let us then strive to do the great work before us that, when all our labor is over, our children and children's children may look back with just pride upon what we have done; while the Grand Master above shall say, "Well done, good and faithful servants."

The Festivals of the Patrons.

Our exchanges from all portions of the country are filled with preparatory notices of festivals that are soon to come off, or of pleasant accounts of those that have transpired. When have the members of the farming household, male and female, thus looked up from their toil before? The more considerate of their own class have realized that they ought to do it; and their best and most philosophical friends among outside observers have urged it upon them, time and again; not only for the present enjoyment and relaxation from care and labor which it affords, but for the substantial benefits that must inevitably grow out of it.

There are two conspicuous classes who have persisted in throwing about American farm life charms which we all know it has never possessed. On the one hand there have been flatterers, who have had political or other schemes on hand, in carrying out which they wanted the aid of the farmers; and to secure this, they paid him, as a bonus, a liberal allowance of agricultural binncomb about "the independent farmer," "the hard-fisted farmer," "the contented farmer," etc. On the other hand, farm life has been plastered over by essayists, poets and writers of fiction, who have really seemed to be striving more to deceive themselves than their readers.

The designs of the flatterers alluded to above have never achieved a tithe of the results that were expected; and the fictitious accounts of the charms of rural life which the latter have produced, can hardly be classed even among the things that are "good to read about." To use a common expression, they were "too thin." Social enjoyment would not come forth upon the stage of American life merely because even its best friends declare that it ought to appear; but there is some mysterious power in this new and wonderful movement, that has called it forth from its retreats; and it now appears in the happy "harvest feasts" that are being held all over the country, as one of the marked results of the organization of the Patrons of Husbandry.

This new spirit of pure and hearty social enjoyment was not created by any organization, and it is not probable that the most sanguine and the most far seeing of the originators of the Order anticipated any such result. Still the organization has brought it forth and developed it; and if the Order is to be judged by its fruits, we think the most sensitive of its friends will be perfectly willing to have this set before the world as a sample. We cannot think that the most cynical of social critics would wish to see this new and cheerful phase of rural life obliterated; nor do we believe that those who declare that the Order itself will come to naught will expect to see this genial spirit exorcised. They know better. Country life will never go back to its former isolation.

Reference is made to the notices of harvest feasts with which our exchanges are filled; and we would, in justice to that portion of the press which has not declared itself in favor of our Order, state that none of them, in noticing these festivals, speak of them in unfriendly or sneering terms. Papers in the localities where these festivals occur, invariably give the parties their best wishes and their hearty congratulations. As for ourselves, we will take this occasion to assure our picnicing and harvest-feasting brothers and sisters, that we are more cognizant of their many happy gatherings than they are probably aware of; and that we would not only take pleasure in noticing all of them, were it possible, but would also delight in taking a part in them. But we can only wish them a good time generally.

GETTING ALARMED.—It is stated that some of the Pennsylvania manufacturers and capitalists are organizing anti-Grange societies. They are afraid the Patrons will object to the further protection of the wealthy manufacturers of that State at the expense of the farmers and artisans. No doubt of it. The people are beginning to think that some of these manufacturing enterprises of the country, which have long enjoyed the benefits of high tariffs, are now able to stand alone. They not only think so but proceed to act upon that idea.

Crop Statistics—Grange Benefits.

The importance of reliable crop statistics is not appreciated as it should be. Farmers are quite too apt to farm by guess. Facts, however, should constitute the basis of every calculation, whether in planting or marketing. Without facts all must necessarily be guess-work, and the farmer can have no guide by which to be governed in his operations, except in watching his neighbor, who, he may think, is possessed of some facts which are not known to him.

Heretofore, it has been very difficult, if not impossible, except at enormous expense, to arrive at reliable crop statistics. These facts were in the possession of a few, and those only who farmed, or speculated on produce, on a large scale. The success which such persons have generally met with in their operations sufficiently attests to the importance of the statistical information which they always secure, at great expense. The information by which Mr. Friedlander, of this city, is governed in his operations, and which must be gathered anew every year, costs him many thousands of dollars. That information is his individual property, a most important part of the capital upon which he works.

Now, just that information is what is needed by every wheat farmer, especially, in the State. Other classes of statistics are needed by those engaged in other branches of produce. And how are our farmers to acquire this needed information? Individuals who collect it at great expense for their own use will not furnish it, and individual farmers of small means cannot afford to collect it. Just here is where the organization of Granges comes in for one of its many benefits.

The Grange is the very best possible medium for collecting crop statistics. Mr. Friedlander has a similar system of secret agencies, on which he depends, which is kept up at an enormous expense; but it is not as effectual as the Grange system. By that, if thoroughly utilized, every Patron in California may know just as much about the wheat crop and its prospects as Mr. Friedlander does; while, through the Grange agents in the various market centers of the world, they may have just as good a knowledge of the wheat market and the condition, position and probable rates of freight from one point to another.

In order to make the most of our position every Grange should consider itself the center of its district for collecting information. Blanks have been forwarded from the Central Agency in Washington, through the various State agencies, to every one of the 12,000 Granges in the Union, upon which all the desired information should be recorded and forwarded as per accompanying directions. Blanks have already gone out to the various Granges on this coast, and it is desirable that early and careful attention should be paid to the matter. It is made the duty of every subordinate Grange "to ascertain within the territorial jurisdiction of the Grange the amount grown of barley, corn, cotton, fruit, hay, hemp, hops, oats, potatoes, rice, rye, sugar, tobacco and wheat, the acreage of each, the amount on hand on the fifteenth of April, market value, etc. These committees are also required to ascertain the amount of butter, cheese, lard, molasses, sugar and wool produced the quantity on hand, and the market value thereof on the fifteenth of April. The blanks so filled up and signed by the Master and Secretary, and stamped with the seal of the Grange, are to be forwarded to D. Wyatt Aiken, Washington City, who will make an aggregate report and send copies to every subordinate Grange in the country. The farmers will then know where to sell, and when to sell, and will also be able, by knowing the amount required for consumption in the country, the probable surplus for export, to hold the power of fixing, to some extent, the price of their produce."

It is, perhaps, rather late to urge this matter for this season, inasmuch as most of the Granges have already filled out and returned the blanks. Yet we are sure that the work in many cases has not been properly appreciated by the committees having it in hand, and it is to be feared that in many cases the work has not been as thoroughly done as its importance demands. It may appear a matter of small importance to some of the lesser districts; but it is desirable that every district, however insignificant, should be fully reported.

Brother Patrons, from what has been said you can see at a glance the immense advantage to you of such a report as will come from Bro. Aiken, provided it embraces all that is proposed. But the value of his report will depend upon the fullness and correctness of those from the subordinate Granges. We trust where any delay or negligence has heretofore been allowed in this matter, that next time it will be thoroughly and promptly attended to.

HOLLISTER GRANGE.—Dr. E. S. Carr, after delivering the anniversary address on the 13th, of the establishment of the first Grange in Santa Clara county, will go to Hollister, the picnic anniversary of which Grange is held on the following day.

GRANGE HALL.—The Patrons of Santa Ana, Los Angeles, are erecting a fine hall for their special accommodation.

THE GRANGE WAREHOUSE at Modesto, calculated to hold 5,000 tons of wheat, is nearly completed.

Less "Lawing."

It is as true as it is serious, that farmers, as a class, in this State particularly, have indulged to a large extent in "lawing it." An examination of the records of our courts will show that an undue proportion of the civil suits involve country issues, and it is too often the case that both the plaintiffs and defendants are farmers. True, the farmer is often compelled to come into court as a plaintiff to defend his property from the grasping avarice of land speculators, for he is usually most easily caught, and the fattest game that the lawyer can bag.

Farmers have long been aware of the folly, and worse than folly, of going to law; but the lack of business and social intercourse with their neighbors often prevents a proper understanding of right and mutual interest, encourages suspicion and jealousy, and too often leads them to rush into the courts, and sometimes dividing the whole neighborhood into active partisans. But, thanks to the influence of the Order of the Patrons of Husbandry, this disturbing element in farm life throughout the country, generally, is rapidly disappearing. The Order has brought farmers into closer communion with each other, and has developed mutual confidence and respect; and without the assistance of any secret charm has produced a change which is now substituting arbitration for law. Arbitration is one of the grand principles of the Order, and is already producing important material results, as well as promoting peace and harmony in many neighborhoods. The vast benefits that the world is expected to derive from the adoption of arbitration by the great powers, are precisely such as will accrue to the farming world by the same practice.

New Granges.

EDS. PRESS:—Enclosed you will find names of officers from three new Granges organized by me in the last week, two in El Dorado county, and one in Sacramento county. I left Sacramento on the 27th of April on the Sacramento Valley Railroad, reaching its terminus, Shingle Springs, at 10 A. M., where I connected with the stage for Placerville; took an outside seat and found it very warm and dusty; vegetation suffering for the want of moisture. On arriving at the old town of Mud Springs, now called El Dorado, I found a number of the surrounding farmers and their wives assembled for the purpose of organizing a Grange, which I established, under the name of El Dorado Grange, with the following list of officers:

C. G. Carpenter, M.; N. Gilmore, O.; C. D. Broke, L.; D. E. Norton, S.; J. Knizeley, A. S.; M. S. Robinson, C.; J. M. B. Weatherax, Sec.; M. Kramp, T.; F. C. Carpenter, G. K.; Mary E. Brooke, Ceres; Betsey A. Norton, Pomona; Cleora C. Burns Flora; Fannie E. Knizeley, L. A. S. Post-office, El Dorado, El Dorado county.

After spending a pleasant evening with some of the members and passing the night there, I left for Placerville, where I remained one day, left early on the morning of the 29th, reached Coloma in time for early breakfast, after which I started to hunt up those wishing to organize. At one P. M. we assembled at the Hall to organize. Had a full charter list and some to spare. The worthy Master of Pilot Hill Grange, together with a large delegation of his members, were present, and assisted me very much, enabling me to instruct more fully than I could have done alone. I organized under the name of Sutter Mill Grange, with the following list of officers: A. J. Christie, M.; W. D. Othick, O.; J. G. O'Brien, L.; E. Mortensen, C.; W. H. Valentine, S.; H. B. Newell, A. S.; A. J. Peterson, T.; Henry Mahler, Sec'y; Andrew White, G. K.; Henrietta A. O'Brien, Ceres; Rosa McKay, Flora; Agnes Mahler, Pomona; Mary J. Steams, L. A. S. Post Office, Coloma, El Dorado county.

After completing this organization I returned to Placerville at 1 o'clock in the morning in an open stage, with the rain falling gently all the way. It continued to rain through the night and the following day to noon. It has done a great deal of good to the hill country, as the crops were put in late and are very short. I think without this copious rain they would not have amounted to much. The crop of fruit promises to be very large in the mountain district. Yours fraternally,

W. S. MANLOVE, Deputy.

GALT GRANGE, SACRAMENTO COUNTY.—Bro. Manlove also sends us the following as a list of officers of Galt Grange, just organized by him. J. C. Sawyer, M.; A. B. Bryant, O.; Hiram Chase, L.; J. Young, S.; Hiram Wisner, A. S.; Jas. H. Feris, C.; E. Ray, T.; J. L. Field, Sec'y.; J. Sawyer, G. K.; Angie Fifield, Ceres; Fannie Bryant, Pomona; Rachel Wisner, Flora; A. F. Chase, L. A. S. Post-office, Galt, Sacramento county.

NEWVILLE GRANGE, at Newville, Colusa Co., was organized April 25, by Deputy J. J. Hick, of Grand Island. B. N. Scribner, Master; Sullivan Ashborn, Sec'y.

CALAVERAS GRANGE was organized at Jenny Lind, Calaveras county, May 1, by Deputy J. H. Hegler. M. F. Gregory, Master; A. Miles Sec'y.

WESTMINSTER GRANGE, Los Angeles county has passed resolutions in common with other Granges on the Sewing Machine question.

Pescadero Grange Festival.

EDITORS PRESS:—Our Grange is progressing finely; we now number forty-eight members in the fourth degree. At our last meeting the fourth degree was conferred on five, three brothers and two sisters; and we expect a class of seven or eight to commence, as laborers, at our next meeting. We enjoyed a social Harvest Feast at our last meeting in pleasing style, the success of which was due in a great measure to the energy of our good sisters, who are ever ready to do their part on all occasions. Our meetings during last winter were rather dull on account of the slim attendance. But I think we have done well, when we consider the nature of the weather and condition of the roads, and the busy time among the farmers; for we met every week during the winter with two exceptions, some of our sisters coming three or four miles over roads that were almost impassable. But, as the farmers are now through with their hurrying, our meetings are more interesting, and the attendance is quite large.

The grain in this vicinity looks well, and the prospects for an abundant harvest were never more encouraging than at the present time. There is a greater amount of land sown this season than any former year. If the crops do not meet with any calamity, such as rust or smut, the farmers of this vicinity may expect a big yield to reward them for their labor.

Our Grange gave a picnic on May day, which was a rich social treat, judging from the many smiling faces that were present, and which told of souls within full of joy and bright hope. We marched from the hall to the grove in public procession with regalia. The Santa Clara band, which was employed for the occasion, did not arrive in time to escort us to the picnic ground, but they did good service later in the day in the way of discoursing sweet music. The programme was announced by our Worthy Master, B. V. Weeks, and consisted in singing by the choir, prayer by the Chaplain, then more singing, which was followed by an able and eloquent address by Hon. S. I. Finney, which was listened to with marked attention. Then came more music, both vocal and instrumental, after which we charged upon the well filled tables with all the courage that good appetites would justify, but failed to clear it of its contents, for it was loaded to its utmost capacity with all the good things that the ladies of Pescadero know how to get up. Both Patrons and guests ate to their heart's content; and I am sure that the fragments that were left would fill more than twelve baskets. All enjoyed themselves well; even the little children were not behind the rest in having a good time. Surely such social gatherings will teach us to put our trust in God, nurture hope, and dispense charity. PATRON.

Pescadero, May 3d, 1874.

SARATOGA GRANGE—A RARE TREAT.—EDITORS PRESS:—A large number of the members of the Santa Clara Grange visited Saratoga by a special invitation, on the 29th ult., the occasion of their Harvest Feast. W. M. Leonard, of our Grange, and Deputy Henning, of San José, assisted in conferring the fourth degree on four brothers and two sisters.

The meetings of this Grange are held in the public hall, in Saratoga, a small village nestling at the foot of the Santa Cruz mountains, near the famous Saratoga springs, eight miles from Santa Clara.

We had had an eye on this quiet, unassuming Grange, with its circumscribed territory, wondering whether they would have sufficient numerical strength to keep afloat; ever ready to welcome any advance toward a union with us in one body. But we found our young sister, only lately out of her teens, an active adjunct in the Order, numbering about 40—a smoothly working body, well up in the discipline, with superior vocal music. To one lately from the State Convention, muddled somewhat by the vast enterprises of the Brothers, we, for once, felt like investing all our stock in the Santa Clara Sisters' Co-operative Institution known as the Harvest Feast, second to none that has anywhere come under our observation.

Sister Knowles, of Santa Clara, acknowledged the genuine cordiality of our reception, in a neat, impromptu speech, commending the resolute undertaking of the comparatively few, in whom she saw much inherent strength, if rightly applied. Her eye went up the mountain side from that charming spot, and up the pathway of their progress; for there was thrilling inspiration in the harmony of voices, that also floated upwards, as all joined in the choruses of "Rally round the Grange."

Long will we remember the cordial greetings, which made us feel at home and happy; and if ever we lose courage, we shall look up towards Saratoga as an example for perseverance. Santa Clara, May 4, 1874. I. A. W.

THE OREGON PATRONS are rapidly organizing into business associations under corporate forms. The Northwestern Shipping Store and Commission Company is the latest organization of this kind, and has recently filed articles of incorporation in the office of the County Clerk, at Portland.

OMISSION.—The name of Thomas Hellar, Secretary, was last week omitted from our list of officers of Alameda County Council.

Grangers' Picnic in San Joaquin Valley.

On May day the Granges of Oristimba, Cottonwood, Badger Flat and Los Baños had a grand picnic at the Cottonwood grove, near Hill's ferry, Merced county. The different Granges assembled at the hall occupied by the Cottonwood Grange, and there formed in line and marched to the grove, which afforded a splendid shade; a raised platform was erected for the speaker, Professor E. S. Carr, of Oakland, who delivered an able address. Three original songs were sung, the following after the address:

Grange Song.

RESPECTFULLY INSCRIBED TO THE ORISTIMBA GRANGE, STANISLAUS COUNTY, BY MISS MARY FAIRCHILD.

[Air: Tramp! Tramp! Tramp!]

By the Grange we'll always stand,
Doing all the good we can,
While we work with heart and strength, and mind and hand.
We are certain that we're right,
We are working with our might,
And will soon sweep all oppression from our land.

CHORUS:

Hark! Hark! Hark! A sound is rising,
Every Grange will rally at the call;
And our country soon shall be,
From the power of evil free,
While oppression's throne will totter to its fall.

We are working with our might
To remove a withering blight
From this blessed land our fathers loved so well.
We will conquer, never fear;
Every heart is full of cheer,
For in blessed peace and unity we dwell.

[Chorus: Hark! Hark! Hark! etc.]

We have worked in sun and rain,
Labored hard for other's gain,
In the bygone years now numbered with the past;
But the coming years will show
That the seed we farmers sow
Shall not fill another's coffers at the last.

[Chorus: Hark! Hark! Hark! etc.]

So with hearts and purposes firm,
We are planting now a germ
That will ever grow and blossom in our cause.
We are working for our State;
For our country good and great;
We are working for our people and just laws.

[Chorus: Hark! Hark! Hark! etc.]

Other Grange songs were sung while the table was being prepared for the dinner, of which some 600 or 700 persons partook, among whom were noticed members of Hollister and Stanislaus Granges. The repast ended, dancing commenced, and was kept up with spirit till a late hour. A good string band was in attendance, and the choir of the Badger Flat Grange sang some beautiful songs which would have done credit to professionals.

The country included within the jurisdiction of the four Granges extends from the Oristimba creek to the Los Baños, on the west side of the San Joaquin river, and gives promise of a fair crop for the coming harvest, though the late north winds have somewhat retarded the growth of the grain, particularly the late sown. That sown on summer-fallowed ground looks most promising. THOS. A. CHAPMAN.

May 2d, 1874.

Dr. Carr's verbal description of the several Granges coming in large bodies in jolly farmer array, and their reception "in the town" (consisting of the Granger's hall, a store and school house) is even better than his "lecture talk," and he should be called upon to repeat it.

LOWER LAKE GRANGE, LAKE COUNTY.—EDITORS PRESS:—The following resolutions were passed by Lower Lake Grange at our meeting of 25th ult., without a dissenting voice:

Resolved, That Lower Lake Grange is in deep sympathy and hearty co-operation with the Good Templars and others of this State in their endeavors to abolish that class of "middlemen" known as the retail liquor dealers.

Resolved, That we recommend to our sister Granges that they take such action as will speedily dispense with said class of middlemen.

The farmers well know that while the country is flooded with saloons and deadfalls at every corner their sons are liable to fall into the snares of the tempter. Our Grange is in a flourishing condition, our meetings are well attended and a deep interest is manifested in the Farmer's Movement. We find that the RURAL is by no means a stranger in our vicinity, as many of our members take it, and we hope soon to be able to say that every member of our Grange is a subscriber. We have already been availing ourselves of the benefits of purchasing supplies through our State agency, and find it a great saving, and if Granges know their own interests they will all do likewise. We were visited with a refreshing shower of rain on the 29th and 30th ult., and we now look for an abundant harvest. A PATRON.

Lower Lake, May 4th, 1874.

THE "GRANGERS' BANK."—We would call the special attention of those who have subscribed for stock in the "Grangers' Bank of California," to a notice in our advertising columns of a meeting of stockholders, to be held at Corinthian Hall, in this city, on the 21st of the present month (May), for the purpose of adopting a code of by-laws for the Corporation, as required by law. Persons who contemplate subscribing for stock in this association, but who have not yet done so, will do well to subscribe at once, and take a part in the business of the above meeting. We shall make more special allusion to the importance of this undertaking as a Grange measure, at some future time.

Letter from Suisun.

EDITORS PRESS:—It has been said, and with much truth, that our farmers apply themselves too closely to the drudgery of their farms, and spend too little time in social and mental improvement. The social feature of the Patrons of Husbandry is an admirable feature, and greatly assists to correct previous tendencies.

The farmers, their wives, sons and daughters, and friends, gathered from far and near to spend the gala day, which introduces this blooming month, and Gordon Valley resounded with mirth, song and shout, while skipping feet kept time to merry music; broad oaks shading the happy dancers. Suisun, Fairfield, Bridgeport, Rockville, Vacaville and the surrounding country were fully represented by some 1,500 to 2,000 persons, making a joyous gathering long to be remembered. The mountain sides were dotted with youthful ramblers; while at the foot the grassy earth afforded both chair and table for those who gathered to feast on the bounties before them.

The lower portions of Solano county have suffered from the excessive rains, and some are despondent. Some farmers are progressive and have improved stock, but the number should be greater. Mr. Brown has lately brought two hundred Spanish Merino sheep from Vermont, lately arrived and are now near Main Prairie, Mr. Pierce, Mr. R. B. Cannon, Mr. W. Wayne Fitch have a beautiful "Lodi" filly.

There are few or no forest trees, and why farmers do not surround their farms and line the roads with rows of Blue Gums, is a mystery; no part of the State is better adapted to the rapid growth of this valuable timber. The trees will average ten feet in height annually and ten years' growth of a hundred acres would be a fortune to any one. Could the roads, farm boundaries and division lines be graced with these trees, the sweeping winds would be modified; fuel be more plenty, and the cost of planting be returned a hundred fold. C. W. O.

May 3d, 1874.

THE CENTENNIAL EXHIBITION.—At a meeting of the Executive Committee of the State Grange, held April 29, the following resolution was passed:

Resolved, That in accordance with the request of the Patrons of Husbandry assembled in convention, April 21, in San Francisco, the State Grange of California should take steps to secure a creditable exhibition of the industries of the State at the Centennial Celebration to be held in Philadelphia, in 1876; and that the Executive Committee of the State Grange should appoint a committee of five to carry out such suggestion. In compliance with the above resolution the Executive Committee have appointed the following persons as a Centennial Committee: B. Kooser, of Santa Cruz Co.; H. B. Jolley, of Merced Co.; T. Hart Hyatt, of Solano Co.; J. W. Venable, of Los Angeles Co.; and Andrew Wolfe, of San Joaquin Co.

Resolved, That the RURAL PRESS and other papers be requested to publish the foregoing appointments. W. H. BAXTER, Sec'y. State Grange.

TO CORRESPONDENTS.—We have several communications on file for the Patrons of Husbandry department, which are necessarily laid over until next week. Will "A. R. W." please furnish us his full name?

A RECLAMATION PROJECT.—The inhabitants of Nelson's Station, California and Oregon railroad, have in view the construction of a canal for the purpose of draining their fine lands from the waters accumulated by the spring water fall. They propose to construct a canal two miles and an eighth in length, twenty feet wide at the bottom, commencing at a point on the railroad two miles east of Butte creek, where Little Dry creek crosses the railroad, and having its terminus at the north line of T. R. King's ranch. It will also require a levee on the east bank of Butte creek to make the work complete. The canal will drain all the country south of the canal, and will reclaim some 35,000 acres of the best of land. The probable cost of the canal and levee will be \$20,000.—Northern Enterprise, May 2.

COTTON-PLANTING IN MERCED.—The San Joaquin Valley Argus, of May 2d, thus describes a recent visit to Major Strong's cotton plantation on Mariposa creek: "The Major had already planted three hundred acres, the earliest of which was just coming up, and as the weather is favorable and the ground in first-rate condition, the young plants look strong and healthy. Major Strong informed us that he was getting in about thirty acres per day, which will enable him to finish planting all his tract of 480 acres of land to-day, or at the furthest early next week, when he can put his force to work cleaning the weeds out of his crop."

CHANGE OF PLACE.—It may be a convenience to farmers and others desiring labor of any description including skilled mechanics, to learn that the employment office of our well-known citizen, A. Zeelandelaar, for the last six years Secretary and proprietor of the California Labor Exchange, is removed to 715 Montgomery street, corner of Washington. We refer those in want of help to advertisement in our columns.

A STALK of asparagus is on exhibition at Sacramento, which, instead of being round, is flat, measuring across three and a half inches, and in length one foot nine inches.

San Jose Farmers' Club.

The Club met at the usual hour, May 20, and was called to order by President Casey.

Under the head of fifteen minutes' discussion, Mr. Holloway made a few remarks on the President's veto of the Inflation Bill.

The regular question, "What are the best breeds of cattle for this locality?" was then taken up and discussed.

Mr. Erkson said that our county consisted of rich alluvial valleys and thinly clad hills, and he wanted to know what kind of stock would thrive best. He thought that the lighter herd of cattle, and not the Durhams, would be better for the foothills and uplands. The Devons would thrive well in such places. He was of the opinion that a three-quarter was better for all purposes than a thoroughbred. For dairying this was especially true. The common stock, crossed with the Durham and Devon breeds, make the best for dairying purposes. Mr. Erkson said that he was in the business once, and he found that raising thoroughbreds was unprofitable, for the butcher never asked him the breed; the only question was the fatness, etc.

Colonel Younger said that the great question was, what breed will produce the best beef and the greatest quantity, in a given length of time. The quantity of milk derived enters largely into this question, and he was satisfied that the Devons, Alderneys and Durhams, which are splendid milkers, would prove more profitable, taken all in all, than the common cattle. The Durhams, when cultivated, are the finest milkers in quantity and quality in the world. His experience had also demonstrated that the beef of the thoroughbreds was far superior to the common breeds. It was nothing uncommon for two-year olds to weigh 1,600 pounds. The butchers will pay more for thoroughbreds than any other. But few are sent to market for the reason that they are worth more out of the butcher's stall than in. The Durhams make better crosses with the common cattle than any other breed. With a thoroughbred short-horn in two years you can make more beef than with one of the common stock in five or six years.

Judge H. C. Skinner corroborated Colonel Younger's views in regard to the Durham as far as the warm valleys of California were concerned. In the Eastern States this rule, however, would not always apply.

Mr. Holloway said that the cattle that would produce the most beef in the shortest length of time should be fed on cut hay and grain. He was in favor, as a general thing, of the lighter animal. He thought that it took more food to make the big, thousand-pound thoroughbred animal than it did to make two five-hundred-pound commoners. He thought the Alderney was the best butter maker. If dealt gently and kindly with, they were pleasant, agreeable and nice animals about a farm. In farming and cattle raising, however, every man should study his own locality.

Mr. A. J. Fowler found that in two years the Devon beat the Durhams in regard to size and beef. This was in the hills. In the valleys he thought the Durhams were superior. On the hills his Devon cows were always in better order than the Durhams. The quantity of milk given by each was about the same.

Col. Younger thought that the short horns would suit any locality where the feed was the same. They would produce more meat in a given length of time, and more milk and a better quality than the common breeds, and are therefore worth more to the farmer. The short-horns cross the best. He was in favor of that breed of short-horn that tapered forward instead of backward.

Mr. Erkson did not think the Durham could thrive on the hills. They are not as hardy, not as enduring, and can't stand rough feed like other kinds of stock. In the valleys he believed that thoroughbreds should be cultivated. We should encourage the cultivation of the best breeds of cattle in this valley. He hoped the farmers would pay more attention to the matter.

A ROSE PLANT ABOUT TO BLOOM.—A noble specimen of a rare species of yucca is now throwing up its blossom shafts in the grounds of the Military Academy in Oakland. It is botanically allied to the agave and manifests the same rapidity of growth. The circle of leaves at the base less rigid and showy than the century plant, is even more architectural in character, and this specimen as it stands is one of the most magnificent vase plants we have ever seen. We shall give our readers a sketch of this plant in the next number of the RURAL PRESS.

THE log-driving season has commenced upon the Truckee. Some idea of the amount of lumber floated down may be inferred from the fact that Bragg & Fulton have 2,000,000 feet of logs, and the Boca Mill company and the Truckee Lumber company have about 5,000,000 feet each, ready to be driven down.

THE people of Visalia and vicinity are agitating the subject of holding a district agricultural fair in that place, in September next. The enterprise should succeed, and will serve a good purpose to bring into notice the many resources of that portion of the State.

COL. JACK HAYES has over seven hundred acres of grain growing finely on Mandeville Island. The breaks in the levee on this island, which occurred in the early part of the season, have been mended, and the land is in fine order.



The Farmer Feedeth All.

My lord rides through his palace gate,
My lady sweeps along in state,
The sage thinks long on many a thing
And the maiden muses on marrying.
The minstrel harpeth merrily,
The sailor ploweth the foaming sea,
The huntsman kills the good red deer,
And the soldier wars without e'en fear;
But fall to each, what'er befall,
The farmer he must feed them all.

Smith hammereth cherry red the sword,
Priest preacheth pure the Holy Word,
Dame Alice worketh 'brodery well,
Clerk Richard tales of love can tell,
The tab-wife sells her foaming beer,
Dan Fisher fisheth in the mere,
And courtesans rattle, strut and shine,
While pages bring the Gascon wine;
But fall to each, what'er befall,
The farmer he must feed them all.

Man builds his castles fair and high,
Wherever river runneth by,
Great cities rise in every land,
Great churches show the builder's hand,
Great arches, monuments and towers,
Fair palaces and pleasing bowers;
Great work is done, be't here or there,
And well man worketh everywhere;
But work or rest, what'er befall,
The farmer he must feed them all.

The Mother-in-law.

It has come to be a sort of axiom among the flippant quill-drivers, that when they are out of an idea, the woman question is a text upon which they may dilate, and which they may lampoon and turn into ridicule as their feeble wit may serve them. We suppose it is a sort of instinct which deters these self-supposed humorists from stizzing the women to whom they owe their existence, as it has never occurred to us that it was from any sentiment of delicacy or chivalry that the mother was spared, when these would-be wits are promiscuously hurling their shafts at the hypothetical weaknesses and foibles of the softer sex.

And thus it comes that a man who would regard it as an affront to be designated as the offspring of a canine female, will attack with the most remarkable intrepidity everything that is pure, holy, just, lovely and of good report (perhaps that is not in the order of the apostolic catalogue) in every woman but his mother. Why is she spared? Because he recognizes any special divinity about her? or because he cares more for her than for any other female? Nay, verily, instinct and the habit which even brutes have of respecting the rights of a parent, are to us the only appreciable causes for this consideration.

What has struck us as more singular in the effusions of these writers is that they seem to have a special penchant for travesties of the wife and mother-in-law, particularly the latter. Can it be that all these funny men have been so unhappily mated? that their writings are a reflection of their matrimonial experience? that matrimonial broils and the animadversions of an irate mother-in-law are essential to humorous writing? Forbid it heaven! We must believe that the humorists are unmarried, or that their lines are not cast in such pleasant places as those more grave people whom we meet in our daily walks have been favored with.

"Whoso findeth a wife, findeth a good thing"—or words to that effect—is the voice of inspiration. A man is supposed to be suited when he ties himself for life to a woman—at least he does it with his eyes open.

Nine out of ten women are only what their mothers make them. If, then, a man has not judgment enough to tell what kind of a mother-in-law he is likely to get with his wife, he has no business after marriage to come forward and lampoon and burlesque his wife's parent. In so doing he only stultifies himself, and proclaims to the world that he is an improvident ass.

But there is nothing really laughable in such sallies as that describing a man's presence of mind when he carries the feather bed down stairs and throws his mother-in-law out of the window, in case of fire. They may "make the unskillful laugh but cannot but make the judicious grieve," and in view of the remarkable frequency of such jests we can easily imagine Shylock remarking:

"These be the Christian husbands; I have a daughter; Would any of the stock of Barabas Had been her husband, rather than a Christian."
—Benicia Tribune.

"In my fertile country," said a Leicester-shire man, "you could turn a horse into a field new mown, and the next morning the grass would be grown above his hoofs." "Pooh! that's nothing," cried a Yorkshire man; "you may turn a horse into a field in Yorkshire, and not be able to find him next morning."

The difference between having a tooth properly drawn by a professional surgeon, and having it knocked out miscellaneously by a fall on the pavement, is only a slight distinction—one is dental and the other is accidental.

Peck's Experience with a Coal Stove.

We never had a coal stove round the house until last Saturday. Have always burned pins slabs and pieces of our neighbor's fence. They burn well, too, but the fence got all burned up, and the neighbor said he wouldn't build a new one, so we went down to Jones' and got a coal stove. It is called the "Radiant Home," and any man that says we didn't have a radiant home at our house for about four hours last Saturday night, is a Republican and a villain. You see we didn't know anything about coal stoves. We filled the Radiant Home about half full of pins fence, and when the stuff got well to going we filled the artesian well on top with coal. It simmered and sputtered about five or ten minutes and all went out, and we put on an overcoat and a pair of buckskin mittens and "went out too," to supper. We remarked, in the course of the frugal meal, that Jones was a "fraud" for recommending such a confounded refrigerator to a man to get warm by. After supper we took a piece of ice and rubbed our hands warm, and went in where that stove was, resolved to make her draw and burn if it took all this pine fence in the First Ward. Our better half threw a quilt over her and shiveringly remarked that she never knew what real comfort was until she got a coal stove. Stung by the sarcasm in her remark, we turned every dingus in the stove that was movable, or looked like it had anything to do with a draft, and pretty soon the Radiant Home began to heave up heat. It was not long before she stutted like the new Silsby steamer. Talk about your heat! In ten minutes that room was as much worse than a Turkish bath as Hades is hotter than Livermen's ice-house. The perspiration fairly frised out of a tin water-cooler in the next room. We opened the doors, and the snow began to melt as far up Vine street as Hascomb's house, and people all round the neighborhood put on linen clothes. And we couldn't stop the confounded thing. We forgot what Jones told us about the dampers, and she just kept a biling. The only thing we could do was to go to bed, and leave the thing to burn the house up if it wanted to. We stood off with a pole, and turned the damper every way, and every turn she just sent out heat enough to roast an ox. We went to bed, supposing that the coal would eventually burn out, but about twelve o'clock the whole family had to get up and sit on the fence. Finally a man came along who had been brought up among coal stoves, and he put a wet blanket over him and crept up to the stove and turned the proper dingus, and she cooled off, and since that time has been just and comfortable as possible. If you buy a coal stove you want to learn how to engineer it, or you may get roasted. —La Crosse Democrat.

THE UNCHANGEABLE LAND.—Things do not change in the East. As Abraham pitched his tent in Bethel, so does an Arab sheik now set up his camp; as David built his palace on Mount Zion, so would a Turkish pasha now arrange his house; in every street may be seen the hairy children of Esau, squatting on the ground, devouring a mess of lentils like that for which the rough hunter sold his birthright; along every road plod the sons of Rechab, whose fathers, one thousand years ago, bored themselves and theirs to drink no wine, plant no tree, enter within no door, and their children have kept the oath; at every khan young men sit round the pan of parched corn, dipping their morsel into the dish; Job's plow is still used, and the seed is still trodden into the ground by asses and kine; olives are shaken from the boughs as directed by Isaiah; and the grafting of trees is unchanged since the days of Saul. The Syrian house is still, as formerly, only a stone tent, as a temple was but a marble tent. What is now seen in Bethsny may be taken as the exact likeness of the house of Lazarus where Mary listened and Martha toiled, or as the house of Simon, the leper, where the precious box of ointment was broken, and whence Judas set out to betray his Master.

ORIGIN OF THE PRINTER'S DEVIL.—When Aldus Manutius set up in business as a printer in Venice, he came in possession of a little negro boy. This boy was soon known all over the city as "the little black devil," for, at that time, negroes were not often seen in Venice, and some of the most ignorant people believed him to be either an embodiment or an emissary of Satan who aided Aldus in the work of his profession. One day Manutius, desiring to dispel this strange and spreading opinion, displayed the young imp publicly to the poorer classes, making this short but characteristic speech: "Be it known to you, and to all Venice, that I, Aldus Manutius, printer to the holy church and the doge, have this day made exposure to all, of the printer's devil. And if any think he is not like us flesh and blood, they may come and pinch him, and they will find that though he is black, he is human."

There are but few men, and even these men very seldom, who can treat themselves as utter strangers, and examine themselves with another's eye, which is comprehended in that grand saying, "Know thyself;" knock at your own door; call for once upon yourself as though you are a stranger. What a strong request that is. First you must believe that you do not know yourself, for not till then can you know yourself.

Adam had one consolation when he fell. There were no people standing on the opposite corner to laugh at his mishap.

"How Much Was He Worth?"

There is a terrible significance in the question we sometimes ask upon the death of a wealthy man, if we only understood the real significance of the question. "How much was he worth?" we ask; and the angels might reply; "Worth? He wasn't worth anything. His money was worth something; his body is worth something as a source of fertility to the soil—but he wasn't worth anything." So we vary this question: "Yes, but how much did he leave?" "Oh, leave," it might be answered; "yes, I will tell you. He had houses, lots, bonds, stocks, gold notes, merchandise, farms. And he left—Great God! he left them all. He carried nothing with him. Naked and destitute came he into the world, and as naked and destitute did he go this way whence he came. He carried nothing; neither land nor money, nor yet did he carry with him the blessing of the needy; the grateful tears of an orphan; the benediction of the poor. He left all—he carried nothing away with him." But his neighbor has died; a man who was not known on 'Change nor in the tax list. "And what has he left?" we may, perhaps, curiously ask. "Left? he has left nothing; but he has taken much with him. He has gone to heaven laden with blessings and the gratitude of the poor, of the helpless, of the young, of the aged, of the widow, of the friendless; of those whom he by his counsels and his acts, and his prayers had blessed; of those whose poverty he relieved, whose ignorance he had enlightened, whose darkness he had dispelled, whose bodies and whose souls he had fed." When Wilberforce died, Daniel O'Connell said: "He has gone up to heaven bearing a million broken fetters in his hands." Happy he, whatever he may leave or not leave on earth, who goes thus freighted into the other world.—Good Words.

TALKING AND LISTENING.—Listening is a trade which must be acquired; there must be efforts made to subdue the propensity to loquacity.

But this is not all. You must not only be silent, but attentive—the mark of a good listener. You should know what to appropriate of what you hear and what to reject. Here is the benefit—to get the good which a good talker will impart or which conversation will develop. It is like reading a book, or nature, or like thinking; you are furnished with new and profitable ideas if you are in a select or proper company; hence the importance of choosing one's society. Better be with the society of your books, or with nature infinitely, than in a vicious atmosphere to talk, for there is personal influence of the talker or the circle to affect you.

Talk when you can contribute your quota of good; occupy only the time that is your own; and in a large circle this is only a small part, a word now and then. Never forget that the main thing is not to talk, not even to entertain, but to listen. A social circle is an audience on a small scale; we should all be listeners to the one that talks.

In listening we must deny ourselves, especially if we have a talent for talking. Here tuition must make itself felt; we must restrain for the good of others, and we must listen to them with attention—not in sn attitude of indifference or formality. If this is impossible, the subject or the society unsuitable, you are not in the proper place to listen. Avoid it, and seek congenial company.

WOING AND WINNING.—Young girls should be exceedingly careful about falling in love with young men, whether rich or poor, who yet remain to be won. They cannot guard their affections too carefully in reference to those whose sentiments toward themselves are as yet unknown. Then again, when a young lady sits down to devise a scheme for the capture of a wealthy husband, as a general would plan a campaign, we think she enters upon an undertaking which she had better not be engaged in. The chances are that she will not succeed, and that if she does succeed she will not be happy. Marriage should be the spontaneous union of heart as well as of hands. Then the relation contains the elements of happiness, but not otherwise. It has no promise for those who enter into it solely from cold calculations of advantages. If a young woman wishes to obtain a good husband, her surest way is by the sedulous cultivation of her own head and heart, and by learning all the domestic duties on which so much depends in married life. Thus she may attract him—it may be some one now unknown to her—as the most fragrant flowers attract the bee, even from a distance.—Rural Home.

THINK.—Do your own thinking. Yes, that is the idea. Think for yourself. It is well to listen to the expressed thoughts of others, and it is an agreeable pastime to give expression to your thoughts. But when alone, weigh what you have said, and traverse what you have said. It is well to do this, for it will assist in curing you of false notions, and in eradicating unprofitable and vicious ideas, and in time make you better men and women. What you thus gain from surroundings you will unwittingly transmit to the rising generation, and the result will be, that you will do your share in the glorious work of elevating the human family. Do your own thinking.

"What sort of a sermon do you like?" said Dr. Rnsh to Robert Morris, "that kind of preaching which drives a man into the corner of the pew, and makes him think the devil is after him."

THE BLESSED HOME.—Home! To be at home is the wish of the seaman on stormy seas and lonely watch, Home is the wish of the soldier, and tender visions mingle with the troubled dreams of trench and tented field. Where the palm tree waves its graceful plumes, and birds of jeweled luster flash and flicker among gorgeous flowers, the exile sits staring upon vacancy; a far away home lies upon his heart; and born upon the wings of fancy, over intervening seas and lands, he has swept away to home, and hears the lark singing above his father's fields, and sees his fair-haired boy-brother, with light foot and childhood's glee, chasing the butterfly by his native stream. And in his best hours, home, his own sinless home, a home with his Father above that starry sky, will be the wish of every Christian man. He looks around him; the world is full of suffering; he is distressed with its sorrows and vexed with its sins. He looks within him: he finds much in his own corruptions to grieve for. In the language of a heart repelled, grieved, vexed, he often turns his eye upward, saying: "I would not always live here; no, not for all the gold of the world's mines; not for all the pearls of her seas; not for all the pleasures of her flashy, frothy cup; not for all the crowns of her kingdoms, would I live here always. Like a bird about to migrate to those sunny lands where no winter shades her snows, or strips the grove, or binds the dancing streams, he will often in spirit be pluming his wing for this hour of his flight to glory.—Guthrie.

BOTTLEBURY, of Camden, will never dive into the creek to save another woman from drowning. He saw a red-haired girl named Sparks, tumble in the other day, off a boat, and he instantly plunged in after her, caught her by her dress, and swam to the shore with her. As soon as they were on dry land, Miss Sparks gave a hysterical scream, flung her arms about Bottlebury's neck, and fainted. Just then, the father came up, with the rest of the family, and perceiving the situation, he dashed up to Bottlebury, grasped his hand, and said: "Take her, my boy; take her! It is hard to give her up; it wrenches her old father's heart; but she is yours. Bless you, my children—bless you!" Then Mrs. Sparks cried, and said she hoped Harriet would be happy. The little Sparkses manifested their emotion by climbing up Bottlebury's legs and pulling his coat tails. Then Harriet came to, and, laying her head on his shoulder, whispered, "Kiss me, darling." Bottlebury, amazed and indignant, tore himself away and fled. He was arrested that afternoon on charge of breach of promise, and on the trial, the jury gave the broken hearted Miss Sparks two hundred dollars damages. Bottlebury has intimated to his confidential friends that if any other warm-haired woman intends to fall overboard near him, she will find it to her advantage to learn to swim.

OWNING A HOME.—The strength of the American Republic is the universal desire to own a house. It is moulding all the people, native and foreign born, into one homogeneous mass. The ownership of a home is something of which neither the Irish peasant nor the German laborer has, in his own country, any conception, but it is here the goal of his hopes and desires. Education comes next; it is something the need of which is not felt until the adornments of home are thought of. This desire to own the roof under which one sleeps is distinctively an American characteristic, and seems by nature adapted to the growth which is raising us in importance in the scale of nations. It is the link which connects the man with the Government, it adds to his interest in the making and execution of the laws, and identifies him with the usages and customs of the people. It is this element which gives the people of Switzerland their unity and power, and the lack of it causes nine-tenths of the unrest in Ireland. No feeling is stronger than the attachments of home, and no nation whose people possess this as a common sentiment can lose its liberty.

HAPPINESS AND DUTY.—Happiness passes away, leaving hardly a single trace behind, and can often, indeed, scarcely be called happiness, seeing nothing lasting has been gained by it. Unhappiness also passes away (and that is a great consolation), but leaves deep traces behind, and, if we know how to improve them, most wholesome ones, purifying and strengthening, and frequently productive of the highest happiness. It is worthy of peculiar remark, that when we are not too solicitous as to happiness or the want of it, but devote ourselves to the strict unsparring fulfillment to duty, then happiness comes of itself—yes, even arises from a life of troubles and anxieties and privations. We have often seen this verified in the case of women who were very unfortunate in their conjugal relations, but rather would have perished than dreamed of forsaking their duty.

A "RUNNER" for a Milwaukee house, was, a few days ago in La Crosse anxious to get across the river on the ice, but was told it was dangerous, so he got on his hands and knees and crawled across hauling a skiff on the ice to get into in case the ice broke. After he had crawled about half way across, and was all tired and discouraged, he heard a noise behind him, and, thinking the ice was breaking, he got on his knees, just as a load of wood came up behind him. The ice was a foot thick, and some other runners had played it on him. He is searching for the fellow who told him the ice was thin.

How many of our readers ever took a hearty quaff of cool, sparkling spring-water. From the good old-fashioned gourd dipper? Those who have not, have probably heard their fathers or grand-fathers tell of the old gourd dipper! It is as famous as the "old oaken bucket." Our grand-father had such a one, and how often we have drank the cold mountain spring water from its warty-ribbed cavity. How pure, how refreshing it was. There was no serpent coiled at the bottom; there was no intoxication in its sparkling effervescence; no insanity nor dark despair lurking in its depths; there was nothing to destroy our manhood or dethrone our reason; the music of its rippling flow was not mingled with the wails of orphans, nor shrieks of the inebriate, nor diluted with the tears of suffering wives and mothers. Let princes and nabobs boast of their goblets of silver and gold, and quaff their sparkling wines! but give to me a draught of the pure spring water from the old fashioned dipper of my fathers.

Then give us the old gourd dipper,
That hangs by the mountain spring;
And one long draught
Of nectar we'll quaff,
As we pause in life's journeying.

—*Mathew Bramble, in the Oakland Transcript.*

A SINGULAR FREAK.—A well-known Parisian has had himself painted, by an eminent artist, "As he was," "As he is," "As he will be," "As he was," represents him at the age of twenty-five, a poor wretch in ragged garments, with his toes peeping through holes in his shoes—slinking, half famished, by the side of a wall. "As he is," figures him fat and jolly as an alderman, well dressed, with gold chains decking his waistcoat, and diamond rings blazing on his fingers. And, in "As he will be," he is made a hideous corpse. Not the least singular feature of such a singular freak, is the fact that he has the paintings hung in his drawing-room.

FUN FOR THE FAMILY.—Kiser, a Choctaw Indian, owed a cute lawyer a sum of money so long that the latter finally threatened Kiser with a lawsuit. This scared the Choctaw, who paid the money and then asked for a receipt. "A receipt?" said the lawyer. "Can you understand the nature of a receipt? Tell me the use of one, and I will give it to you." The Indian looked at him a moment, and then said, "S'pose maybe me die; me go to heben; me find de gate locked; me see de Apostle Peter; he say, 'Kiser, what you want?' Me say, 'want to get in.' He say, 'You good man?' Me say, 'Yes.' He say, 'You pay Mr. A. that money?' What me do? I hab no receipt. Hab to hunt all ober hell to find you."

THE philosophers of India once possessed a book so large that it required a thousand camels to carry it. A king desired to have it abridged, and certain scholars reduced it so that it could be carried by a hundred camels. Other kings came, who demanded that it should be diminished still more; until at length the volume was reduced to four maxims. The first of these maxims bade kings to be just; the second prescribed obedience to the people; the third recommended mankind not to eat except when they were hungry; the fourth advised women to be modest.

So then the year is repeating its old story again. We are come once more, thank God, to its most charming chapter. The violets and the May-flowers are as its inscriptions or vignettes. It always makes a pleasant impression on us, when we open again at these pages of the book of life.—*Goethe.*

THE more people do, the more they can do. He that does nothing renders himself incapable of doing anything. While we are executing one work we are preparing ourselves to undertake another.

A SOPHOMORE says he cannot understand how any one possessing what is generally known as a conscience can counterfeit a five-cent piece, and put on the back of it "In God we trust."

A DISGUSTED Eastern editor remarks: "O, bother cremation! We have to earn our living—and we don't want to be compelled to urn our dead."

AN editor in Michigan, talking of corn, professes to have a couple of ears fifteen inches long. Some folks are remarkable for the length of their ears.

Two pairs of stairs are necessary to every newspaper office in North Carolina; one for the editor to go down as the caller comes up the other.

THE speaker who is unable to arrest the attention of his audience without the assistance of the police is clearly unable to discharge his duty.

SMALL means often accomplish great things. Each of us may do something for others, and true sympathy and loving ministry are never lost.

THAT farmer understood human nature who said: "If you want your boy to stay at home, don't bear too hard on the grindstone when he turns the crank."

"Now, Johnnie," says grandma, "I want you to sit as still as a mouse." "Mouses don't sit still, grandma." Sure enough.

DIVINE fictionists—the mills of the Gods.

THE love land of babies—Japland.

YOUNG FOLKS' COLUMN.

Little Hands.

Little hands, little heart,
Keep them pure and white,
Fit for heavenly errands
And the Angel's sight.

Other hands, tired hands,
Fearless, clasp and hold,
Warning, with warm touches,
Weary hearts and cold.

So shall hands, so shall heart,
Fair as lilies be,
When, life done, the Angels
Come and call for thee.

How John Made it Up.

He had failed somewhere—in study or deportment, I cannot remember which—and his teacher told him he must stay after school. When the other scholars were dismissed, John seized a moment when the teacher's back was turned, and slid out of the door. She called after him to come back, but he pretended not to hear, and ran away. It was a cute trick, he thought, and he bragged over it a little to the other boys; but he did not go to school the next day nor the next. He did not feel like it, he said.

At last he made his appearance again, but instead of the punishment he expected, his teacher, who was giving out the subjects for essays that day, only told him to "write a composition about obedience." John took her meaning at once, and sat scratching his head and puzzling over his composition about half a day. Finally he handed in the following, which is an actual copy of John's composition:

"When won tells won to do a thing, and he does it, it is called obeying; and when won tells won to do a thing and he don't do it, it is called disobeying. And when a man or woman tells a boy or girl to do a thing and he don't do it, it is called disobeying; and when a teacher tells a boy to do a thing and he does it, it is called obeying. The boy's name was John, and he did not obey his teacher, and when she called him back he *did* hear her, and he will never do it again."

The teacher was satisfied.—*Youth's Com.*

A CAT'S DREAM.—She was very still, and appeared to be fast asleep, when suddenly she sprang into the middle of the room, where she fixed her feet on a limited spot on the floor, to which also her nose was applied, as if closely grasping something which she held with her claws. This continued for a short time, when the nose was gently raised, and the visible attention was directed to the feet, which still continued their grasp; but after a time one of them was gradually removed, and then the other, on which puss appeared greatly at a loss to imagine whither the imaginary object could have gone so as to escape her grasp. She looked in various directions along the floor with a foolish face of confusion; and then again her attention was directed to the spot on which the feet were closely pressed, as if to examine closely whether the presumed escape had been by sinking through the floor; when this seemed unsatisfactory, the disappointed animal, now widely awake, retired slowly from the spot; but she returned more than once to re-examine the place, as if she found it impossible to comprehend how an object she had so plainly seen and grasped should have sunk into nothing. Many minutes elapsed before this cat appeared to be reconciled to the conviction that what had seemed a dream was not in truth a reality.—*Land and Water.*

A BROOKLYN lawyer's four-year-old daughter is marked as a diplomat in the future women's era. Recently her mother, returning from church, found her marshaling a long array of toy-soldiers on the nursery floor. "Are you playing with soldiers on Sunday, Louise?" said mamma. "Oh, these are the army of the Lord," was the quick response of their curly-headed commander.

A NOBLE LITTLE BOY.—A little girl, playing in a field near Westminster, Mass., was attacked by a savage bull. Her brother, aged 15, climbed over the fence, and bravely fought the bull with a stick. "Run, sissy! run quick!" shouted the boy, and she saved herself by obeying. The boy, however, was gored so terribly that very likely he will die of the hurt.

"PA," said a Baltimore boy, "what is Mardi-grass they are talking so much about?" "Shrove Tuesday," said the well-informed father. "What is Shrove Tuesday?" queried the lad. "Look in the dictionary." The boy looked, and saw, "Shrove Tuesday—the Tuesday following Quinquagesima Sunday, and preceding Ash Wednesday." Then he knew all about it.

A BOY who had been taught that time is money, appeared at the bank, the other day, and remarked that he had had an hour given him, and he would like to spend a quarter of an hour, and would take the change for the other three quarters.

A LADY teacher inquired of her juvenile class if any of them could name the four seasons. A five-year member promptly raised his hand and said, "Pepper, salt, vinegar and mustard."

COMPOSITION by a little boy—Subject:—"The Horse." "The horse is a very useful animal; it has four legs—one on each corner."

GOOD HEALTH.

Brief Thoughts on Habit.

Our habits are the best illustration we can give of the very intimate relation between our minds and our bodies.

1. Every person has his modes of thought and action, and these are but habits which we have inherited from our ancestors, or acquired ourselves. Indeed some physiologists go so far as to teach that the reason why the body grows up as it does, is because of the power of habit for ages.

2. It is a matter of universal experience that training for special aptitudes is more effective when exerted on the young and growing child, than when brought to bear on the full grown man or woman. The training in early life gives the organs of the body a tendency to grow to certain modes of action. In after life these modes of action are difficult to acquire. In other words, we find it easy and almost automatic to do what we have done before, and to think and feel what we have thought and felt before. This tendency is stronger in the nervous system than in the other organs of the body.

3. The reason why old people remember so much more distinctly what they learned in early life than that most recently learned, is because the force of habit, while the body was in its full vigor, has fixed these impressions more thoroughly in the nervous tissues of the growing brain. They endure to the end of life.

4. In mature life it is difficult to form new habits of thought, or to master new subjects, unless they fit in with what we have already learned. Things seem very unreasonable to us that do not match with our previous knowledge, though they are perfectly true, measured by the standard of those who have formed different habits of thought.

5. Habit shows its power over both mind and body concerning the things we eat and drink. People who, from long habit, have got used to certain articles of food think they cannot live without them. They are used to them, and whether best or not is a question never to be thought of.

6. It is more than probable that the habit of drinking liquors would never be acquired to any great extent after the age of thirty. Let a boy be well fed and know nothing about the use of alcoholic beverages till a man, and he would rarely form the habit of using them. "I once knew a family reduced to poverty," says Carpenter, "who declined to eat a rich barley soup because they were not used to it." It was hard to form a new taste after the habits of the body and mind had become fixed. The same writer gives another case where all the workmen of a large outfitting establishment refused to work because they were required to make a slight alteration, not more troublesome, in the pattern of a particular garment. And still another of an effort on the part of manufacturers of cheap prints for the humbler classes, to change the styles a little, which failed. They had been in the habit of wearing a particular pattern so long it had become a part of themselves. The least departure from it could not be tolerated. The tissues of the body get into bad habits as well as the nervous system. After nasal catarrh has once been established it is often kept up from mere force of habit. People cough from habit, spit from habit, go to sleep and wake at particular hours from habit. We once knew a thief who stole from habit. His faculties were used to working in this way and could work in no other.

7. Where habits are wisely and judiciously formed in early life the tendency is an extremely useful one, enabling us to work with ease instead of with difficulty. Habit renders all things easy. Without habit it requires a strong will to bring us up to the point of doing what we ought to, or must do.

8. It is not wise to be a slave to even good habits; to be so we cannot do any work except in a particular way, sleep except in a particular bed or room, or eat only a particular food.

9. To break up a bad habit requires a powerful effort of the will. Nothing so weakens this faculty as the force of bad habits. Every victory of habit over the will leaves the victim weaker and weaker, till at last his power of resistance is completely annihilated.

10. The formation of habits should begin with birth, especially as regards eating, drinking and sleep. The regularity of these early bodily habits will help to shape the mental habits of after life. Nothing tends so to develop the vice of self-indulgence in children so much as to allow them to eat, sleep, study and play when they please, without reference to order and discipline. A mother related a case to me the other day, of her child, which had been used to nursing twice during the night, thus disturbing the sleep of the mother and injuring her health. She resolved to break up this habit. The first night the child awoke as usual for its food. The mother refused it, and the result was two hours of lusty squalling. It almost made the mother relent, but she persevered. The next night the same was repeated, only in a less degree. The third night the child did not cry over ten minutes, and this was the end of all her trouble. The child did not reason on the subject; it had no will in the matter. The strong force of habit made it cry for its accustomed food at a certain hour, and as soon as a new habit was formed it took the place of

the other, the little fellow being equally satisfied. Mothers would save themselves much care and trouble if they would study the subject of habits thoroughly, and then adopt a wise course with their little ones.

11. Military drill in schools for the young, or gymnastic drill, has great value, from the fact that it not only promotes a healthy physical development, but it helps to form habits of strict order and prompt obedience. When soldiers go to battle if strict discipline is maintained they can lead a forlorn hope; but the moment the ranks are broken, if they cannot form again, all is lost.

12. The habit of doing its duty is a very important one for a child to learn. It generally has a good idea of its own rights, but knows nothing of the rights of others. Duty teaches this, especially when right and justice are made a part of it.

13. Lastly, love and affection should grow into habits. Fathers and mothers, sisters and brothers must set the example. There is no moral health or happiness without love. It is the mainspring of all healthy action, the greatest power given to human beings.—*Herald of Health.*

THE CINCHONA ALKALOIDS.—Dr. H. C. Wood, in his excellent "Treatise on Therapeutics," just issued, has the following remarks on cinchona:

"The physiological action of cinchona is similar to, but less powerful than that of quinia. Thus Conzen (quoted by Husemann) has found that its action on infusoria and on fermentation is similar to but weaker than that of its sister alkaloid. Upon dogs, according to Bernatzik's experiments, the lethal dose of cinchona is to that of quinia as 5 is to 4. The history of cinchona in the organism appears, therefore, to be parallel with that of quinia.

As an antiperiodic cinchona exerts a similar influence to quinia, but is probably about one-third weaker than that alkaloid, and must be used in correspondingly larger dose. Dr. J. B. Hamilton (*Indian Medical Gazette*, November, 1873) affirms as the result of experiment that cinchona as a prophylactic against malaria is very superior to quinia.

As a tonic I have never been able to perceive that cinchona acts differently from quinia.

The *London Lancet* (February, 1873), referring to the cinchona alkaloids, says: Considering the expense of quinine, it is somewhat surprising that these alkaloids have not been more generally used in the treatment of malarious fevers, especially as there does not appear to be any doubt in the minds of those who have tried them as to their efficacy."

MILK DIET IN DYSENTERY.—Dr. Barret states in the *Archives de Medecine Navale*, that he has made use of milk in chronic dysentery among soldiers and sailors returning from China. He considers a milk diet superior to all other treatment in such cases. The milk must be pure, unmixured with water, as fresh as possible, and not boiled. Sufficient milk was given to a patient, but nothing else allowed to pass his lips. Diarrhea, if it appears, lasts but a few days. No change of diet is to be made, and no medicine given. If the physician fears the persistence of the diarrhea, a small quantity of bismuth may be prescribed. If the milk pass through the bowels undigested, pepsin will remedy the defect in the digestive process. After a time the feces become solid, the patient thinks himself cured, and craves other food. This is the dangerous period, for too early relaxation of the diet may cause a relapse. White of eggs, rice cream, and the lightest possible things are to be admitted sparingly; and when the patient feels convalescent, and will endure the restrictions no longer, he is to return by the slowest degrees to his former diet.

THE NEW BLOODLESS OPERATION.—The plan of operating lately introduced or revived by Professor Dittel, of Vienna, appears to have become suddenly fashionable. The *London Lancet* gives an account of the mode by which it was suggested to Dittel. It seems that some months ago he was called to see a young girl who was suffering from severe nervous symptoms, and who was evidently dying. Next day, on making a post-mortem examination, he found that the rubber band of a hair net which had been worn day and night for a month was deeply imbedded in the pericranial tissues, and had in one part cut through the walls of the skull and was pressing on the dura mater, which was in a state of acute inflammation. On inquiry it was ascertained that the girl had a cruel step-mother, who greatly objected to the loose and dishevelled locks of her daughter, and insisted, therefore, on the child wearing a net to keep the hair in place.

USE OF LEMONS.—When persons are feverish and thirsty beyond what is natural, indicated in some cases by a metallic taste in the mouth, especially after drinking water, or by a whitish appearance of the greater part of the surface of the tongue, one of the best "coolers," internal or external, is to take a lemon, cut off the top, sprinkle over some loaf sugar, working it downward into the lemon with the spoon, and then suck it slowly, squeezing the lemon and adding more sugar as the acidity increases from being brought up from a lower point. Invalids with feverishness may take two or three lemons a day in this manner with the most marked benefit, manifested by a sense of coolness, comfort and invigoration.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR: W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week, 1 month, 3 months, 1 year.
Per line.....25 80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:
Saturday, May 9, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Pure Blooded Angora Ewe; The First Fruits; The Grape Prospect; Put Your Hay Early, 289. Native California Coffee; Poison Oak Remedies; California Earthen and Stone Ware; Italian Rye Grass; Patents and Inventions, 296. Mountain Ranch Hints; Los Angeles County for Opium Culture; Are We to Have a Flood? Self-Pumping Well-Boring Drill; Kitts' Improved Header Beam; Budding the Rose; Meeting of the California Thoroughbred Cattle Breeders' Association, 297.

ILLUSTRATIONS.—Pure Blooded Angora Ewe, 289. Kitts' Improved Header Beam; Self-Pumping Well-Boring Drill, 297.

CORRESPONDENCE.—Crop Prospects in Santa Clara County; Letter from Minnesota; Letter from Washington Territory; San Luis Obispo County; Pen Strokes; Ojai Valley, 290. Notes of Travel in Colorado Territory; Notes of Travel in Stanislaus and Merced Counties; The Calycanthus, 291.

HORTICULTURE.—Seed; Soaking Seed Wheat, 291.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 292-3.

HOME CIRCLE.—The Farmer Feeds All (Poetry); The Mother-in-law; Peck's Experience with a Coal Stove; The Unchangeable Land; Origin of the Printer's Devil; "How Much Was He Worth?" Talking and Listening; Wooling and Winning; Think; The Blessed Home; Owling a Home; Happiness and Duty, 294. A Singular Freak; Fun for the Family, 295.

YOUNG FOLKS' COLUMN.—Little Hands (Poetry); How John Made It Up; A Cat's Dream; A Noble Little Boy, 295.

GOOD HEALTH.—Brief Thoughts on Habit; The Cinchona Alkaloids; Milk Diet in Dysentery; The New Bloodless Operation; Use of Lemons, 295.

THE VEGETABLE GARDEN.—About Cabbages; The Pea Crop; Grafting Potatoes, 299.

AGRICULTURAL NOTES from various counties in California, 300.

MISCELLANEOUS.—Puddle Walls, 291. Salt and its Uses; Colored Fires; Cannon Made of Ice; To Prevent the Rusting of Iron; Raising Wrecks; Photographic Engraving; The Coming Transit of Venus; What is Steel? The Active Principle of Yeast; A New and Practical Improvement in Umbrellas; Nitrous Oxide, 298.

Poison Oak Remedies.

A lady recently informed us that "soap root," which grows wild in most hilly districts in California, macerated and applied, gives almost instant relief to the surface affected by poison oak. As soon as dry it seems to form an airtight covering. We have seen it tried with effect; but as to whether in bad cases it is sufficient without any further means of eradicating the poison from the system, we can not say. Mrs. Sherwood writes to the San Francisco Call as follows: "We tried several cures, but all failed but the following, which was sent from your paper. It did not act so quickly as promised in the recipe, but was very effective:

"Dissolve one ounce of gum arabic in six ounces of sulphuric ether; cork tightly in a bottle. Bathe the surface where the irritation appears with cold water, and wipe dry; then apply the above solution. The ether will evaporate, leaving an elastic coating of gum, impervious to the air. In about two minutes the most distressing case of poison oak can be relieved entirely of all unpleasant sensations. As the coating peels off, apply more of the solution, and in twenty-four hours the cure is performed."

[We presume that collodion, which is gun cotton dissolved in sulphuric ether, will answer the same purpose. It may be obtained at any druggist's, and when applied to the surface with a brush, immediately forms a thin coating impervious to air or water.—ED. CALL.]

The last suggestion on this subject is that a simple mustard plaster answers all purposes in effecting a cure for poison oak.

BEE SUGAR.—We would like to correspond with parties—in Santa Rosa, or Russian River valley, or indeed any part of the State—who may feel interested in seeing beet sugar making one of the established industries of their respective localities. Address RURAL PRESS, 338 Montgomery street, San Francisco.

Native California Coffee.

We have received a large number of communications on the wild coffee found in this State, and have quite a number of samples gathered in different localities, all of which are very nearly if not quite identical in character. Our correspondents are generally very enthusiastic about the grand results which are expected to flow from the discovery that we have coffee at our very doors, so to speak. The price of imported coffee has ruled so high, of late months, and so much complaint has been made of combinations by dealers to put up rates, that many have fancied that in the native California coffee has been found an effectual panacea for oppressive charges and a good substitute for, if not successful rival to, the imported article.

We should perhaps state here that the recent steady rise in the price of the latter was not due to suppositions "coffee rings," but was owing to the natural laws of demand and supply, and simply in accordance with a similar movement in the coffee markets of the world. Quotations have fallen off of late, and perhaps this accounts for the temporary cessation of gratulation.

Let us consider fairly what is the real value of the discovery that the coffee plant is indigenous to the soil of our State. It would seem at first glance that, as the coffee is here, all that is necessary is to gather and prepare the seeds, plucking them from the bushes which grow in wild profusion on hillside and by water courses—so plentiful, in fact, that the unrecognized shrubs have only been accounted a nuisance.

There are very few, if any, of the edible plants which arrive in their native state to the perfection they attain under the cultivating hand of man. Histories have already been written of the successive stages of development which have given us our fine fruits and vegetables, starting with dwarf, insipid parent stocks which promised little of the future excellence of their progeny. Even now we are constantly hearing of new and finer fruits, originated and grown by careful and scientific selection and hybridization. What our fruits were in their original state we can form some estimate of, by considering the comparative worth of wild fruits now extant and that of their cultivated relations. It is much the same with the coffee plant, as with the fruits. Although it grows wild in many parts of the world, and even frequently furnishes an article of commerce in some countries, we have to look to the plantations which are mostly cared for, in addition to being situated in a truly congenial climate, to find the better kinds of coffee.

We do not think that the bushes found growing voluntarily in out of the way places will ever make a constant and reliable source of supply. There is really a considerable amount of labor and diligence needed to obtain the coffee kernels in any quantity, and we think our readers would be puzzled to pick, sort, prepare and pack these little grains in such amount as to secure an average pay of three dollars per day for the time so employed. But it has been said that to obviate this difficulty the wild bushes may be transplanted and their culture may be practised in regular coffee plantations, like those of Mexico and Central and South America. The plan is apparently a feasible one. If the coffee plant grows wild, it certainly ought to be easy of domestication. But this leads us to an important consideration: if we are indeed to enter upon the cultivation of coffee, and rank it among our staple crops, would it pay to commence by taking an inferior kind, with which to stock our prospective plantations?

We have used the term inferior advisedly. In spite of the assertion that a beverage made by taking an infusion of various parts of the plant, kernels, berries and leaves, is a satisfactory one, we, who have never been blessed with the opportunity to taste this nectar, must be pardoned for hesitating to rank it above good Java or Mocha, of which we know the merits. The kernels which have been forwarded to us as specimens, after making allowance for their weathered condition, do not resemble in size and plumpness the grain of the cultivated coffee, and, if we are to follow the analogy offered by the fruit comparison noticed, would probably produce a drink as inferior in quality as they are themselves in appearance. We are perhaps a little hasty in our judgment, it will be thought, but time will show whether we are right or not.

If then, we are to become coffee growers, let us grow good coffee. There certainly would be no wisdom in taking the trouble to raise a poor product when a profitable one might just as well be grown. And here is where the real significance of the native coffee is shown. It reminds us by its presence that we perhaps have overlooked a crop which may be adapted to the conditions of our soil and climate. The coffee plant is a remarkably hardy one and flourishes in widely different latitudes, and in the tropics at very high altitudes. The Colombian consul at this port informs us that plantations are common at an elevation of 4,000 feet above the sea level and that the coffee bush may be met with as high as 8,000 feet, which is certainly pretty well up. At this height, even in Central America, there must be occasional touches of frost, and the fact that the wild variety is here found in localities where it is exposed to frost shows that it is tough enough to withstand the cold of our winter, even far to the north of this city. Where the native plant

grows, probably the coffee of commerce could be raised. Whether it would prove a successful crop is not so certain, but that is within the possibilities. The only test worth anything would soon be applied. If a California-raised coffee would hold its place in the market beside the imports from other countries, the result is obvious. Let our readers introduce fresh seeds of the finest foreign varieties and attempt the culture on a scale large enough to prove something.

While we are upon this topic, we should not forget to mention that since the above was written another gentleman, the Rev. J. A. Bruner, of Santa Clara, has called at our office with samples gathered by him at Lodi, San Joaquin county. A section of one of the stems was over two inches in diameter, and was cut rather for the peculiar appearance of the bark, which had been nibbled away in squares by the birds, than for its unusual size. This coffee grows on the light sandy land in the midst of overgrown oaks, on the plains, but not, says Mr. Bruner, on the rich alluvial soil. The hills in the neighborhood abound with it. The wood of the trunk is susceptible of a very high polish and is cut easily, and the older stems would make very handsome walking sticks, if properly made up.

We would not wish to throw a wet blanket over the hopes of those who are looking for something of value to grow out of the discovery of this supposed indigenous coffee; and we would suggest that no speculative movement tending to draw off our excitable folk from the even tenor of their ways be inaugurated, for it is very positively asserted, by a botanist who ought to know, that the supposed coffee is not coffee at all; but instead of it, that it is the *Fragula Californica*, of the natural order *Rhamnaceae*, of the Buck Thorn family, while the true coffee of commerce belongs to the order *Chinonaceae* and is believed to be a very different plant, therefore, from the one we are talking about as indigenous coffee.

However, as there are doubts about the California shrub being of the Buck Thorn family, or a *Fragula* of the order *Rhamnaceae*; but a true, though distinct species or variety of coffee from the Arabic, we shall await the result of this summer's experiments and test its merits with considerable interest.

Italian Rye Grass.

A correspondent, writing from San Francisco, desires information concerning the rye grass, noticed by us several weeks since. Our knowledge is very limited, but we would say to those interested that Dr. Maillard, near San Rafael, Marin county, can give all the information desired, as he is cultivating it.

J. C. Morton, the great English agricultural writer, says it "is one of the best forage plants for cows when cultivated liberally. If manured abundantly after each cutting, especially if the dressing can be washed in by irrigation, another cutting, weighing 12 to 18 tons per acre, will be ready in a few weeks. As many as five heavy cuttings have been obtained from it in the season, on the liquid manure farms of Ayrshire. When sufficiently ripened, it is the best possible food that can be given to cows." Of course in Los Angeles it could be cut oftener and at shorter intervals than in Ayrshire. Mr. Morton speaks of alfalfa (or lucern, which is the same thing), as yielding only "6 to 8 tons per acre each cutting," and that only "if the intervals between the rows are forked and manured" each time it is cut. This puts Italian rye grass 6 to 10 tons ahead of alfalfa, each cutting, and from what I have seen the result would be similar in California. Rye grass forms a close mat from one to three feet high, with abundant seed, while alfalfa is not so close, and would have no seed (barely flower) in so short a time as six weeks. I sowed a row or two of rye grass by the side of a row of alfalfa (lucern) two or three years ago. The rye grass has almost run out the alfalfa, the gophers having aided the process by cutting the roots of the latter, and while the rye grass volunteers splendidly, no fresh mats of the alfalfa appear. I tried a row of California brown grass, but it did not hold its own against the rye grass; it has, however, a fine large seed, and should make fattening feed when cut in the right season; it will succeed on drier soils than are adapted for rye grass.—Gilroy Advocate.

SQUIRREL EXTERMINATOR.—In our column this week is the advertisement of Wakelee's Granulated Squirrel Exterminator, with testimonials of its complete efficiency in the destruction of squirrels, rats and gophers. We have a neat package of the poison put up in glass, in a very convenient form for carrying in the pocket. The granules seem to be wheat, partially coated with a whitish substance, the nature of which we are not informed. But we are assured that a single grain of it will kill a squirrel so quick, that if five feet from its hole, it dies before it can get there. Our Contra Costa farmer may find the exterminator just what is claimed for it and just what they want. Please report.

Mr. ASHFORD, a farmer of Sutter county, has had considerable trouble with his Chinese laborer, because when he paid them off he garnished their wages of the poll-tax, which he paid to the Assessor.

The spring clip of wool in Yuba county is coming in rapidly, and is much cleaner than usual.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., May 5, 1874.

FOR WEEK ENDING April 21, 1874.

PAVEMENT.—Francis Boudrye, S. F., Cal.
HEAD BLOCK OR CLAMP FOR BOOT AND SHOE LASTS.—Henry Rose, S. F., Cal.
MODE OF PREPARING RAWHIDE FOR BELTING.—Herman Royer, S. F., Cal.
MAGAZINE FIRE-ARM.—Alfred Swingle and Frank A. Huntington, S. F., Cal.
PRUNING IMPLEMENT.—Rufus E. Farrington, Anaheim, Cal.
MEDICAL COMPOUND.—James Helpen, Visalia, Cal.
MAP EXHIBITOR.—Eli F. Russell, Portland, Oregon.
TOY.—Charles E. Baldwin, San José, Cal.
HAY AND COTTON PRESS.—Michael Mickelson, Ashland, Oregon.
BUCKLE.—Eli F. Russell, Portland, Oregon.
HARVESTER.—Joshua B. Webster and William A. Dorr, of Stockton, Cal., and Martin M. Clenathan, Merced, Cal.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue.
NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

California Earthen and Stone Ware.

The articles coming under this head form a class which it is very essential to have included in our home productions, their bulk and liability to breakage making them objectionable as articles of transportation. This want has been well supplied by the Pacific Pottery, whose advertisement will be found in our columns. The manufactory is at Sacramento, and is the oldest pottery in the State. It has been in the hands of the present company over ten years, and they have certainly achieved marked success. Their ware is not excelled by any of Eastern manufacture, and can be bought at rates quite as low, exclusive of transportation.

We were led to examine the condition of this particular market by enquiries from parties wishing to purchase drain-tile. For their information we have obtained from Mr. Owens, the agent in this city, the following list of prices of the articles referred to: Three sizes of drain-tile are made by them—2, 3 and 4 inches—the prices being \$6, \$8 and \$12.50, respectively, per hundred feet.

The variety of articles made by this company is extensive, embracing all that is requisite in this line for housekeeping, draining, manufacturing, gardening and agricultural purposes. The merits of their sewerage pipe have been tested and endorsed by the leading architects and owners of real estate in this city; while their fire brick has been pronounced superior to that imported from England.

This company is now making improved irrigation pipes—their own patent—which will undoubtedly prove an efficient aid in this important department of California farming.

Mr. J. B. Owens has for three years been the San Francisco agent for the Pacific Pottery, and by his business tact and reliability has secured for the establishment an extensive trade and one that is rapidly increasing. To San Franciscans a compliment to Mr. Owens would be superfluous; but we would assure our readers generally, that any business which they may wish to transact with him will be done in a fair, prompt and courteous manner.

ALIMENTARY TUBERCLE.—A singular substance has been found at a depth of a foot, or a foot and a half, in the soil of Van Diemen's Land. It is called *indigenous bread*. It is covered with a thin skin, has a rounded form, like a potato or yam, and is sometimes as large as a man's head. When cut, it appears to be composed of a solid, spongy mass, containing a considerable quantity of alimentary matter.

No root or fiber has been found adhering to it, so that sometimes it has been thought to be a sort of terrestrial polypus, possessing a principle of animal life. The only indication of its presence which the natives have, is the occurrence of an exceedingly small leaf, which rises from the earth and is connected with it by very thin, delicate fibers, which break whenever the tubercle is moved.

CURING HAMS.—Better hams than any imported are made at Heald's ranch, Placer county, as follows: Take out the whirl bone, and thus divest the meat of much of the joint water. In eight shoulders and eight hams put in one and a half tablespoonfuls of saltpetre, a little salt, and fill up with plenty of sugar. Also, take California mountain-raised swine, and pickle the sides in brine made of salt and plenty of sugar, and you will have better "salt pork" than most of our people have eaten on this side of "America."

Mountain Ranch Hints.

The present season appears to be about one month later than that of last year in the foothills and mountains within the snow belt in California. At Moses Heald's ranch, five miles above Colfax, on the Dutch Flat turnpike, peaches were in full bloom April 20th. Mr. H. was then busy plowing, sowing wheat for hay, pruning his vineyard and doing like work of the season.

His Catawba, Isabella and Flame Tokay grapes were improved last season, in quantity and quality of fruit, by long pruning and allowing the vines to lie on the ground, thereby retaining a more even temperature during day and night. For his locality he considers the Tokay the best single variety.

In his fruit room, Mr. Heald has different varieties of grapes in clusters, simply packed in sawdust, that still retain a fair degree of freshness and unimpaired flavor. His apples, picked in September last, laid upon a bed of sawdust, have as yet decayed but little. Although somewhat shriveled, their flavor has improved by keeping, and they are decidedly toothsome.

In pruning fruit trees he takes pains to leave the largest growth of limbs on the windward side. This balances the trees so as to keep them erect and prevent them from assuming a leaning position by the force of winds prevailing almost constantly from a certain quarter. In supporting trees he places three stakes a foot or more distant from the body, believing that a single stake driven close to the body of a tree has an injurious effect—a tendency to make the ground cold and unhealthy by rotting timber.

During the season many droves of cattle and sheep are driven from the valley to mountain pastures. For their accommodation are more than a dozen large corrals on Mr. Heald's place. By using a portion of the corrals for stock and for cultivation during alternate seasons, he furnishes free corrals to drovers and raises high crops. Over 2,000 head of stock and 20 drovers have quartered at this place in a single night.

Los Angeles County for Opium Culture.

The best climate for the cultivation of the poppy for the production of opium, is one in which the heat, without being excessive before the ripening of the plant, is tempered with a certain degree of moisture day and night. No extremely dry and intensely heated district is favorable to a large depositor yield of the juice; there is too much woody fiber in the plant at the expense of the desired product. The valley of Los Angeles, while truly semi-tropical in many of its productions, has nevertheless a climate of peculiar softness, and never suffers from the extreme heat so common to the more interior valleys of the State.

There is a steady pouring in of moisture-laden winds from the ocean by day and night, tempering the solar heat by day and fairly raining a perfect dew-shower during the nights of summer. The poppy yields its opium in three months from the planting, which would permit of three crops being grown from the same land in a single year; and as the yield of opium is as high as seventy pounds in the districts of Asia Minor, where most successfully cultivated, and believing the soil and climate of Los Angeles equal to any in the world for the production of opium, we believe the day is not distant when that beautiful valley will be gaily dressed, by the hundreds of acres, with the bloom of the opium poppy.

Are We to Have a Flood?

The unusual continuance of the spring rains the present season, may well suggest the heading of our article. In the earlier days of California it was not unusual to see our larger mountain streams overflowing their banks in May and June, and completely submerging the whole tule country of the Sacramento and San Joaquin rivers. The occurrence, when it did happen, was in seasons in which large quantities of snow had accumulated upon the Sierras during the winter, to be suddenly melted by late and warm rains, to be sent in torrents to the valleys, and, on their way, flooding the alluvial of the rivers, to the great destruction of the farmers' crops, and sometimes the property of cities upon their borders.

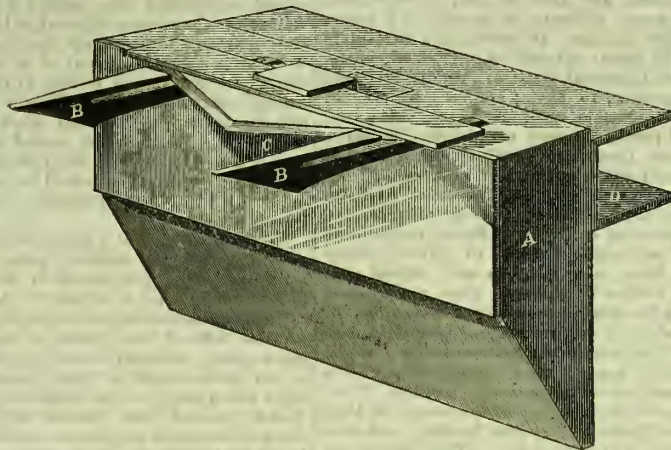
That Sacramento is perfectly safe from any future flood we have not the least doubt; but how is it with those fine, extensive alluvials that border the American river? We hope they may experience no overflow, though we are not without misgivings. The best of the reclaimed delta islands, Sherman and others, will doubtless stand firm in their levees, and thus escape the damaging effects of former overflows; but should it be otherwise, an immense amount of damage to growing crops would be inevitable.

BETTER THAN CAPONS.—A gentleman who has seen roosters made to brood chickens, as explained on the first page of last week's RURAL, says the process is as successful as it is novel. Simply scratch with a pin the skin of the fowl on each side of the lower bone between the legs and he will squat on the chickens as soon as passed to him. Will some reader try the experiment and report?

Self-Pumping Well-Boring Drill.

With the improved drill represented in the annexed illustrations, the inventors claim that not only faster and better work can be accomplished, but that the apparatus can be more conveniently manipulated, and will penetrate further into the ground before its removal for cleaning is required, than the borers in common use. It is also stated that a hole, with this device, may be sunk by hand a distance of 200 feet, and with a lever to any desired depth; while the operator is enabled, during the progress of the boring, to know exactly the kind and depth of strata through which the tool is passing.

The drill is made tubular and somewhat flaring, so that it forms an orifice a little larger than its body. Its lower edge is serrated, so



KITTS' IMPROVED HEADER BEAM.

as to cut a ring groove into the strata, the core of the bore passing up through the cavity in the drill. The upper end of the latter is rabbeted, and, by means of a screw thread cut thereon, is attached to a perforated tube, A, Figs. 1 and 2. The object of the holes in the tube is to allow the water to escape, and thus lessen the weight of the drill as it is moved up and down. To the upper end of the drill is hinged a valve, B, represented in section, Fig. 2, which opens upwards into tube A, so as, when the tool is

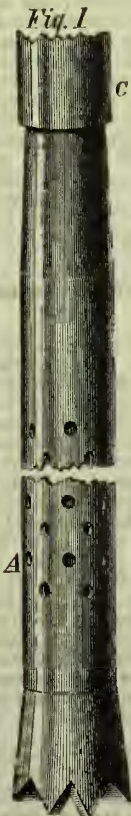
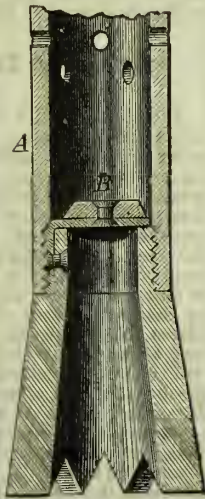


Fig. 2



Self-Pumping Well-Boring Drill.

raised, to carry the contents of the pipe up with it. Sections of tubing—part of one of which is shown at G, Fig. 1—are screwed to the part B, and increase in number with the depth of bore.

When the sectional pipes are too heavy for manipulating, a rope may be attached by means of a swivel to the end of sectional pipe, and the boring may be continued to indefinite depth. In prospecting for coal oil or mineral deposits, as has been stated above, the operator can ascertain the exact nature of strata which he is boring through, simply by means of the pump attached to the drill. The drill cuts a solid core, and when it is taken out so as to clean the pump, the core which the drill has cut, may be removed, and can be examined at pleasure.

In the Pacific States and Territories, where prospecting is carried on and water is needed, the drill would be a useful instrument. Another advantage claimed is that, should the portions of the device become detached, a screw rod may be readily inserted and the separated parts drawn out.

This device was patented by Messrs. Timothy Phillips and Joseph Golletz. Territorial rights and further particulars may be obtained by addressing the inventors at Leavenworth, Leavenworth county, Kansas.

Kitts' Improved Header Beam.

To harvest the extensive grain fields, which are so characteristic of California, farming, requires quick work; and quick work is always accompanied with a certain amount of carelessness. This carelessness, in connection with the faulty construction of harvesting machinery, occasions great waste. It has been stated that enough grain is wasted in a single season to pay for harvesting the entire crop. One of the most serious causes of this waste is the falling of the heads of grain in front of the header after they have been cut by the sickle, owing

to the angle at which the sickle and beam must work, especially in short grain. Numerous devices have been resorted to in order to ensure the lodgment of the cut grain upon the draper. Our illustration represents one of these devices, which was recently patented through the MINING AND SCIENTIFIC PRESS Patent Agency, by Philander Kitts, of Monticello, Napa county, in this State. The sickle beam, A, of a header is ordinarily made of considerable width and depth in order to secure a proper amount of stiffness or rigidity, and also to permit of the guard-fingers being secured in it by driving them horizontally into it, or secured upon it across its upper face and held down by an iron plate.

Mr. Kitts constructs the beam quite narrow and of considerable depth. To secure the necessary amount of rigidity he secures a flat iron bar or plate, C, along the front of the beam. He secures the guards in the beam by bending their rear ends at a right angle to the forward part, so that the bent portion can be driven down into the beam from the top and thus let the guard and end extend out in front of the beam. The beam and plate are notched opposite each guard, so that when the guard is driven down into the groove or notch, its upper side will be even with the upper surface of the beam.

At the rear of the beam, A, he secures a double angle plate, D, so as to form a sort of trough within which the edge of the draper or carrying belt runs and is guided. This plate is secured so that its upper bend is a little below the upper edge of the beam, A, and as the beam is very narrow the sickle, E, beam A, and plate, D, will form narrow steps down which the cut grain and heads will fall easily upon the carrying belt, and there will be but little danger of waste or clogging, because of the nearness of the belt to the knives or sickle.

Budding the Rose.

We are inquired of as to the proper season of the year for budding the rose. It can be done at any time when both stock and bud are in proper condition. The bark of the stock must peel freely from its woody foundation in order that the bud may be successfully inserted. It is not necessary that the bark of the bud should peel, but a thin slice of the wood can remain attached to the bud and be successfully introduced and propagated; but the best condition with an experienced operator, is when the bark can be separated from the wood, all except a very small portion projecting up into the base of the bud; this is allowed to remain, and the bark and bud inserted in the usual way.

Usually the budding of the rose is performed to the best advantage from April to July inclusive; but if the stock is growing freely, the bark is usually in a condition to peel, and then budding can be performed with very certain success.

SOAP ROOT VS. FISH.—The so-called soap root (a species of the lily family) is made use of by Indians to catch fish by wholesale, in the following manner: Finding a deep hole in a small stream where trout "most do congregate," they pound and macerate a quantity of soap root and throw it into the water, sufficient to stupefy the fish and cause them temporarily to float to the surface, in an inverted position, when Mr. Lo rapidly "gathers them in."

Meeting of the California Thoroughbred Cattle Breeders' Association.

The adjourned meeting of this Association was held on Saturday, May 2d, 1874. J. D. Carr presiding.

On motion, R. S. Carey, President State Agricultural Society, Wm. Wilson, President Santa Clara Agricultural Society, J. R. Rose, President Sonoma and Marin Agricultural Society, and S. G. Reid, of Portland, Oregon, were made Honorary Members of the Association.

G. D. Morse, of San Francisco, S. B. Emerson, of Mountain View, A. L. Boggs and L. J. Hanchett, of San José, were admitted to membership of the Society.

On motion of Cyrus Jones, duly seconded, it was

Resolved, That in all cases where cattle are entered to compete as thoroughbreds, reliable pedigrees should be filed with the Secretary of the Agricultural Society at whose Fair said cattle may be exhibited; the pedigrees to be at all times subject to the inspection of the public.

The following motion by the same member was also carried:

Resolved, That the action of the Board of Directors of the State Agricultural Society, in enforcing the payment of an entrance fee of ten per cent. in the highest premium offered in the sweepstakes class for each and every entry in said class, is, in the opinion of the Association, unjust to the exhibitors and detrimental to the interests of the State; and that the said Board of Directors be therefore requested to rescind its action and allow all entries to be made free of any charge whatever.

A motion to the effect that the Constitution of the California State Agricultural Society should be amended, so as to exclude any but life members and delegates from county societies from the privilege of voting, was lost. Another, to admit of the State Fair being held at some other place than Sacramento was withdrawn.

W. Page moved that agricultural societies be requested to dispense with the daily cattle parades, inasmuch as show cattle were kept in open stalls and were at all times subject to the inspection of the public. He argued, moreover, that these daily parades were, at certain places, frequently injurious to the cattle, owing to excessive heat, and that they were always attended with more or less risk from cross tempered and unmanageable specimens which were placed in the care of mere boys, unaccustomed to the handling of cattle. The motion, after considerable discussion, was put to a vote and lost.

The following motions by J. B. Redmond were carried without discussion.

Resolved, That the Board of Directors of the State Agricultural Society be requested to inform this Association, what action was taken, and the decision arrived at, at the State Fair of 1873, with reference to the protest presented by this Society against the pedigrees of certain cattle there exhibited by Messrs. Chas. Clark and Coleman Younger.

WHEREAS, The course heretofore pursued at Agricultural Fairs held in this State, of not announcing awards until the closing day of the Exhibition, which is frequently two or three days after a decision has been arrived at by the Judges, is, by this Association considered unusual and objectionable. Therefore

Resolved, That the Directors of Agricultural Societies in this State be requested to adopt the system pursued by all well-organized societies of the kind throughout the Eastern States, viz:

That the award be made public, and the ribbon attached by the Judges at the moment that a decision is arrived at.

Resolved, That a committee of two be appointed by the Chairman, to confer with the Directors of the Bay District Agricultural Society as to the accommodations for the exhibition of cattle at the grounds now being prepared in this city, and also as to the schedule of premiums to be offered at the next Fair to be held under the auspices of said Society.

The Chairman appointed R. Ashburner and Milford Page; and, on motion of the latter, J. D. Carr was added to the committee.

On motion of Wilfred Page, it was

Resolved, That this association request of the Board of Directors of the State Agricultural Society that the number of cattle now required for competition in the herd class be reduced to six head, these to consist of one male and five females.

The following motions, by J. D. Carr, were seconded and carried:

Resolved, That Directors of Agricultural Societies be requested to make separate classes for Short Horns, Devons and Herefords, and that all other thoroughbred cattle be included under one class.

Resolved, That in the opinion of this Association premiums should be offered in Devons and Herefords not to exceed two-thirds, and other classes of thoroughbred cattle not to exceed one-half of the premiums offered in Short Horns.

On motion of Cyrus Jones, it was

Resolved, That the Board of Directors of the State Agricultural Society be requested to alter their schedule of premiums, and, instead of offering high premiums for aged animals, and reducing the former as ages decrease, that a uniform premium throughout be adopted; it being the opinion of this Association that a calf is entitled to as much credit for superiority in its class as is an older animal in its respective ring.

Mr. Cyrus Jones moved that an annual joint sale of thoroughbred cattle be held under the auspices of this Association.

A. L. Boggs moved an amendment to the effect that the first sale be held in San José, during September or October next, and that a committee of five be appointed by the Chairman to make arrangements for same.

The motion as amended was carried, and the chair appointed Messrs. Jones, Boggs, Emerson, Redmond and Wick as such committee.

On motion, Messrs. Rose and Wilson were added thereto.

Meeting adjourned until the regular semi-annual meeting to be held at Sacramento during fair week.

[In our next issue we will give an account of the origin and history of the above Association; and shall, in the future, make it a point to keep our readers informed of its transactions, Ed. Press.]

MISCELLANEOUS.

Salt and its Uses.

A correspondent of the *Country Gentleman*, thus writes of this well-known but not very well understood necessity of life:

Salt is a chemical compound, consisting of 60.68 per cent. of chlorine and 39.32 of sodium. These two substances, thus combined, make pure salt, unless some other thing be combined with them. When other substances enter into the combination, they are impurities—some of them only adding to the weight, and doing no other injury, others destroying the value of the salt as a preserver of meat.

The principal impurity usually found in the salt made from sea water, in the English and French, and in the Syracuse salt, is sulphate of lime, (common plaster of Paris,) which does no other injury than to add to the weight, thus causing the consumer to suppose he has purchased fifty-six pounds (a bushel) of salt, when in fact, according to the extensive chemical determinations of that great authority, Prof. Cook, now in the service of the State of New Jersey, he generally buys in salt made from sea-water 2.04 per cent. of sulphate of lime, in the Cheshire, 1.35; in the Dieuze, 1.70, and in the Syracuse, 1.14.

The impurities that injure salt are known as the deliquescent chlorides, so called because they absorb moisture from the air and cause the salt to become damp. Thus the purchaser of salt should take care to see the salt he buys is dry. This is, to men who have no better means of judging, the best test they can have, and even an expert judge would trust his decision quite readily upon the feeling of a handful of salt. If when he closed his hand upon it and then freed the salt it fell apart like dry sand, and there was a sharp, angular feel to the grain, he would say that the salt was free from the injurious chlorides of magnesia and lime. But if the handful of salt retained the form given it by slight pressure, and it felt soft and clammy, he would say it would do to salt cattle, hides and like uses, but that it was unfit to put in butter or to salt beef or pork.

Some of your readers may wish to know more exactly what these chlorides are. For their information I will say that, in connection with salt, they are found in a fluid form adhering to the surfaces of the particles, and may be washed away in the process of manufacture by the use of proper skill and care. So the makers of the salt of the Bay of Biscay, on the coast of France and Spain, place the salt as it is made on platforms, where it is washed, and when it has become hard it is broken up, piled in heaps, and then washed and allowed to drain until the chlorides are carried off.

Chemically stated, the chloride of calcium (lime) consists of 63.35 parts of chlorine and 36.65 of calcium; the chloride of magnesium consists of 73.64 parts of chlorine and 26.36 of magnesium. These chlorides have an exceedingly bitter taste, and not only injure the salt by causing it to imbibe moisture, but, by their acrid, eating qualities, causing beef to become hard and dark colored, the rind to slip off from pork when it is boiled. Fish, under their action, become hard, dark colored and tasteless. Butter and cheese have a bitter taste imparted by these substances, and are soon spoiled by them.

Prof. Cook spent much time in the examination of salt, and to know all about the salt of Europe he went there and exhausted the subject, and as the result of his labors the following table of analytical results is given, of the presence of the deliquescent chlorides in the best known salts sold for consumption:

Salt made from sea water, seventy-three parts in 10,000; Cheshire, commonly called Liverpool "stoved," four parts; Cheshire, commonly called Liverpool "common," twenty-five parts; Cheshire, commonly called Liverpool "rough," thirty-seven parts; salt made at Dieuze, (in the northeast part of France,) "fine," twenty parts; salt made at Dieuze, "medium," twenty-six parts; salt made at Syracuse, "solar," four parts; salt made at Syracuse, "boiled," two parts.

Thus Prof. Cook found that the salt of Syracuse was only equalled in its freedom from these injurious chlorides by Liverpool (England) stoved salt, as compared with the "solar," and that the "boiled" salt of Syracuse had only one-half the quantity contained in the Liverpool-made salt; but why should the Syracuse solar salt have four parts to the boiled two? The solar forms in large, irregularly-shaped crystals, that have cavities and sunken places, from which it is difficult to wash and drain the sticky semi-fluid chlorides, unless the crystals are broken down by grinding.

Having Prof. Cook's analysis before them, the salt-makers turned their attention to the discovery of some process by which they could get rid of the impurities, and make pure salt. In this they were successful. Professor Charles A. Gosman, a chemist of established reputation, was employed to perfect the methods that the salt-makers had themselves devised of removing the delinquent chlorides, and the result was pure salt, which was put into the market under the name of factory-titled dairy salt. In 1861, while the processes adapted for making entirely pure salt were much less perfect than they have since been made, some of this dairy salt was sent to Prof. Cook for his opinion. Of this salt he said: "A satisfactory evidence of the purity of salt is its dryness. I have had this specimen in a wooden

salt-box for four months, and still it loses less than one per cent. of water by heating it to melting. Your factory-titled possesses no deliquescent properties, and contains no active substance except pure salt."

Butter, to remain of the first quality, must have salt that is pure, and it is for butter and cheese and table purposes that this exquisitely pure salt is mostly used. The chemical processes to which it is subjected, and the grinding is very fine, add about one-eighth of a dollar to the cost of a bushel—equal to sixty-two and half cents a barrel.

COLORS FOR FIRES.—Those who are interested in home-made fireworks may learn something from the following hints given by the *Scientific American*: Red fire: sulphur, 1 part; sulphuret of antimony, 1 part; niter, 1 part; dried nitrate of strontia, 5 parts. Blue fire: Tersulphuret of antimony, (orpiment) 1 part; sulphur, 2 parts; dry niter, 6 parts. This is the Bengal blue light. Green fire: Boracic acid, 10 parts; sulphur, 17 parts; chlorate of potash, 73 parts. Yellow fire: Sulphur, 16 parts; dry carbonate of soda, 23 parts; chlorate of potash, 61 parts. Violet fire: Charcoal, 8 parts; sulphur, 10 parts; metallic copper, 15 parts; chlorate of potash, 30 parts. Orange fire: Sulphur, 14 parts; chalk, 34 parts; chlorate of potash, 52 parts. Purple fire: Lampblack, realgar and niter, of each 1 part; sulphur, 2 parts; chlorate of potash, 5 parts; fused nitrate of strontia, 16 parts. By parts are meant equivalent proportions, ounces, pounds, etc. The different ingredients are to be separately reduced to powder, sifted through lawn, and kept in well corked wide mouthed bottles until used. Care must be exercised in handling, especially the chlorate of potash, when in contact with combustible materials. The materials must be carefully mixed on a sheet of paper with a wooden stirrer with a light hand, avoiding excessive friction. They should not be mixed long before using, as they are apt to deteriorate by long keeping and even to inflame spontaneously. The nitrate of strontia, alum, saltpeter and carbonate of soda, before being weighed, should be heated until their water of crystallization is driven off and they fall to powder.

CANNON MADE OF ICE.—A hollow cylinder will bear a greater strain than a solid one. Many of us know by experiment what a hard pressure an egg will resist when placed endwise between the hands. This curious strength in a round but weak substance is due to the exact, orderly arrangement of the particles, i. e., in perfect curves. A memorable illustration was seen in the mock artillery set to play guard in front of that creation of imperial whim, the ice palace of Catharine of Russia. Before the palace stood six cannons of ice, and two mortars formed of cast pieces. The cannons were six-pounders, which are commonly loaded with three pounds of powder; these, however, with a quarter of a pound, and carried a ball of stuffed hemp, and sometimes of iron. The balls, at a distance of sixty paces, passed through a board two inches in thickness, the ice of the cannons could not have been more than three or four inches in thickness, and yet it resisted the force of the explosion.—*American Manufacturer.*

In kerosene lamps the light often is unsatisfactory while all is apparently in good order. It should be borne in mind that, though the wick is but very gradually burned, it is constantly becoming less able to conduct oil. During several weeks some quarts of oil are slowly filtered through the wick, which stops every particle of dust or other matter that will with the utmost care be in the best kinds of oil. The result is that the wick, though it is of sufficient length and looks as good as ever, has its conducting power greatly impaired, as its pores, so to speak, or the minute channels by which the oil reaches the place to be burned, become gradually obstructed. It is often economy to substitute a new wick for an old one, even if that be plenty long enough to serve for some time to come.

TO PREVENT THE RUSTING OF IRON.—A correspondent sends us the following suggestions: I have tried many things, but found nothing better than boiled linseed oil to protect instruments and tools, (files, saws, guns, etc.) from rusting. It even works the best with a kettle used for heating water for bathing. Wipe the metal with a cloth dipped in the oil, and let it dry, which will require only a few minutes. If it is unnecessary to have the iron bright and shining, you need not scour it before the application of the oil; this will combine with the rust and form a firm, durable coating.—*Jour. of Chem.*

RAISING WRECKS.—In raising sunken vessels, it has been common to use flexible air-tight bags, which, when properly secured to the vessel, are inflated with air by pumps. A recent improvement, by Mr. Sowerbutts, of England, consists in supplying acid and alkali to the bags, which, on being mixed, generate carbonic acid within the bags and produce the necessary inflation, no air pumping being necessary.

When fuel is burned in an open fire place, at least seven-eighths of the actual or potential heat passes up the chimney unused; about one-half being carried off with the smoke, and one-fourth with the current which flows in between the mantel-piece and the fire, while the remaining loss is represented by the unburned carbonaceous matter in the smoke.

Photographic Engraving.

The subjects suitable for printing blocks, of the kind now to be described, are those known as line and dot subjects, that is, pen and ink sketches, line drawings, engravings, and such like, to the exclusion of objects in pure gradated tint, like a silver print from a negative of a natural subject having gradation of tint.

A plate of glass is coated with a solution of beeswax in ether, the relative proportions of the two being about half an ounce of wax to ten of ether. This leaves a very thin coating of wax upon the plate, which is still further attenuated by rubbing with a cloth. The object of this waxing is to prevent a too close adhesion of the gelatin coating, to be next applied.

To prepare the sensitive surface, gelatin is steeped in water for half an hour or upwards until it has become swollen from the absorption of water; most of the superfluous or non-absorbed water is now poured off, and the vessel containing the gelatin is placed in hot water, or otherwise subjected to heat, by which the gelatin immediately becomes liquefied. To this is added sufficient of a saturated solution of bichromate of potash to render it of an orange color, yet not sufficient to cause the salt to crystallize out and show it upon the surface of a glass plate, coated with the mixture. The film is dried and then removed from the glass, which is permitted to be done by the agency of the wax substratum. It is now ready for exposure.

Suppose now, that a reproduction of an engraving or piece of ordinary print or sheet of music be the subject that is to be produced; a transparency—not a negative of this subject—must have been obtained and superimposed upon the side of the gelatin pellicle next to the glass plate. After exposure to light for a quarter of an hour—more or less, according to the light and quality of the negative—this gelatin film is pressed into contact with any handy flat surface, such as glass or metal, care being taken that the surface that was next the negative be placed outside. It is now sponged copiously with, or immersed in cold water, by which a considerable amount of relief is obtained, the parts corresponding with the black of the original print or drawing being seen standing in high relief, while the whites are sunk. This, it will be seen, supplies the conditions for a surface block to print in connection with type, all that is now wanted being the conversion of the soft gelatin into hard, unyielding metal.

The gelatin relief or mold obtained in the manner described is, first of all, made surface-dry by means of bibulous paper, and is then lightly dusted over with finely pulverized plumbago or bronze powder. A cast from this surface is then taken by means of molten beeswax, which, when cold, readily parts company with the gelatin relief, owing to the intervening sprinkling of plumbago or bronze. This wax cast is then sent to the electrotypist, who, in a few years afterwards, will deliver a metallic cast, mounted upon wood and ready for working in the printing press. This process originated with Mr. Thomas West, of London.—*British Journal of Photography.*

The Coming Transit of Venus.

At the Greenwich Observatory a very ingenious little apparatus has been constructed in order to train the assistants in photographing the transit of Venus. It consists of a mirror placed upon a heliostat that represents the sun, so that whenever there is sunshine the model is as bright and luminous as the orb of day itself. Traveling in front of this light is a strip of glass carrying a tiny disk of platinum to represent Venus, and this is made to move by clockwork along the same path that the planet will take across the sun's disk. Viewed by a telescope from below the sun, the planet and the rate of motion are exactly the same as the original will appear to our observers in December, 1874. It is furnished with a tell-tale attachment that points out mistakes in faulty observations. Photo-astronomers will practice on this model until thoroughly conversant with the nature of the work to be performed.

M. Janssen's method for photographing the transit of Venus is as follows: The photographic plate is in the form of a disk, fixed upon a plate which rotates upon an axis parallel to that of the telescope. Before it is placed another disk, forming a screen in which is a small aperture, in order to limit the photographic action to the edge of the sun. The plate which carries the sensitive disk has 180 teeth, and is placed in communication with an escapement apparatus actuated by an electric current. At each record the pendulum of a clock interrupts the current and the plate turns one tooth, so that at each second a fresh portion of the plate is exposed. Thus in as many seconds 180 images of the sun and the planet can be obtained. When the series relating to the first contact is obtained, the plate is withdrawn and another substituted, which gives the second contact, and so on for the four.—*College Courant.*

Writing ink is one of the things in which modern science seems to have made very little improvement. A recent analysis of the ink found on a manuscript of the year 910 showed that its composition was similar to that of the inks now in general use. In printing inks, however, modern science has made many improvements, of which every advantage has been taken.—*Newspaper Reporter.*

What is Steel?

Under this head Mr. Elbridge Wheeler, of Philadelphia, claims to have solved this problem and we give place to his remarks on this subject: There has of late been considerable discussion upon the subject of iron and steel, and we think, according to the best information that can be obtained, no one ever had better opportunity for testing the relative properties of steel and iron than Sir William Armstrong, with the kingdom of Great Britain to back him.

Sir William says: "It is impossible that I can hold any other opinion than that the vibratory action attending excessive concussion is more dangerous to steel than to iron;" and we think that years of experience in the manipulation of iron and steel fully attest the correctness of his opinion.

What we desire to impress upon the public mind is the importance of the two metals combined for such purposes, and in such proportions as are best adapted for the uses they may be intended; and further, to give a few facts in the working of steel by our process, which we think of great utility, and which, so far as we know, has never been accomplished by any other process.

We contend that steel cannot be made to answer the purposes of steel and iron at one, and the same time; that is, in fact it must be either steel or iron—hence high grades and low grades of steel, as they are termed, and the lower grades but little if any better than the best grades of iron.

It has been said that no one could tell where iron leaves off and steel begins, but we think steel commences where iron presents carbon, and steel is no longer steel when it has lost its carbon, for it is carbon that makes steel.

At a recent convention of the American Railway Master Mechanics' Association, held at Baltimore, it was contended that steel axles did not wear as long as iron. The reason is obvious. No engineer would think of using a car axle made of steel proper—that is, of steel high in carbon, which would give the necessary wearing property—but must have steel that will stand the axle test of iron; consequently it is but iron, or a very low grade of steel, which for wearing purposes is no better than iron.

A similar difficulty arises in the manufacture of railroad rails. Steel that is best adapted to wearing purposes is liable to sudden fracture, and would not be considered safe "under excessive concussive strain," quoting a well known author; therefore, the Bessemer steel rail has but the slightest amount of carbon, or barely enough to distinguish it from iron.

We claim that we have a process that will make safe and reliable high grades of steel under any and all circumstances, giving longer life to rails and axles, and safe and reliable as the best iron, by combining iron and steel together.

It is a well known fact that ingot steel is more or less open, porous, or spongy, and that no amount of blooming or hammering nites or welds the particles, from the fact that a welding cannot be taken upon the ingot after leaving the mould; by our process we can safely bring an ingot to a welding heat, and finish it into a bar at the same heat without in the least detracting from the quality of steel.

THE ACTIVE PRINCIPLE OF YEAST.—It is stated in a foreign scientific journal that M. Hoppe-Zeyler has recently made a communication on the separation of the active or active matter in yeast from the yeast itself. This matter is procured in the form of a white powder, soluble in water, and which may be preserved intact in a dry state or in pure alcohol. Beer-yeast in an active or living condition retains this substance, and will not yield it up to water; but when the yeast is killed by means of ether, the yeast readily abandons the ferment to the water and the active substance or principle is obtained by evaporation. The aqueous solution of this ferment, or active principle, acts in the same manner as the yeast itself, and rapidly transforms sugar into alcohol.

A NEW AND PRACTICAL IMPROVEMENT IN UMBRELLAS.—We have been shown an umbrella which, by its simple and ingenious construction, can in a moment's time, when desired, be folded up and packed in a valise, or carried in the pocket. The ribs are cut in two parts, and secured together by means of a slide, so that when the umbrella is folded one section of the ribs slides along the side of the others, thus reducing the ribs to one half their length. When the ribs are extended and ready for use, they are held in position by an extra set of braces, which serve the double purpose of holding the ribs at their full length, and giving extra strength to the umbrella. The stick is jointed in the center by a link and slide ferule, and is folded up with the ribs.—*Technologist.*

With respect to unalloyed copper, M. Riche finds that its density, when alternately submitted to mechanical treatment, tempering and annealing, is variously affected according as the metal is protected from or exposed to access of air. In the former case the mechanical action increases, and in the latter case diminishes the density. The introduction of a small proportion of iron gives considerable tenacity and hardness to copper.

NITROUS OXIDE.—Jolyet and Blanche state that experiments made on pigeons and dogs show that nitrous oxide is not a true anesthetic, but that it produces insensibility by asphyxia.

VEGETABLE GARDEN.

About Cabbages.

There is a great difference in the quality of cabbage. Some varieties are invariably large and coarse-grained, strong flavor, and more or less of a woody texture when cooked. For market purposes the large varieties are more salable than the small, because few persons know anything about the different sorts. A cabbage is a cabbage to them, and its value is measured by its size, quality not being understood or thought of by those who depend upon the markets for a supply.

We remember when the still famous Winingstadt cabbage was introduced, and the high recommendation which accompanied it—all true, without doubt, as there was no reference to quality, beyond that it would come to maturity early, and the heads were very firm and solid. This is very true, and this old favorite still holds its own for market purposes; but in our opinion it is far from being a first-rate sort on account of the extreme firmness and compactness of the heads, approaching too near a ligneous character.

The Early York and old Early Drumhead are, to our taste, far better sorts for home use, and will, when well grown, answer equally well for market.

For late market sorts, the Marblehead, Mammoth and Late Drumhead still lead; but when one wants a good, fine-grained, sweet and rich cabbage, the Mammoth sorts must be laid aside.

For cooking, the Savoy cabbages are unequalled, and there are both early and late sorts possessing similar good qualities. They require a richer soil and better care than other varieties, and do not grow to as large size; but they make up for all this in excellence of flavor and tenderness.

For pickling, the red varieties are usually preferred; not because they are any better, but the deep, rich color adds something to the appearance of even a dish of pickled cabbage. Those of our readers who are fond of this vegetable should try the various sorts and see if we are not correct in saying that there is a great difference in the flavor of cabbages. —*Rural New Yorker.*

THE PEA CROP.—There being no more valuable crop for fodder or feed than peas, nor any that is more beneficial to the soil, it is strange that it should be almost entirely neglected. I have raised several crops alone, as well as many mixed with oats, and both for green fodder and for dry feed. When raised alone, I have sown two bushels of seed per acre with a drill in rows nine inches apart. When ripe, I have cut them with the mowing-machine, raked them with the horse-rake and threshed them in the machine, and have often got over 20 bushels per acre upon what I call a poor field. But I have found them most profitable when sowed along with oats at the rate of 1½ bushels of peas and 2½ bushels of oats per acre. They must be sown with drill, or the oats sown by hand and harrowed, and then the peas drilled in, because it is impossible to cover all the peas with the harrow. This mixed crop is the best fodder crop for cows, horses, or hogs that I know of, when cut green; and when allowed to ripen, it will yield from a single acre just as many peas and oats together as could have been grown upon two separate acres. Threshed and ground together, the grain makes excellent feed for all sorts of stock, and the straw is the very best fodder for sheep. For cows or horses, it is as least as good as hay, and is readily eaten, if properly taken care of. After such a crop, the soil is clean and mellow, and in the very best for a crop of wheat. When thrashing peas, it is necessary to hang a board at the rear of the machine, as the peas fly like shot, and if one strikes the face it hurts, also, the seed, being much troubled with the weevil, none but seed of Canada growth, which is readily procured from any produce dealer in New York, should be sown. The weevil-eaten peas are in some measure destroyed for seed purposes. —*Tribune.*

GRAFTING POTATOES.—A correspondent of the *Rural New Yorker* says that the grafting of potatoes has recently been recommended to be introduced for the eventuality and purpose of combining the good qualities of two different sorts into one. Select of the potatoes which have your preference, the very best and soundest specimens; cut out in a careful way, with a penknife, the buds or eyes; cut them out about one inch deep and one-half to three-fourths of an inch diameter, in the form of a pyramid, i. e., that the hole in the potato runs into a point on the end or inside; then take of the other potato a piece, if possible, with from one to three buds or eyes; fit it in as good and tight as you possibly can, and tie up with a (bass) string in the quickest possible manner. To fasten the inserted piece more effectually, a hair-pin may be put in from each side. Potatoes grafted in this manner should be, as soon as this operation is perfected, placed in a damp ground and well covered up. If the cuts grow out—that is, if the two different pieces join—the operation is a success.

AUTHORITY shows, according to analysis, that the dried onion contains from 25 to 30 per cent. of gluten, and ranks in this respect with the nutritious pea and the grain.

DEWEY & CO.

American & Foreign Patent Agents,

OFFICE, 338 MONTGOMERY STREET, S. F.

PATENTS obtained promptly; Caveats filed expeditiously; Patent reissues taken out; Assignments made and recorded in legal form; Copies of Patents and Assignments procured; Examinations of Patents made here and at Washington; Examinations made of Assignments recorded in Washington; Examinations ordered and reported by Telegraph; Rejected cases taken up and Patents obtained; Interferences Prosecuted; Opinions rendered regarding the validity of Patents and Assignments; every legitimate branch of Patent Agency Business promptly and thoroughly conducted.

Our intimate knowledge of the various inventions of this coast, and long practice in patent business, enable us to abundantly satisfy our patrons; and our success and business are constantly increasing.

The shrewdest and most experienced inventors are found among our most steadfast friends and patrons, who fully appreciate our advantages in bringing valuable inventions to the notice of the public through the columns of our widely circulated, first-class journals—thereby facilitating their introduction, sale and popularity.

Foreign Patents.

In addition to American Patents, we secure with the assistance of co-operative agents, claims in all foreign countries which grant Patents, including Great Britain, France, Belgium, Prussia, Austria, Victoria, Peru, Russia, Spain, British India, Saxony, British Columbia, Canada, Norway, Sweden, Mexico, Victoria, Brazil, Bavaria, Holland, Denmark, Italy, Portugal, Cuba, Roman States, Wurtemberg, New Zealand, New South Wales, Queensland, Tasmania, Brazil, New Grenada, Chile, Argentine Republic, AND EVERY COUNTRY IN THE WORLD where Patents are obtainable.

No models are required in European countries, but the drawings and specifications should be prepared with thoroughness, by able persons who are familiar with the requirements and changes of foreign patent laws—agents who are reliable and permanently established.

Our schedule prices for obtaining foreign patents, in all cases, will always be as low, and in some instances lower, than those of any other responsible agency.

We can and do get foreign patents for inventors in the Pacific States from two to six months (according to the location of the country) sooner than any other agents.

Home Counsel.

Our long experience in obtaining patents for inventors on this Coast has familiarized us with the character of most of the inventions already patented; hence we are frequently able to save our patrons the cost of a fruitless application by pointing them to the same thing already covered by a patent. We are always free to advise applicants of any knowledge we have of previous applications which will interfere with their obtaining a patent.

We invite the acquaintance of all parties connected with inventions and patent right business, believing that the mutual conference of legitimate business and professional men is mutual gain. Parties in doubt in regard to their rights as assignees of patents, or purchasers of patented articles, can often receive advice of importance to them from a short call at our office.

Remittances of money, made by individual inventors to the Government, sometimes miscarry, and it has repeatedly happened that applicants have not only lost their money, but their inventions also, from this cause and consequent delay. We hold ourselves responsible for all fees entrusted to our agency. The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former cases, and can more directly judge of the value and patentability of inventions discovered here than any other agents.

Situated so remote from the seat of government, delays are even more dangerous to the inventors of the Pacific Coast than to applicants in the Eastern States. Valuable patents may be lost by the extra time consumed in transmitting specifications from Eastern agencies back to this coast for the signature of the inventor.

Confidential.

We take great pains to preserve secrecy in all confidential matters, and applicants for patents can rest assured that their communications and business transactions will be held strictly confidential by us. Circulars free.

Engravings.

We have superior artists in our own office, and all facilities for producing fine and satisfactory illustrations of inventions and machinery, for newspaper, book, circular and other printed illustrations, and are always ready to assist patrons in bringing their valuable discoveries into practical and profitable use.

DEWEY & CO.,

United States and Foreign Patent Agents, publishers Mining and Scientific Press and the Pacific Rural Press, 338 Montgomery St., S. E. corner of California St., San Francisco.



ITS ISSUES CONTAIN
Sixteen well filled pages.
Original and Choice Engravings.
Editorials on Home Industries.
On various kinds of Stock-rearing.
On Horticulture and Gardening.
Correspondence from Farming Districts.
Answers and hints to Correspondents about Local Farming.

Good Health and Useful Information.
Reports from Granges and Farming Clubs.
Mechanical and Scientific progress.
Agricultural Notes from all quarters.
Domestic Produce Markets.
Home Circle.
Domestic Economy.
Mechanical Hints and Domestic Receipts.
Home and Farm Matters.
Affording, in all, more of real instructive and profitable matter for general readers than any other weekly on this side of the Continent.

DEWEY & Co.,

Publishers, No. 338 Montgomery street, S. F.

The Mining & Scientific Press,

Started in 1860, is one of the oldest weekly journals now published in San Francisco. It has been conducted by its present proprietors for ten years, during which period it has been repeatedly enlarged and constantly improved. The active and steadfast efforts of its publishers have gained for its conduct an amount of practical experience greater than any other publishers have accumulated on this coast, of a weekly journal.

The sum paid by us for the best editorial talent obtainable for our special class journal; for engravings, for interesting news and correspondence, and for printing a large-sized, handsome sheet, is unequalled by that of any other American weekly west of the Mississippi. As a PRACTICAL MINING JOURNAL it has no rival on this Continent.

It is the only MECHANICAL, and the only SCIENTIFIC journal of the Pacific States.
Every Miner, Assayer, Millman, and Metallurgist in the United States should take it.

Every Pacific Coast Mechanic, Engineer, Inventor, Manufacturer, Professional Man, and Progressive and Industrial Student should patronize its columns of fresh and valuable information.

Every Mining Engineer, Superintendent, Metallurgist, Mine Owner and Mine Worker in the world should profit by its illustrations and descriptions of New Machinery, Processes, Discoveries and Record of Mining Events.

Every intelligent thinker in the land, in high or humble situation, who would avoid literary trash for genuine information, should SUBSCRIBE AT ONCE.

DEWEY & CO.,

No. 338 Montgomery street, S. F.

NOTICE TO FARMERS.

Something Entirely New.
HOME SEWING MACHINE.

This machine is manufactured after an experience of twenty years. It contains within itself every known improvement. It is the best because the simplest, easiest to understand and by far the lightest to run, and the equitable adjustment of all its parts makes it the most durable Machine in the market. Take the INTERESTED STATEMENTS OF NONE, but EXAMINE FOR YOURSELF.

SEND FOR A CIRCULAR.

It uses a Shuttle, Straight Needle, Two Threads, and makes a stitch alike on both sides.

E. W. HAINES, Agent,

17 New Montgomery St., Grand Hotel Build'g, S. F.

We also continue to sell another machine, the

HOME SHUTTLE SEWING MACHINE.

Price, \$45.

Mme. Demorest's Reliable Paper Cut Patterns. Send for a Catalogue. 15v7-cow-6m



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,

2v6-4f President Business College, San Francisco.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F.

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 179 J street, Sacramento.

Saul & Co., 579 Market Street, San

Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of

Red Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-1f

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The New A1 Clipper Ship

FRIEDLANDER.....1,638 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street,
San Francisco.FRANK MILLER & SON'S
MOWING MACHINE OIL,
IN PATENT CANS, ALREADY FOR USE
IN THE FIELD.

NO FARMER should be without it, as the season for mowing and reaping comes on. For sale by Baker & Hamilton, M. C. Hawley & Co., E. S. Whitcomb and other agricultural implement dealers. m2-1m

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street,
Agents for the Pacific Coast. 11v7-3m

PEA-FOWLS.

A FINE PAIR OF PEA-FOWLS, BETWEEN ONE AND TWO YEARS OLD,

For Sale. Price, \$50.

Address, M. EYRE, Napa, Cal.
m2-4t

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO.



OUR SPECIALTY: "BEYOND THE MISSISSIPPI."
GO WEST, YOUNG MAN! GO WEST!
Gold by the Rubell Silver by the Ton!
Capital required: Nerve and Honest Industry
THE FAR WEST,
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFUTT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chrome,
"AMERICAN PROGRESS,"
free to each subscriber.
Two sample Wonts sent for 10 cents. Agents wanted

GEO. A. CROFUTT, Pub'r.
New York: (San Francisco:)
P.O. Box 3435; P.O. Box 2776.

AGRICULTURAL NOTES.

CALIFORNIA.

AMADOR.

RAIN.—*Ledger*, May 2: The most copious and welcome rain of the season commenced on Wednesday night, and fell steadily most of the following day, saturating the ground and effectually dissipating all fears as to the full maturity and abundance of mountain crops of every kind. This latter rain was not only opportune, but will secure to our farmers the most abundant crops ever harvested in the foot-hills. Not only will grain and hay crops be abundant beyond any former season, but the fruit yield, including grapes, will be heavy beyond precedent.

BUTTE.

INDIAN VALLEY.—*Record*, April 18: Our ranchmen are all very busy at present putting in their crops, and the supposition is there will be as much, if not more grain sown this season than there has been any preceding year. We have had a very backward spring on account of the heavy bodies of snow in and around the valley, which, on account of the late cold weather, have been very slow in melting away. In one respect this has been an advantage, for if we had had as much warm weather as we generally do at this time of the year, we might have to record some heavy freshets.

CALAVERAS.

PROSPECTS.—*Citizen*, May 2: Last year, about this time, we made a tour of the county, and noted particularly its progress and prospects. This year we have made an almost identical trip; and, on comparing the status of our county now with what it was then, we cannot help congratulating the tax payers on its advancement. The past season, although unusually severe, guarantees abundant crops. The acreage tilled this year is in excess of the usual extent.

CROPS RUINED BY GEESE.—*Sun*, May 2: We learn that there has been a great deal of damage done to crops by the immense number of wild geese that flocked upon them during the winter. Many fields, from which they were not headed are entirely destroyed, the land being perfectly bare. Scare-crows were put up in some of the fields, which had the effect of scaring them off a few yards around, and on these small patches there is splendid grain, while in other parts of the field it is perfectly bare.

RAIN.—We had a splendid rain here on Wednesday, but we learn that it did not extend out on the plains, where it was needed, if at all. Much of the grain on the river will fall down.

CONTRA COSTA.

GRAIN SUFFERING.—*Gazette*, May 2: From the reports of the past week or more, it appears to be certain that much of the grain in the San Joaquin valley is suffering from the effects of the northerly winds and late warm weather; and it is said that the early, dry sown grain, is suffering more than that put in later, upon plowed ground. One reason for this may be that the large growth of foul volunteer has unduly exhausted the moisture from the earth which should have furnished means of support to the grain.

EL DORADO.

THE OUTLOOK.—*Republican*, April 30: The prospects for an abundant yield of all the products for which this section is noted are most flattering at the present time; and Placerville already begins to feel the good effects that will be fully realized from the bountiful crops this season. Our fruit crop promises to be enormous, and it well known that there is no better raised on the Pacific coast than that grown here in El Dorado county, and unless steps are taken to secure the erection of proper drying and preserving works, hundreds of tons of this fruit must necessarily go to waste, and the thousands of dollars that it would bring in the markets of the world, will be distributed among more enterprising communities.

FRESNO.

FINE CROPS.—*Expositor*, April 29: A correspondent writes us that he lately visited the Alhambra settlement, and from what he heard and saw, the crops in that section will be a great success. Thousands of acres of as fine looking grain can be seen as ever man's eye rested upon. Mr. Holmes has in over 2,000 acres; and Isaac Friedlander, who recently purchased the farm of L. A. Sledge, has in over 2,000 acres. The latter farm has been greatly improved and is now the finest place in the valley. There are six windmills on the place, and over \$15,000 have been expended in improvements in and about the farm house.

LAKE.

Tobacco.—*Bee*, April 30: We understand that A. A. Ritchie, of Guenoc, will soon plant on his ranch forty acres in tobacco, merely as an experiment.

LOS ANGELES.

Downey City.—*Cor. Herald*, May 1: Our farmers are busy planting corn. With little cultivation, and in many places no irrigation, land here produces 75 to 125 bushels per acre. Potatoes, barley, corn, pumpkins, squashes, beets, alfalfa and melons are grown in large quantities. This has long since been known to your readers, but it is not so well known that oranges and walnuts can be grown here. Last year, a tree on Mr. McDonald's place, west of Gallatin, bore oranges. In regard to size and flavor, they compare favorably with the average Los Angeles orange. This year, two of his trees are blooming. A portion

of the trees in Mr. Burke's large walnut orchard bore walnuts last season. A greater number will bear this year. The oranges above referred to, were grown on a tree transplanted when it was quite small. Thus the adaptability of our section to raising the more sensitive fruits is proved. The consequence will be that when our farmers shall steady themselves by becoming clear of debt for the purchase of their lands, each may have his lot of orange trees, which will add quite handsomely to his income.

MONTEREY.

DRYING UP.—*Democrat*, May 2: We are told that there is a slim prospect of grain from the 1,000-acre tract, seeded this year on the Arroyo Seco rancho, above Richardson's crossing. It is also said that the crops on the Caterina and Gonzales ranches, are showing a yellowish tint which augurs badly of a harvest. From the Chualar rancho northwardly, the appearance of the fields is universally good.

RAIN.—Thursday, during most of the day, rain was falling lightly in this place. It was sufficient to make the streets a little muddy, and, if it extended far, must have revived the crops about the Chualar rancho.

NEVADA.

RAIN.—*Union*, April 30: Rain commenced falling heavily on Wednesday night, and continued nearly all of yesterday. A large quantity fell; by which the ground was thoroughly soaked. As this storm had been gathering for several days, the rain has probably extended over a large portion of the State, and will prove of inestimable value to the growing crops. The crop prospect of California has never been better than this spring, but the recent dry weather was beginning to cause an anxiety among farmers, which the present storm will relieve. A more opportune rainfall has seldom occurred in this region.

PENN VALLEY.—*Cor. Tidings*, May 2: Considerable red clover and alfalfa have been sown throughout Penn valley. If we have no more frost the fruit crop will be an abundant one. Acres and acres of vines have been and are being planted out this spring. H. L. Hatch has planted between 15,000 and 20,000, mostly raisin grapes. W. Emery plants about 1,000 raisin and other choice varieties. P. L. Stull, several thousand raisin grapes and several acres of orchard. Mr. S. is also experimenting with nut bearing trees, having about 75 young trees, including hatternut, hickory-nut, common black walnut, English and California walnut, all grown from the seed last year, and now after transplanting, are doing well. Montgomery Bros. have put in about ten acres of alfalfa and red clover; Cssey Bros. about the same; P. L. Stull, five acres of red clover, and many others less quantities.

RAIN was never more welcome than when it began falling on Wednesday night. By reason of the too constant wet weather throughout the winter, our farmers could not get in their grain until very late, and though looking well, without more rain the majority of fields in this county would have been a failure. The ground is now thoroughly wet, down to permanent moisture, and with warm weather, now promised, vegetation must shoot ahead at a rapid rate.

WM. GEORGE, who has done more than any single individual for the fruit interest of this section, is agitating the subject of a drying house in Grass Valley. With one, our fruit growers can utilize every pound they produce, and at fair rates of profit.

PLACER.

IOWA HILL.—*Cor. Argus*, May 2: Times have somewhat changed in this vicinity. Instead of bleak cold winds, barren sidehills and leafless trees, we have beautiful warm weather, sidehills covered with green grass and flowers, and trees covered with beautiful green foliage. And, if one were to judge from the large amount of blossoms on our fruit trees, we shall certainly have an abundance of fruit of all kinds. Grain, which has been somewhat backward on account of the cold weather, is growing fast and looking finely, and everything (with the proviso that we have late rains) betokens an abundant harvest.

RAIN.—On Wednesday last a heavy shower of rain set in; which, with short intervals of cessation, continued throughout Thursday, accompanied with a slight breeze from the south. This rain comes in good season, and will enrich and replenish the growing crops to great advantage.

LINCOLN ITEMS.—*Herald*, May 2: Owing to the continued storms and cold weather during the winter, and prevailing north winds this spring, the grain crops about Lincoln are looking rather poorly; though, if plenty of rain should fall during the remainder of the season, nearly an average yield can be expected. The farmers, however, seem to be in very good spirits. They know such an unfavorable season seldom happens, and they hope to make up for all deficiencies in the next crop or two.

SAN LUIS OBISPO.

Tribune, May 2: The spring clip of wool is coming in briskly. The heavily laden teams have been passing almost continuously through this place for the landing during the past two weeks.

SANTA CLARA.

Mercury, May 1: Our city was visited with a fine shower yesterday, which laid the dust and which will work wonders for the late sown grain. The farmers have been praying for just such a watery dispensation, and are exceedingly jubilant in consequence.

MOUNTAIN VIEW.—The farmers are all getting ready for haying. The hay crop will be

heavy this season, in this section. The surrounding country is now looking beautiful; in fact, there are few places in the State to compare with this.

SANTA CRUZ.

FINE SHOWER.—*Pajaronian*, April 30: Enough rain fell last night to enliven and give a fresh start to the rapidly growing vegetation.

TEHAMA.

SHEARING.—*Independent*, April 25: As many of the wool-growers of this county as have been able to secure shearers are busy at work shearing their sheep. The clip will be quite light compared with other seasons. The past week has been quite severe on shorn sheep, but shearing could be postponed no longer, as the owners of sheep are anxious to get their flocks started for the mountains.

P. H. SUMNER, real estate agent, has removed his office to No. 329 Montgomery street, S. F., where his friends will find him ready for business.

THE END-SHAKE THRESHER.—The following letter is from Wm. P. Harkay, Esq., Sheriff of Sutter county, referring to the value of the Lanfenberg End-Shake Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.

MESSRS. TREADWELL & Co., San Francisco.—Gentlemen: In regard to the Lanfenberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I used it throughout the season on a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain. I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thresher.

WM. P. HARKAY.

We have frequently spoken a favorable word for the Blanchard Churn. It is a pleasure to commend an article that is exactly what it is represented to be. They are made only by Porter Blanchard's Sons, Concord, N. H.

DR. E. J. FRASER, Homoeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No. 305 Kearny street, northwest corner of Bush. 6v7-3m

Economy, comfort, looks, all combine to make SILVER TIPPED Shoes indispensable for children. Try them. Never wear through the toe. ap25

FARMERS' LINE.

FOR LONDON DIRECT.

THE MAGNIFICENT A 1 CLIPPER SHIP,
MONETA.
621 Tons, Master.
W. SINCLAIR.....Master.

FOR LIVERPOOL DIRECT.

The magnificent A 1 Clipper Ship,
SEA WITCH,
1288 Tons, Master.
BAKER.....Master.

These fine vessels have nearly full cargoes engaged and will have very quick dispatch. Freight taken in lots to suit shippers.

Will be followed by the splendid A 1 Iron Ship
GLENGARRY,
1769 Tons,

Due here in May; or by other first-class vessels. Liberal advances made on shipments of produce consigned to our Liverpool house, Messrs. Robert Rodgers & Co. RODGERS, MEYER & CO. 19v7-3m

POISON! POISON!

WAKELEE'S PATENT Granulated Squirrel Exterminator.

A NEW AND MOST DESTRUCTIVE POISON FOR THE WORST PEST OF CALIFORNIA.

For years the farmers of the Pacific Coast have been spending money in experimenting to find a safe, cheap and efficient way of ridding their grain-fields of their worst enemy, THE SQUIRRELS, which destroy Millions of Dollars' worth of grain every year; and unless a strong and combined effort is made to kill them off, they will become more numerous every year.

Wakelee's Granulated Squirrel Exterminator is just the thing the farmers of California have been looking for. It is sure DEATH. One or two grains of it will kill a Squirrel so quick that if it is five feet from his hole it dies before it gets there. The Poison is put up in day and in granular form, and easily handled; in one pound tins, at \$1 per pound. It goes a great way, as 10 to 15 grains of it are sufficient to place at each hole. Also successfully used for killing Gophers and Rats. It has been thoroughly tested in different parts of the country, and gave universal satisfaction. It is kept and sold by druggists and dealers generally through the country. The following are some of my testimonials, viz.:

SANTA CLARA, April 20th, 1874.
H. P. WAKELEE, Esq.—Your Squirrel Exterminator was used according to your directions, on my Quilo Farm with excellent success, and in my estimation is just the thing the farmers want to kill their Squirrels.

J. R. ARGUELLO.

SAN LEANDRO, Cal., April 3d, 1874.
H. P. WAKELEE, Esq.—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,
J. M. ESTUDILLO.

DOUGHERTY STATION, Alameda Co., Cal.
MR. H. P. WAKELEE, San Francisco: I have used your Squirrel Poison and found it to be just what you claim for it. It is sure death. Yours,
C. M. DOUGHERTY.

FEED-CUTTER ROLLERS

Covered and made new in the best manner at usual rates, at H. ROYER'S Belt Factory, 437 Brannan St.

19v7-3m

For the very best Photographs go to BRADLEY & RULOFSON'S GALLERY, with an "Elevator" 429 Montgomery street, San Francisco. 2v7-6m

SHOULD BE KNOWN BY

GRANGERS,
FARMERS,
MINERS,
MILLMEN,
MECHANICS,
MANUFACTURERS,
FAMILIES,

AND ALL PERSONS ON THE PACIFIC COAST,

WHERE TO GET

The Best Labor at Shortest Notice.

Having taken new offices and enlarged my business in the most central location of San Francisco, (715 Montgomery street, corner Washington and Montgomery Avenue), I hope to receive the same liberal patronage as during the last six years of my Secretaryship of the Free State Labor Exchange, and later as its proprietor, (from April, 1868, to April, 1874). It is a known fact, and I feel convinced that on inquiry you will find among your neighbors many persons who have employed, through me, some skilled or unskilled labor, and who will endorse my services for good judgment in the SELECTION OF HELP and EXPEDIENCY IN FILLING ORDERS.

MORE THAN ONE HUNDRED THOUSAND

Persons have been furnished by me with employment as

Blacksmiths,	General use,	Teamsters,
Book-keepers,	Grooms,	Woodchoppers,
Carpenters,	Laborers,	Feeders,
Cheesemakers,	Wareh'se men,	Miners,
Engineers,	Sacksewers,	Painters,
Wagonmakers,	Buttermakers,	Sheepshearers,
Cooks,	Lumbermen,	Shepherds,
Farm laborers,	Machinists,	Tracklayers,
Gardeners,	Milkers,	Wheelwrights,

And in all other capacities—male or female. Consequently, when you want

GOOD RELIABLE HELP,

CALL ON OR ADDRESS LETTERS TO

A. ZEEHANDELAAR,

715 Montgomery St., San Francisco,

(Post-office Box 755).

A. ZEEHANDELAAR,

Formerly of the CALIFORNIA LABOR EXCHANGE,

EMPLOYMENT OFFICE,

Real Estate and General Business Agent,

715 MONTGOMERY STREET,

Corner Washington and Montgomery Avenue, S. F.

MALE AND FEMALE HELP

Of every description sent at the shortest notice to City and Country, Free of charge to employers.

Business Places, Houses, Lots and Farms Sold. Partnerships negotiated. Farms rented on shares. General Commission and Collecting Business transacted. Address your letters to P. O. Box 775, ap 16p

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, May 6, 1874.

Crop reports from all sections of the State are more favorable than those made earlier in the season. The late occasional rains appear to have been received with thankfulness. These showers are very different in effect from the backward heavy cold rains which were so complained of a couple of months ago. Now the general expectation seems to be that the harvests will be unusually large, while on the other hand there is no reason to anticipate a lower state in the markets of the world, unless in wheat, the reports of which are very flattering from England and other European countries. Good crops here and poor ones abroad, however mean the sentiment appears, are what are needed to send California ahead.

Prices throughout the whole line of Domestic Produce are very low at present. Several departments are even more depressed this week than heretofore, while a recovery in tone has been evinced in but few articles.

Receipts

Of State Produce at this port during the past week were as follows: Flour, 5,023 barrels; Wheat, 81,715 cents; Barley, 10,800 cents; Oats, 800 cents; Corn, 3,725 cents; Rye, 564 cents; Beans, 1,552 sacks; Castor Beans, 10 sacks; Mustard Seed, 105 sacks; Peas, 49 sacks; Potatoes, 6,100 sacks; Onions, 140 sacks; Hides, 3,955; Wool, 8,442 bales; Hay, 700 tons; Straw, 39 tons; Wine, 37,325 gallons; Brandy, 1,700 gallons; Oranges, 253,500; Lemons, 30,500. The spring clip of Wool, and Oranges, Lemons, etc., make up the bulk of receipts; as will be seen shipments of Wheat to this city are small. The new crop of Potatoes is making a fair showing for the season, although it has been atated to be backward.

Beans.

Pink are slightly weaker, while no other changes are noted.

Broom Corn.

The stock of Broom Corn now held in this city is said to be between 300 and 400 tons. This is in the hands of two leading factories, and seems to be kept back for manufacturing purposes rather than from any desire to "bull" the market; as, if the latter were the intention of holders, they could already have realized an advance of 100 per cent. on the price paid by them last fall. Orders for small lots are frequent, especially from Australia. Five tons of second quality brought \$140 the other day, and offers of \$180 are common for fine Corn. Prices will rule very high until the crop of 1874 is harvested, and it is thought that this will be much later this year on account of the frequent floodings reported from the Broom Corn growing sections of the State. What the state of the market will then be it is impossible to conjecture, as this depends entirely upon the quantity and condition of the coming crop, a most uncertain thing. If, however, enough is raised to make the culture worth while to many growers, prices will fall to be profitable, as the local demand is limited to the requirements of a few manufacturers, and the crops East are not likely to again fall short.

Dairy Produce.

Butter is rather stiffer, and Point Reyes will command 30c. a lb. There is no Butter in market now selling a less than 20c., though a few weeks ago we noted a considerable sale at the absurd price of 12c. California Sirkir brings a good price here, and is in demand for shipment East, where, at present rates, a fair profit is made. This trade does not hold on much later in the season, however. California Cheese is slightly lower, and 16c. may be taken as the top of the market.

Eggs.

Eggs are a little stronger, if anything. Ducks' Eggs are running somewhat lower, and now sell at 1c. below Hens'.

Feed.

Bran is selling at a considerable reduction. Middlings have also declined materially. Hay and Straw are firm. The price of Straw in this State is quite high, in comparison with that of Hay. This is owing as much to a shortness of the supply as to any urgency of demand, the general use of headers and the practice of burning off lands rendering it scarce.

Flour.

The bottom price for Superfine is now \$4.50, though sales are being made at better figures as a rule. The top of the market has not fallen any lower, beat Extra bringing still \$6.00. The present rates are more favorable to millers, as the Wheat market is lower than a short time since, in comparison with that of Flour. At one time it seemed as if there were no margin for profit at all on Flour. Little is being shipped. The stock in Liverpool, March 31, was 156,800 barrels and 123,900 sacks, or nearly four times the quantity held at the close of last December. This, with the decline in the China and South American trade, accounts for the existing dullness.

Hops.

Hops are reported dull, with prices unchanged, in New York. This market is very quiet, under microscopic receipts.

Onions.

Onions have steadily advanced for some time, and are now held at 6c. a lb., a very high quotation.

Potatoes.

The break in Potatoes noticed in our last report continues. The extreme price for Petalumas, \$1.12 1/2, is, to say the least, dubious, and could only be reached to-day by very prime samples. New Potatoes are coming forward quite freely, and are 1/2c. a lb. cheaper than last week.

Poultry.

Turkeys have again declined. They are now so low that forwarding to market is discouraged. Chickens are higher. Tame Ducks are also selling at an advance. Geese have fallen 25c. a pair.

Provisions.

The market is firm for all kinds of Provisions. A fair jobbing business is being done.

Wheat.

Wheat is very dull. The Liverpool market is a little stronger, but here the feeling is very quiet. We venture no predictions. It is evident that the Wheat trade for the season is pretty well over; and what prices will be for the next few months will not materially affect our farmers, who have for the most part already disposed of their crops.

Wool.

But little of the fall clip is now in stock and none on the market. The spring clip comes in freely. The market is moderately active, with sales at fair rates. The state of the New York market, as telegraphed to the Associated Press, is as follows: The market has been active during the past three days, with a demand wholly from manufacturers. Several lots of new Wool have entered the market, and the attention of the trade has been centered upon them. The new spring California clip that has arrived is in good condition, and the staple is all that could be desired. It resembled Oregon, being very long and light. New Texas is also of a very fine quality, and one lot sold readily at 36c. The holders of new spring California asked 36c, and there is a probability that the figure will be obtained. Sales of 111,000 pounds and 347 bales California at 21 and 26c; for same, 20; for burry, do; a small lot of spring, private terms, supposed to be 22 cents. Sales of California for the past month, 159,000 pounds.

DOMESTIC PRODUCE.

WEDNESDAY M., May 6, 1874.

BEANS.	WHEAT.	WHEAT.
Beans, small wh. b. 5 1/2 @ 5 3/4	Wheat, 15 @ 16	Wheat, 15 @ 16
do, butter, 6 @ 7	Almonds, 10 @ 12 1/2	Almonds, 10 @ 12 1/2
do, large, 6 @ 7	do, soft, 22 @ 25	do, soft, 22 @ 25
do, bayo, 2 1/2 @ 2 3/4	Flour, 18 @ 20	Flour, 18 @ 20
do, pink, 5 1/2 @ 5 3/4	do, 23 @ 24	do, 23 @ 24
do, Lima, 6 @ 7	do, 24 @ 25	do, 24 @ 25
do, Lima, 6 @ 7	do, 25 @ 26	do, 25 @ 26

BROOM CORN.

Butter, Cal. ch. 25 @ 30

do, good, 22 1/2 @ 25

do, inferior, 20 @ 22 1/2

do, firkin, 25 @ 27 1/2

do, pickled, 13 @ 15

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

do, Duck, 19 @ 21

do, Eastern, 14 @ 17

GENERAL MERCHANDISE.

WEDNESDAY M., May 6, 1874.

Bags and Begging are in moderate request; business is fair, without any very important sales for the week. Standard Gummies are selling at about 2c lower than previously quoted. A new brand of Soap, the Palmatin, has been placed on the San Francisco market by a local manufacturing company; it brought at auction 60c @ 50c per box of 20 bars or 18 lbs net. The price is so low that manufacturers probably will not care to place any more on these terms. Tobacco cured under the Culp patent process is largely used in making domestic Segars, but is really not on the market, as all made are disposed of directly by the company. Sugar remains in about the same condition—prices at bed-rock, with an evident determination of both parties not to give way. If there has been any change, it is in Granulated, which has sold rather more freely at current rates than other kinds. The Port Cube holds its own. There have been no further declines in Oils. Coal is steady, with sales of over 900 tons Australian at current rates.

BAGS.

Eng. stand, wht 12 @ 13 1/2

Cal. Machine, 12 @ 13 1/2

Gilroy, 12 @ 13 1/2

do, 12 1/2 @ 14

do, 22 1/2 @ 14

do, 23 1/2 @ 15

do, 24 1/2 @ 15

do, 25 1/2 @ 16

do, 26 1/2 @ 16

do, 27 1/2 @ 17

do, 28 1/2 @ 17

do, 29 1/2 @ 18

do, 30 1/2 @ 18

do, 31 1/2 @ 19

do, 32 1/2 @ 19

do, 33 1/2 @ 20

do, 34 1/2 @ 20

do, 35 1/2 @ 21

do, 36 1/2 @ 21

do, 37 1/2 @ 22

do, 38 1/2 @ 22

do, 39 1/2 @ 23

do, 40 1/2 @ 23

do, 41 1/2 @ 24

do, 42 1/2 @ 24

do, 43 1/2 @ 25

do, 44 1/2 @ 25

do, 45 1/2 @ 26

do, 46 1/2 @ 26

do, 47 1/2 @ 27

do, 48 1/2 @ 27

do, 49 1/2 @ 28

do, 50 1/2 @ 28

do, 51 1/2 @ 29

do, 52 1/2 @ 29

do, 53 1/2 @ 30

do, 54 1/2 @ 30

do, 55 1/2 @ 31

do, 56 1/2 @ 31

do, 57 1/2 @ 32

do, 58 1/2 @ 32

do, 59 1/2 @ 33

do, 60 1/2 @ 33

do, 61 1/2 @ 34

do, 62 1/2 @ 34

do, 63 1/2 @ 35

do, 64 1/2 @ 35

do, 65 1/2 @ 36

do, 66 1/2 @ 36

do, 67 1/2 @ 37

do, 68 1/2 @ 37

do, 69 1/2 @ 38

do, 70 1/2 @ 38

do, 71 1/2 @ 39

do, 72 1/2 @ 39

do, 73 1/2 @ 40

do, 74 1/2 @ 40

do, 75 1/2 @ 41

do, 76 1/2 @ 41

do, 77 1/2 @ 42

do, 78 1/2 @ 42

do, 79 1/2 @ 43

do, 80 1/2 @ 43

do, 81 1/2 @ 44

do, 82 1/2 @ 44

do, 83 1/2 @ 45

do, 84 1/2 @ 45

do, 85 1/2 @ 46

do, 86 1/2 @ 46

do, 87 1/2 @ 47

do, 88 1/2 @ 47

do, 89 1/2 @ 48

do, 90 1/2 @ 48

do, 91 1/2 @ 49

do, 92 1/2 @ 49

do, 93 1/2 @ 50

do, 94 1/2 @ 50

do, 95 1/2 @ 51

do, 96 1/2 @ 51

do, 97 1/2 @ 52

do, 98 1/2 @ 52

do, 99 1/2 @ 53

do, 100 1/2 @ 53

do, 101 1/2 @ 54

do, 102 1/2 @ 54

do, 103 1/2 @ 55

do, 104 1/2 @ 55

do, 105 1/2 @ 56

do, 106 1/2 @ 56

do, 107 1/2 @ 57

do, 108 1/2 @ 57

do, 109 1/2 @ 58

do, 110 1/2 @ 58

do, 111 1/2 @ 59

do, 112 1/2 @ 59

do, 113 1/2 @ 60

do, 114 1/2 @ 60

do, 115 1/2 @ 61

do, 116 1/2 @ 61

do, 117 1/2 @ 62

do, 118 1/2 @ 62

do, 119 1/2 @ 63

do, 120 1/2 @ 63

do, 121 1/2 @ 64

do, 122 1/2 @ 64

do, 123 1/2 @ 65

do, 124 1/2 @ 65

do, 125 1/2 @ 66

do, 126 1/2 @ 66

do, 127 1/2 @ 67

do, 128 1/2 @ 67

do, 129 1/2 @ 68

do, 130 1/2 @ 68

Stock Notices.



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.

Address N. GILMORE,
El Dorado, El Dorado County, Cal.

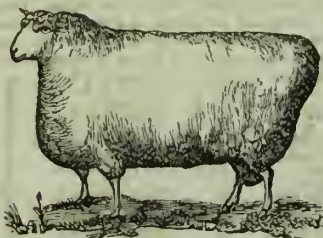
Pure Blooded French Merino Rams and Ewes.

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



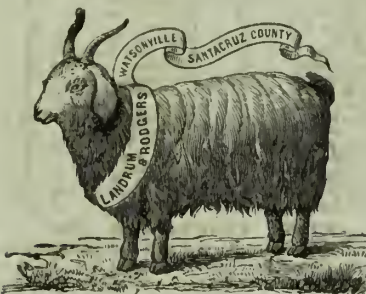
OWENS & MOORE.

COMMISSION MERCHANTS.

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m



We respectfully invite the attention of wool growers to our fine stock of Cotswold Sheep and Angora Goats. We have 200 head of Pure Breed Angoras to select from; we have some of the finest Goats in America; we guarantee everything we sell to be as represented; our prices are as low as any in America for the same grade of stock. Call and see, or address,

LANDRUM & RODGERS,

13v7-eow-tf Watsonville, Cal.

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bulls in herd-book, 8,238. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,

Oak Home Ranch, Waterloo Road, three miles from Stockton.

3v7-3m

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,

17v7-3m San Rafael, Marin Co., Cal.

JERSEY CATTLE.

A few head of very choice Jersey Cows—Heifers and Bull Calves—for sale. Apply to

R. G. SNEATH, Menlo Park.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE
Vienna Exposition, '73.
Grand Medal of Progress!
Grand Medal of Merit!
AND TO OAP THE CLIMAX.
Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and
Superintendent of the Company's works,
as co-operator for VALUABLE IMPROVE-
MENTS.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,
152 New Montgomery Street, SAN FRANCISCO. 2v7-6m

U. S. LIVE STOCK EXCHANGE.

S. E. Cor. Fifth & Bryant Sts.,
SAN FRANCISCO.
Cattle, Sheep, Milch Cows and
Horses sold on commission or bought on farm for cash.
Our accommodations for Live Stock are the most con-
venient, complete and extensive in the city or State.
WANTED: Milch Cows, Cattle and Work Horses.
Address: DAWSON & BANCROFT, 49 5th St., S. F.
ap18-tf

FRESH MILCH COWS, FOR FAMILY USE.

Thoroughbred Jersey Cattle for Sale.
Inquire at Room No. 7, No. 411 1/2 California street.
18v7-tf

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!

COMPOSITION—OLEIC ACID, NICOTINE,
SULPHUR, CARBOLIC ACID & ALKALI.It destroys and removes Scab, Ticks, Fleas, Mange,
Scratches, Insects on Plants and Trees, Foot-Rot, etc.,
etc. Being strongly impregnated with CARBOLIC
ACID, it is one of the best disinfectants known. Its
healing, cleansing and disinfesting qualities are un-
surpassed.The STANDARD SOAP COMPANY also manufactures
Laundry Soap, Family Soap, Hard Soap, Soft Soap,
Marine Soap, Kane's Condensed Soap, Washing Powder,
Washing Fluid, Liquid Laundry Blueing, Harness Soap,
Thomas' Cool Water Bleaching Soap, Thomas' Patent
Glycerine Soap, Mottled and White Castile Soap, Silica-
te Saponia, Bay Rum, Florida Water, Hair Oils, Ex-
tracts, Perfumes, Colognes, Cosmetics, etc., etc.204, 206 and 208 Sacramento Street,
16v7-3m SAN FRANCISCO, CAL.

TIPTON & BURTT'S

MEDICINAL

SHEEP PREPARATION,

Warranted FREE FROM ALL POISON. A sure and positive
cure for SCAB, TICKS and LICE, and a sure promotion
of the growth of the wool. It has been used in Tehama
County for the past two years, with most gratifying
results, and we have the pleasure of referring to the
following gentlemen as to its merits, viz.: H. A. Raw-
son, Jas. Gooch & Bro., J. W. Montgomery, J. Eby,
Curtiss & Brown, H. Bosanka, Jos. Cone, J. W. Gate
& Sons.It is a liquid and put up ready for use in 2 1/2 gallon
tins, four tins in a case.

WHITIER, FULLER & CO., Sole Ag'ts,

21 Front street.....SAN FRANCISCO.

28 K street.....SACRAMENTO.

18v7-3m

J. WAGNER.

MANUFACTURER OF

FRENCH BURR MILL STONES AND PORTABLE MILLS.

General Mill Furnishing. Portable Mills specially
adapted for Farmers' use. 113 and 115 Mission street,
San Francisco. 13v7-3m-2m

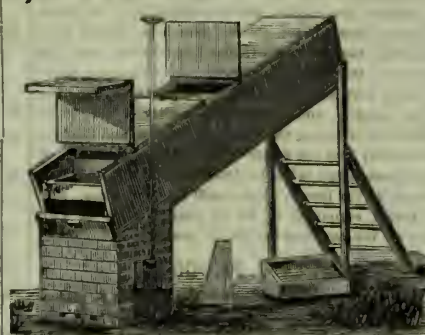
New Patent Cheese Vat and Heater,

Manufactured by G. HARRIS & SON, Petaluma,
Sonoma County, Cal.
Warranted to give satisfaction. ap25-1m

THE BEST
Sewing Machine
FOR ALL KINDS OF
WORK
THAT WAS EVER PUT BEFORE THE
PUBLIC.

Send for Descriptive Circulars and sam-
ples of work.

Ryder's American Fruit Drier.

This DRIER is a perfect success in the East, and will
be on this Coast when its merits are known. Its cheap-
ness brings it within the means of every Fruit Grower.
The uniformity and perfection of its work challenge
comparison. The principle claimed for this Drier
(and violated in all other Driers in use), is, that no
moisture shall come in contact with the fruit after the
cut surfaces are once sealed by the heat, to open the
cells and allow the aroma and fine qualities of the fruit to
escape, which makes it undeniably the most perfect, as
it is the most simple mechanical method for curing
Fruits, Vegetables, Meats and Grains ever invented.
This Drier can make Raisins and the most beautiful
crystallized fruit confection, equal to any imported.
Can any other Drier do this? The fruit cured on this
Drier last season, in this State, took the premium at
the State Fair. Our Factory Drier will cure 60 bushels
of peaches in a day. Send for Circulars. Farm, County
and State Rights, and Driers with Heaters, sold byJ. M. KEELER, General Agent,
306 California street, San Francisco

THE CELEBRATED

SLUTHOUR PUMP.

Now manufactured in the East, in the most perfect
manner. Guaranteed in every particular, surpassing
any other in the market, for Farm, Ship, Irrigating
and Mining purposes. Our large Force, properly
mounted, makes a most effective Fire Engine.KEEPP'S UPRIGHT ENGINE, the cheapest and best
we could find in the East.CHASE PIPE CUTTING AND THREADING MA-
CHINE, a most perfect hand or power machine. One
boy against two men with any other in use. Has the
highest testimonials. It cuts a thread and makes nip-
ples for all sizes of pipes from 1/4 to 2 inches, and only
\$150. Also, Metal Ornamental Goods, Fountains,
Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.

Agents for Eastern Manufacturers, 306 California
street, San Francisco.

LONDON

ASSURANCE CORPORATION.



The Oldest and Wealthiest

Fire Insurance Company doing business in America.

Risks taken at current rates.

CROSS & CO., General Agents,

feb14-eow-bp

316 California Street, S. F.

San Francisco Employment Office,

NO. 808 CLAY STREET,

Crosett & Co., Proprietors.

(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably
filled with FIRST-CLASS HELP.Farmers can always procure men in any number de-
sirable by giving a little timely notice. Hotels can
always get the BEST OF MALE OR FEMALE HELP
on short notice. We have the BEST OF FACILITIES
FOR PROCURING HELP. Have an Agent on the im-
migrant trains distributing circulars, upon the arrival
of every train. Give us your orders and we will en-
deavor to give you the fullest satisfaction. ap18-tf

LANDS & HOMES FOR SALE

FARMING AND GRAZING LANDS

FOR SALE by YOUNG & PAXSON.

Solano County—4,000 acres highly improved, having
the Sacramento river for one of its boundaries; \$25.00
per acre.Napa County—3,500 acres rich valley land, \$10 per
acre.Santa Clara County—Fruit orchard of 92 acres in full
bearing; including all the buildings and machinery
for carrying on a large business. Price, \$80,000; one-
half cash.Monterey County—10,000 acres bottom land on the
Salinas river, well watered. Price, \$12.50 per acre.Stanislaus County—2,000 acres wheat land, improved;
\$12.50 per acre.Contra Costa County—150 acres farming lands; \$20 per
acre.Santa Clara County—3,000 acres farm and grazing land,
ten miles from San Jose, well watered; \$10 per acre.

Merced County—6,320 acres wheat land; \$11 per acre.

Fresno County—3,200 acres wheat land; \$5.00 per acre.

Also, large ranches in San Diego and Los Angeles
counties. Full particulars on application at our office,
No. 424 Montgomery street, San Francisco. ap18-1m

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of
the Santa Ana River, between Anaheim (Los Angeles
county) and the town of San Bernardino, containing
35,717 acres, of which a large proportion is level and
adapted to grain, general agriculture, grapes, semi-
tropical fruits, etc. The famous "Riverside Colony,"
founded by Judge North, embraces a portion of the
east end of this Rancho.Also, for sale, the Rancho "LA SIERRA SEPUL-
VIDA," adjoining on the southeast, and containing
17,769 acres.The Southern Overland Railroad will necessarily pass
through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,

542 MARKET STREET,

N. E. Cor. Montgomery.

ap25-tf

FARM FOR SALE.

1475 ACRES 1/2 mile from the town of Windsor; 1 mile
from depot; 2 1/2 miles from the famous Russian river.
The place is beautifully situated; land all level, divided
into three fields well improved. Good house of nine
rooms and closets; good barn and outhouses; good orchard
of superior fruit; vineyard 12 years old; an abundance
of soft water; land well adapted to grain and vegetables;
about 2,500 cords of black oak timber; and wood brings
\$5 per cord at depot. Three and one-half hours ride from
San Francisco, on line of N. P. R. R. Title, United States
patent. For particulars apply to JOSEPH H. DIMMITT,
P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co.,
San Francisco, Cal. Price, \$30 per acre. ap18-tf

FOR SALE.

A splendid HOP RANCH, in one of the best valleys
in the State; good dry-house and machinery; about
thirty acres of hops in good condition. Will be sold
at a bargain; terms to suit.

P. H. SUMNER,

ap18-tf 311 Montgomery street, San Francisco.

TO RENT.

An improved Farm—including a Vineyard—about one
mile from Napa City. Address

P. H. SUMNER,

311 Montgomery street, San Francisco,

Or Pacific Rural Press Office.

FOR SALE.

100 Acres of Good Land,

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder
good for grain or fruit. All fenced and in cultiva-
tion. Cheap and on reasonable terms.

14v7-tf

P. H. SUMNER.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4.

Forming about half of a block fronting on the broad
ship channel of Islais Creek; will be sold so low as to
make it an inducement to the buyer. Inquire for the
owner, Room 18, No. 333 Montgomery st., S. F. bptf

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers.

36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10

Full Sets of Working Tools and Case (7 ps)..... 7

Spd, Reaping Hook and Shepherd's Crook..... 7

JOSEPH SEYMOUR & SON,

12v7-3m

Syracuse, N. Y.

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which
it is recommended. All Lameness, Spavins, Gallons
Lumps and Blemishes of all kinds are speedily removed
by it.

3v7-3m

WILLIAMS & MOORE, Prop'rs,

Stockton, Cal.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the
advantages of a thorough modern education. French,
German, Spanish, Latin, Greek, Drawing, the Natural
Sciences, Gymnastics and Dancing taught without extra
charge. Vocal and Instrumental Music receive particular
attention. Pupils furnish only a pair of heavy blankets.
Next term opens January 6th, 1874.

Write for Catalogue to

ELWOOD COOPER,

President Board of Directors.

Agricultural Articles.



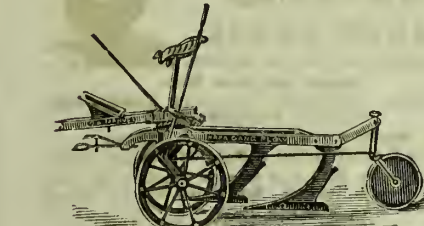
LINFORTH, KELLOGG & CO,
Importers of
HARDWARE
And
Agricultural Implements.
Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



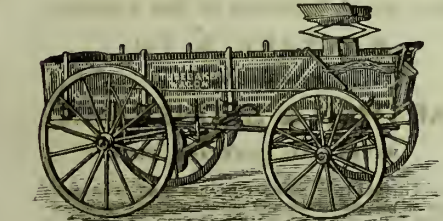
Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with
Dropper.
World Reapers, and Mowers with
Dropper and Hand Rakes—side delivery.
Clipper Mowers and Reapers, with Drop-
per.
Cayuga Chief Mowers and Reapers.
Sulky Rakes—Furst & Bradley's, and Bay
State.
Wood Revolving Hay Rakes—Tiffin and
Geneva.

PITT'S "PACIFIC" THRESHER,
30 and 36 Inch Cylinder, with or without Power.
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cul-
tivators, etc.

The Celebrated



STUDEBAKER WAGON,
The Best in the World.

Rumsey & Co.'s Force and Lift Pumps;
Hydraulic Rams; Church, School and Farm
Bells.
Also For Sale,
Corn Planters, Corn Cultivators,
Mortise Head Hay Rake, Scythes and
Snaths,
Soule, Ketsinger & Co.'s First-Class
Farming Tools,
Gold Medal Forks, Hoes and Rakes,
Batchellor's Forks,
Friedman Harrow, Scotch Harrows, Whistle-
trees, Ox Yokes and Bows,
Road Scrapers,
Canal and Garden Barrows,
Hay Cutters—Burdick's
National, Belcher & Taylor's
Self-Sharpener and Hide Roller.
Also Agents for
CALIFORNIA HARROWS, on Wheels.
EAGLE HAY PRESS.

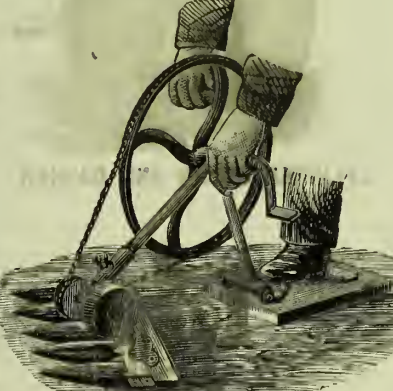
Also a Full Line of General Hardware and
Miners' Tools.
Send for Descriptive Circulars and Price
Lists.
Linforth, Kellogg & Co.,
3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Hoadley Engines, Russell End-Shake Thresh-
ers, Pitts' Powers, Treadwell's Single-Gear Head-
ers, Whitewater Wagons, etc., etc. Send for our il-
lustrated Price List, to Treadwell & Co., San Francisco.

McLAREN, PILCHER & BELL,
MANUFACTURERS, DEALERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.
MANUFACTURERS OF
CURREN'S PATENT HARVEST SHARPENERS,



[PATENTED JANUARY 30TH, 1872.]
The only successful Grinding Machine in existence for
Harvesting Machines. No farmer who has a Reaping
and Mowing Machine can afford to be without it. It is
simple, cheap, quick, durable and portable GRINDING
INSTRUMENT, which is adjustable to any kind of
knives, so that it will sharpen the section immediately,
without removing the cutter or unhitching. For par-
ticulars call on or address,
McLAREN, PILCHER & BELL,
605 Clay street, San Francisco.
Agents wanted. 15v7-6w



Took the Premium over all at the great Plowing
Match in Stockton, in 1870.
This Plow is thoroughly made by practical men who
have been long in the business and know what is re-
quired in the construction of Gang Plows. It is quickly
adjusted. Sufficient play is given so that the tongue will
pass over cradle knolls without changing the working
position of the shares. It is so constructed that the
wheels themselves govern the action of the Plow cor-
rectly. It has various points of superiority, and can be
relied upon as the Best and Most Desirable Gang Plow
in the world. Send for circular to
14v2-3m **MATTESON & WILLIAMSON,**
Stockton, Cal.

THE CELEBRATED MITCHELL WAGON



WM. ZARTMAN & CO.,
CARRIAGE AND WAGON MAKERS,
COR. ENGLISH & HOWARD STS., PETALUMA.
Are prepared to fill all orders for Buggies, Family Car-
riages, Side and End-spring Ranch Wagons, etc. Ranch
Wagons, from \$100 to \$250; Spring Wagons, from \$150
to \$250. Having the advantage of a large brick drying
room for seasoning lumber, they will warrant their
work to stand the test of California Climate.
SPECIAL RATES TO GRANGERS. 12v7-3m

O. CREGO. S. O. BOWLEY.
CREGO & BOWLEY,
Importers and Manufacturers
—OF—
CARRIAGES and WAGONS,
No. 9 Merchant's Exchange,
CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top
and open Rockaways, Jump-seat Buggies, Track and
Road Snikies, Skeleton Wagons, Basket Phaetons of
the very latest styles and finest workmanship.
We would call particular attention to our fine stock
of light Road and Trotting Wagons, made to order by
the following celebrated makers:
Charles S. Coffrey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey,
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to
sell on the most reasonable terms.
Also, a large assortment of single and double F-r-
ness, of the most celebrated makers:
C. Graham, New York; J. R. Hill, Concord; Pittkin
& Thomas, Philadelphia.
Also, a full assortment of Dress and Light Blankets,
Fur and Lap Robes, Whips, Halters, Surcingle, etc., at
wholesale and retail.
CREGO & BOWLEY,
No. 9 Merchants' Exchange, California street,
24v5-3m San Francisco.

H. C. SHAW,
STOCKTON, CAL.
Agricultural Implements,
201 and 203 El Dorado St., Sign of "Webster Bros."
General Agent for the San Joaquin Valley for the
Vibrator Threshers, Studebaker Farm Wagons
and Improved Single Geared Headers.
The Baxter & Webster Single Gear Headers are built
only at my establishment. Address, H. C. SHAW,
14v7-3m Box 95, Stockton, Cal.

The Sewing Machine
—FOR THE—
GRANGERS.
NO COMBINATION! NO MONOPOLY!

The New Improved FLORENCE,
Side Feed and Back Feed.
Agency established on the Pacific
Coast in 1863. The lightest run-
ning, most simple, and most easily
operated Sewing Machine in the
Market. Always in order and ready
for work. If there is a Florence
Sewing Machine within one thou-
sand miles of San Francisco not
working well I will fix it without
any expense to the owner. Samuel
Hill, Agent, 19 New Montgomery
Street, Grand Hotel Building,
San Francisco.

Mr. I. G. Gardner, State Agent for the California
Granges, is authorized to make liberal terms to all
Grangers who purchase the FLORENCE. No combina-
tion against favoring the Grangers has ever been joined
by Florence Agents.
SAMUEL HILL, General Agent.
18v7-3m

The New Wilson
SEWING MACHINE
Has points of superiority over
all others. A reliable warrant-
y is given with each machine
for
FIVE YEARS.
It is unequalled for light and
heavy work. Examine and
compare it with the highest
priced machine in the market
G. A. NORTON, Gen. Ag't
for the Pacific Coast.
337 Kearny St., S. F.
PRICE, \$50. ap25-tf

NOTICE.
To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.
WM. LAIRD & CO., Manufacturers.
ELLIS READ, Agent.
10v7-3m 304 California Street.

Self-Fastening
Bed Spring.
Double-Spiral
Bed Spring.
We manufacture all sizes of BED and FURNITURE
SPRINGS, from No. 7 to the smallest Pillow Spring;
also, the Double Spiral spring, which is the most dura-
ble Bed Spring in use. It is adapted to upholstered or
skeleton beds. We have the sole right in this State to
make the celebrated Obermann Self-Fastening Bed
Spring. Any man can make his own spring bed with
them. They are particularly adapted to Farmers' and
Miners' use. Send for Circulars and Price List to
WARNER & SILSBY,
14v28-60w-bd-3m 147 New Montgomery St., S. F.

Nursery Notices.

O. W. CHILDS,
Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of
trees, adapted to the climate of California.
ORANGE TREES, BUDDED AND GRAFTED;
ORANGE TREES, SEEDLINGS;
LEMON TREES,
LIME TREES,
CITRON,
SHADDOCK,
POMEGRANATE.
ITALIAN CHESTNUT—This tree is unsurpassed for
beauty, and very prolific. The Chestnuts are delicate
in flavor and very large, and an almost endless variety
of rare, useful and ornamental trees.
Send for priced Catalogue. 24v6-6m

Ornamental and Evergreen Trees for Sale
at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of or-
namental Evergreen Trees, Fruit Trees of all kinds, also a
large lot of the Blue Gums, from six inches to 12 feet high,
at from \$4 to \$100 per hundred. A large lot of Cypress,
Vines and Junipers of every kind, Green House Plants,
and a large quantity of Roses, Maple and Laburnum
Trees for street planting. I would call the attention of
the trade to a large quantity of Australian and African
Timber Seeds, and especially Cedrus Deodare, or Dea-
vine Cedar Seeds.
L. M. NEWSOM,
East Oakland, 12th St., near Tubb's Hotel.
Send for Catalogue. 14v10

PEPPER'S NURSERIES,
PETALUMA, CAL.

Having increased our facilities for growing Trees and
Plants, and permanently located our Greenhouses and
Tree Depot corner Washington and Liberty streets, we
are prepared to furnish Fruit and Shade Trees, Small
Fruits, Evergreen Trees and Shrubs, Flowering Shrubs,
Greenhouse and Bedding Plants, etc. Send for De-
scriptive Catalogue and list of prices.
Address, **W. H. & G. B. PEPPER,**
Petaluma, Sonoma Co., Cal.
21v6-1y

PEACH AND PLUM TREES.
15,000 IN DORMANT BUD;
SEVEN OF THE BEST VARIETIES
Of Peaches and five of Plum. The Tinley Peach,
Georgia Freestone Seedling, the first offered in the state,
its flavor being richer and superior to the finest of the old
varieties; it is the best for canning and shipping, and brings
double the price of any other Peach in market. Orders
promptly filled fresh from the Nursery.
BRIAN & DOMINGOS,
4v7-2m P. O. Box 157, Sacramento, Cal.

Our SEEDSMEN.

ALFALFA!

NEW CROP.
For Sale, choice lot of fine CALIFORNIA-GROWN
ALFALFA, in lots to suit, for cash, at market rates.
Our Seed, unlike that imported from Chile, is fine and
free from Mustard or other foreign seed. Vegetable,
Flower and Grass Seed, etc.

50,000 Ramie Plants; 100 000 Gum Trees.
Fine Plants, Trees, Bulbs, and all articles in the
line, fresh and good. Splendid Stock, at the old stand.
E. E. MOORE, Seedsman & Florist,
425 Washington St., - - SAN FRANCISCO.
SEND FOR CATALOGUE. 21v6-tf

JUTE SEED! - JUTE SEED!

NOW IS THE TIME TO PLANT.
Just received, an invoice of FRESH JUTE SEED,
which will be sold in quantities to suit. Also, just
received a full supply of
EGYPTIAN CORN,
(Chicken Feed,) which is in fine condition. Orders
respectfully solicited.
R. J. TRUMBULL, Seedsman,
ap25-3t 427 Sansome street, San Francisco.

THE ALDEN

Fruit Preserving Company
OF CALIFORNIA.
Is now prepared to sell rights and furnish the necessary
machinery for using the "ALDEN PROCESS," ac-
knowledgeed to be the best method known for
preserving Fruits, Vegetables, Meats, etc.
For full particulars call at the company's
Office—Room 5, 402 Montgomery St., S. F.
G. W. DEITZLER, President.
W. M. WHEAT, Vice-President.
FRANK PYLE, Sec'y and Supt.
BANK OF CALIFORNIA, Treasurer.
11v7-6m

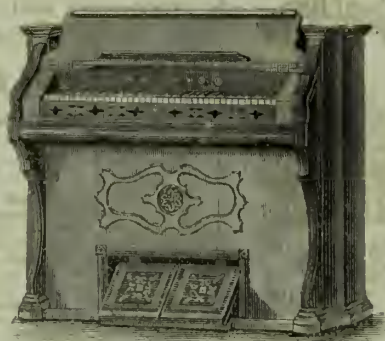
H. K. CUMMINGS, 1858. **H. H. BALSTON,** 1873.
HENRY K. CUMMINGS & CO.,
Wholesale Fruit and Produce Commission
House,
ESTABLISHED 1858.
No. 424 Battery street, southeast corner of Washing-
ton, San Francisco.
Our business being exclusively Commission, we have
no interests that will conflict with those of the producer.
4v23-1y
PURCHASERS please say advertised in Rural Press,

MASON & HAMLIN ORGAN COMPANY,

RECEIVED TWO MEDALS AND
DIPLOMA OF HONOR

VIENNA.

NO OTHER American Organ
deemed worthy of even a diploma.



SEND FOR CATALOGUE

NEW STYLES.

PRICES FROM \$65 TO \$750.

Being 25 to 50 per cent. lower than
prices asked for any other Organ
in the country.

KOHLER, CHASE & CO., General Agents,

633 and 635 Clay Street,

SAN FRANCISCO.

IMPROVE YOUR POULTRY,

It Costs No More to Keep Good Fowls than
Poor Ones!



OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

A few trises of imported Dark Brahmas, of the celebrated Black Prince strain, for sale at \$30 per trio. Also, one trio imported Golden Polish, at \$30. For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the world, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco.
9v7tf

W. M. BRANDON,

JACOB W. ROGERS

BRANDON & ROGERS, California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.
Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.
20v6-1y-16p

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

C. J. CLAYTON,

Clayton, Contra Costa Co., Cal.

10v7-6m

RANCH FOR SALE.

BY VIRTUE OF AN ORDER OF the Probate Court of the city and county of San Francisco, the undersigned will sell the Ranch of the Estate of H. Rush, deceased, in Solano county, consisting of about 4,000 acres of farming land, bordered by 1,200 acres of tule land, three-fourths of entire tract inclosed by Suisun Slough, having landing on same for vessels from San Francisco. Terms reasonable. For particulars inquire of H. F. CRANE, 729 Montgomery street, or D. BALLARD, 106 Davis street, San Francisco. SARAH E. RUSH, Administratrix.
m9-1m

FANCY POULTRY.

A FEW CHOICE FOWLS FOR SALE.

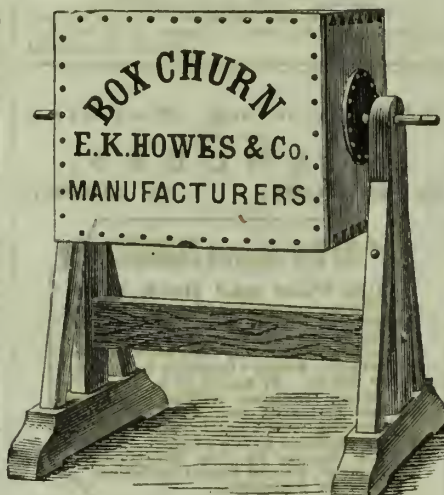
Two trises Silver Spangled Hamburg, \$30 per trio; 1 trio Silver Spangled Poland, \$20; 1 trio Golden Spangled Poland, \$20; 1 trio Dark Brahma, \$15; 1 trio Light Brahma, \$15; 1 trio Buff Cochins, \$15; 3 trises white face Black Spanish, \$15 per trio. Spanish Eggs, \$4 per dozen. GEORGE A. HILL,
19 New Montgomery St., (Florence Sewing Machine Agency).
m9-1t

U. S. LIVE STOCK EXCHANGE, CORNER OF FIFTH AND BRYANT STREETS, S. F.

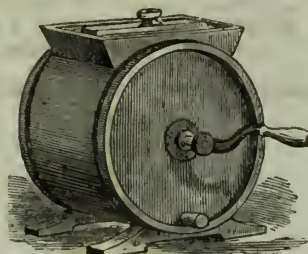
Cattle, Sheep, Milch Cows, Hogs and Horses sold on commission or bought on farm for cash. Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State. Thoroughbred Durbam Cows wanted. Address,
DAWSON & BANOROFF, 449 5th St., S. F.
Special rates to members of the Grange.
m9

E. K. HOWES & CO.,

NOS. 118, 120 AND 122 FRONT STREET, SAN FRANCISCO.



BOX CHURN.



CYLINDER CHURN AND DASHER.



THERMOMETER CHURN.



BLANCHARD CHURN.

SOLE MANUFACTURERS ON THIS COAST OF

All Descriptions of Churns, Butter Workers & Moulds, Butter Tubs, (35, 50 & 60 Pounds), Butter Kegs—Plain and Gal Hoops—Wholesale & Retail.

Send for Price List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired.
8v7-16p-60w-3m



EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz; Buff Cochins, \$3 per doz; White Faced Black Spanish, \$4 per doz; White Leghorn, \$5 per doz. Buff Cochins and Light Brahma Fowls for sale. Address: G. A. DEAN, Pacific Straw Works,
12v7-3m-16p 345 Bush St., San Francisco.

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILIPS,
11v7-1m 608 Clay street, S. F.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas, Buff, Partridge and White Cochins. Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure Whitefaced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California
ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-1f-16p2

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable, Agricultural, and Flower Seeds, Containing all the BEST varieties, and selected with great care.

ALFAFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MEASQUIT,

RED CLOVER,

WHITE CLOVER

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

BRONZE TURKEYS,

Largest and Finest Collection
on the Pacific Coast.

EMDEN GEESE,

58 pounds to the pair, at maturity.

Eggs for Sale Now.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS, COCHINS, BANTAMS, ETC.,

Black Chynaga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address:

M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.
17v7-2m-16p

PACIFIC POTTERY,

Depot—No. 3 California St., San Francisco.

N. CLARK & CO.

Manufacturers of

EARTHEN & STONEWARE,

WATER AND SEWERAGE PIPE.

Our Vitrified Iron Stone Pipe has been thoroughly tested on private estates and public works, and its merits are fully endorsed by the leading Architects of the State.

J. B. OWENS, Agent.

m9-bp-3m

Grangers' Bank of California.

NOTICE!

The Stockholders of the

GRANGERS' BANK

Of California, are hereby notified that a meeting has been called to be held in Corinthian Hall, No. 31 Post street, San Francisco, on Thursday, May 21, A. D. 1874, at two o'clock, P. M., for the purpose of adopting the By-Laws of the Corporation, as required by law.

SPECIAL ATTENTION

Is called to the importance of the Stock being represented either in person or proxy, as it is necessary that a majority of all stock subscribed be represented in adopting the By-Laws of the Bank. By order,
ALFRED F. WALCOTT, Pres't.

FOR SALE.

25 full blooded Spanish Merino Bucks, one and two years old, from stock imported from Addison county, Vermont, in 1872. Call and see, or address,
B. F. WATKINS,
Santa Clara, Cal.
m9-2m



Volume VII.]

SAN FRANCISCO, SATURDAY, MAY 16, 1874.

[Number 20.]

Read's Road-Making and Ditching Machine.

We herewith present another California labor-saving machine, which we learn has been practically tested in several important counties in the State, and received the favorable opinion of all who have seen it work. The machine is adapted to all kinds of scraping—for turnpiking roads whether on level or side hill ground, cutting ditches, leveeing rivers (wherever scrapers can be used), and especially for leveling off land so as to allow of an equal flow of water for irrigation purposes. It may be operated with from six to eight horses, according to the work it has to do.

Our engraving gives an excellent view of the machine. By means of the two levers on either side of the seat in the rear, either end of the scraper can be raised to accommodate to the nature of the ground; while by another contrivance which will be readily seen, the scraper can be adjusted to any desired angle with the line of motion. When the scraper is working at an angle to the travel of the wagon, a side draft will be created, which requires to be counteracted. For this purpose the rear wheels are so constructed that the man who works the levers can crank the wheels to the right or left, to counteract the side draft, by the lever on the platform, with his feet, with perfect ease.

Gen. Bidwell was among the first to adopt its use. J. A. Klyser & J. G. Heald, of Cloverdale, road builders, are using the machine in Sonoma, Mendocino and Lake counties, for building wagon roads. W. L. Overhizer, of Stockton, an extensive farmer and prominent Granger, has secured the right for San Joaquin county for the purpose of building ditches and roads. The machines are manufactured by the Kimball Manufacturing Co. of this city, and sold by Wiester & Co., 17 New Montgomery street, to whom application can be made, for further information, either personally or by letter. R. F. Read, the inventor, is the traveling agent.

Beautiful Napa.

At the age of 63 we are once more in love; not this time, however, with coy maiden or blooming womanhood, or their ever bewitching wiles or smiles; but with charming, beautiful Napa valley, which we have visited, and from which we have just returned. Sunday, May 10th, opened up with a resplendent morn, and the bay, as if under some bewitching charm, lay motionless, only that the ocean's inspiration was drawing to its bosom a strong outward current of waters.

That fine excursion steamer " " but hold, we did not go "dead head"—bore us rapidly and safely to Vallejo, and from thence we proceeded even more rapidly by rail to Napa, a lovely little city, the local emporium of a still more lovely vale. From Napa, along the valley on either side, agricultural development and improvement are everywhere apparent. Horticulture and floriculture present evidence of the good taste and industry of the people; and just now, nature seems to be doing her best in donning her most gorgeous attire, as if in mockery to the puny efforts of those who glory in the beauties of Flora. For though humanity may gild with the glory of flowers the miniature park, the lesser lawn and tiny parterre, nature spreads around her flowers upon a scale of acres, and with a hand so lavish, that man's best efforts at imitation are in vain.

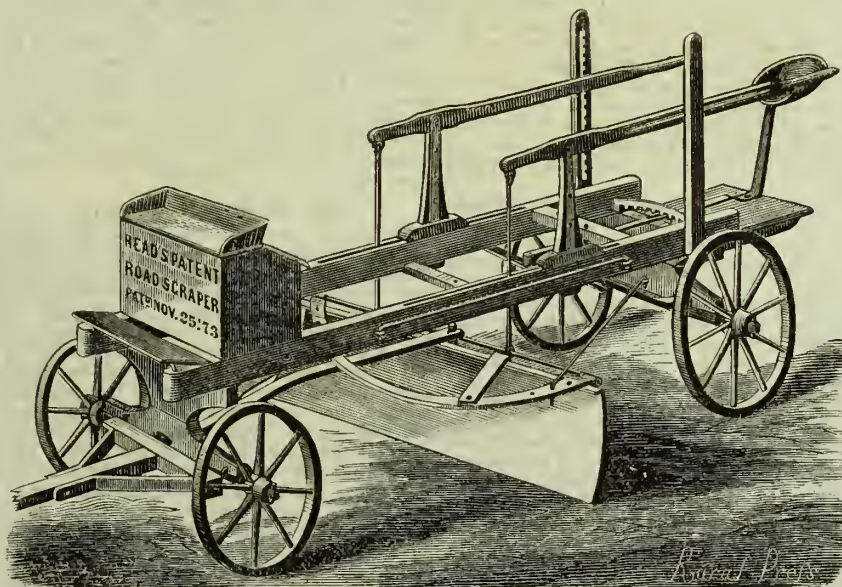
Then the broad grain fields, the verdant grass lands, the luxuriant vineyards, the thrifty orchards and well-kept farms for a foreground, backed by the wavy outline of mountains whose foot-hills in all their fantastic shapes drop down to the valley's edge, all pass like a moving panorama, every moment changing and presenting new scenes of beauty. And all this and much more that we could say had we time and space, is but a feeble outline of the beauties of bewitching Napa valley.

The "Rural Press" as a Medium of Advertising.

There are various parties in this, and even in Eastern cities, who will verify our declaration, that we have, on many occasions, been obliged to communicate with them in order to obtain information, for the benefit of our readers, in regard to the prices, etc., of the articles in which they deal. We are continually receiving inquiries from subscribers as to where certain articles can be obtained; who are the most reliable parties; what are the probable prices, etc. These wants of our patrons include various articles; and when we speak of being compelled to communicate with dealers and others, personally or by post, in order to obtain the requisite information, we would not be understood of complaining of the labors thus required of us, for we are ever ready to serve our friends and patrons. It is for them, and not of them, that we complain. The fault lies with

Poisonous Bugs.

In those parts that have been visited by the potato-bug, considerable discussion has arisen as to the poisonous nature of the insect. Conflicting opinions have been expressed, and counter experiences have been related. Some have handled them with impunity, destroying several quarts of them daily throughout their long destructive seasons, while others, it is claimed, have been annoyed and even seriously injured by their sting. We have had the experience of two campaigns against the potato-bug in Wisconsin, during their worst ravages in that State, and although no cases occurred there which could properly be termed poisoning, much discomfort, and in some cases actual sickness, resulted from handling them. There is an offensive, sickening odor arising from this bug, and it was from inhaling this, and not from any poisoning power, that these effects were supposed to arise. To protect the potato fields against the destructive armies of what



READ'S ROAD-MAKING MACHINE.

the dealers, who have failed to properly advertise their business. We apprehend that this class has not duly estimated the extent of our advertising influence. Even though our circulation were confined to the farming community proper, it would be well for dealers to use the Press as a medium for advertising their business. But besides this large and desirable class of customers, scores of country merchants, hotel keepers, etc., with hundreds of families in cities and villages, would be reached. A more liberal system of advertising will be advantageous to all parties.

Besides the usual advertising advantages, we propose to give reading notices, under the head of "Business Information," for which reasonable charges will be made.

THE day of doubting in regard to the abundance and quality of the present wheat crop is probably past. It is expected that on the east side of the San Joaquin river the crop will equal the years 1872 and 1873 added together. From all other portions of the State, with very few exceptions, the most gratifying reports are received. The grape and other fruit prospects are also unusually promising, and our wool-growers are raising a good yield with a prospect of good prices. The prosperity of these interests is looked after with as much interest by the people of the cities as by the farmers themselves; and even though none of these harvests are yet realized, the present confidence in their results is producing beneficial effects on trade; and from our largest mercantile houses to the journeyman mechanics and day laborers, hearty congratulations and confidence in general prosperity are expressed.

was then termed the "Kansas bug," requires an immense amount of labor, and the draft upon the younger portion of the community was particularly severe, as first-class labor could not be spared for this purpose. We have known many a boy and girl retire from the field, after a morning's labor at this task, completely prostrated, exhibiting symptoms closely corresponding with those of sea-sickness; and this, too, without touching the bug—merely shaking them off the vines into buckets. Other parties, however, would work over them with impunity.

This case affords another instance of the marked difference in individuals in regard to susceptibility to poisons or deleterious atmospheric influences; and also of the varying conditions of the same individual in regard to this susceptibility. And while we do not believe that the potato-bug is poisonous, strictly speaking, we would advise those who are unfortunately brought in contact with it to be somewhat cautious in their dealings with it, looking to the condition of their own system, and not impose the task upon those who manifest a particular sensitiveness in this matter.

A MONTANA paper says: "The fleeces of sheep driven up to Montana double their weight in two years' time. A flock of ewes will nearly double its number in a single season. The wool of New Mexico and Colorado sheep driven into the cool Territory, refines, softens and thickens. Feeding on the bunch grass, they fill up quicker, lie down more, and wander less than do flocks in any other section."

MILLIONS and millions of caterpillars, according to the Salt Lake News, are hatching on the trees in Utah, and threaten to destroy the fruit crop.

Spurious Guano — Mistaking Guano for Plaster.

As guano may be one of the first extraneous manures used by our farmers in the broad field of agriculture for invigorating the soil, we would advise them to get acquainted with its virtues, and how to distinguish what is genuine from spurious imitations. We do not think it likely, however, that many mistakes, so ridiculous as that which lately occurred, as we are told, in England, are likely to happen here.

"A carrier in the neighborhood of Bolton had to convey a barrel of Roman cement to a gentleman, and a barrel of guano to a neighboring farmer, each of which he delivered to the wrong party. A plasterer commenced preparing the guano, which was given to him as Roman cement; and after much difficulty, owing to the bad smell, he succeeded in plastering a few yards of the gentleman's house; but the stench becoming past his endurance, he called out to the gentleman and said, 'I am very sorry, but I must beg of you to get some other person to finish this job, for I never met with such Roman cement before; I am quite sick, and the smell will poison me if I go on; besides, did you ever see Roman cement so yellow?' The gentleman said there must be some mistake, for it evidently was not cement; and accompanied the plasterer to the carriers, where they found the farmer complaining about the barrel of stuff he had got. It was like sand, and when mixed with water it turned into stone, and instead of making the grass grow like winking, as he was told it would, would flag his field. 'I never seed sitch stuff in aw my loif as you; I mix' sum on't wi' weyter, an' its turned into a flag.' 'O,' exclaimed the plasterer, 'that must be the Roman cement, and I have been mixing up your guano instead of it.'"

Present Supply of Wheat in England.

The London *Mark Lane Express* speaks in rather hopeful terms of the prospects of the growing crops of wheat in England, though admitting that the character of the last winter, together with other unfavorable causes that may possibly intervene betwixt the present and harvest-time may prostrate these hopes. It expresses some considerable anxiety as to the supplies for the next four or five months. It states the immediate wants of the country and its anxiety as to their supply as follows:

"Russia and America are our mainstays, but if they, in conjunction with all other countries, have hitherto been unable to send us more than 1,000,000 quarters a month, and we have only about 2,500,000 quarters now in stock, how are we to tide over the time between this and next harvest, with a requirement of say 10,000,000 quarters before us? In three or four months we may receive some of this year's produce from Australia, as we did opportunely last year; but bearing in mind that the total exports from these colonies were only 505,000 quarters in 1871, 325,000 in 1872, and 806,000 in 1873—or on an average, 550,000 quarters, equal to only eight days of our consumption—and that there is, at present, no certainty of receiving any at all, it is a resource not much to be relied on. Again, the foreign requirements of France have been estimated by French authorities at over 6,000,000 quarters of which she has only as yet received about 3,000,000; Belgium, Holland, Western Germany, Italy and Switzerland are in the corn markets. Hungary appears to have nothing to spare, and the grain stocks in other European countries are reported as less in the aggregate than they have been at this period for the last fifty years. There thus appears to be an anxious time before consumers, and it is evident that great economy of consumption has become necessary to carry us on in safety to next harvest, however early or productive that may happen to be."

A LETTER to the *Butte Record*, from Gridley, under date of the 7th instant, states: The prospects of the farmers in this vicinity were never better. Grain and grass promise an abundant yield; the yield of grain will be good beyond doubt, even on much of the land toward Butte creek, and from present appearances there will be no need of the farmers shipping hay next winter from Oakland to this neighborhood.

CORRESPONDENCE.

Grain Elevating and Warehousing System.

EDITORS PRESS:—The earnestness with which the farmers of California have taken hold of the question of warehousing, storing and handling their grain, indicates that they have finally aroused from their Rip Van Winkle slumbers; that the days of sacks and burlaps, with the attendant expense, inconvenience and loss incident to grain growing, are drawing to a close. No valid excuse can be offered for an intelligent community not moving in the matter, years ago. Nor is there for having submitted to such gross impositions and exactions at first. The acknowledged quick perception and ready action of Californians in all pertaining to their advantage, would force the conclusion that they would have taken the lead in a matter of such importance; nevertheless, we find them far in the background compared with their brother farmers east of the mountains, who, by the adoption and use of the system I propose to outline, have become independent and wealthy, while we have been kept in servitude and well nigh bankrupt by continuing to practice what it is hoped will now be changed. It is not possible to account for the anomalous condition of the grain trade on the Pacific coast, unless it is the want of a healthy competition, the outgrowth of an absolute monopoly.

The frequent inquiries respecting the cost and manner of constructing the proper buildings, and mode of organizing for effective operation, have determined me in answering, through the medium of your widely circulated columns—knowing that they are open and devoted to whatever will benefit those whose province it is to create—those who are virtually the main springs of our great social chronometer. An experience of years in the grain centers of the West, engaged in business most favorable for thoroughly understanding the system in all its details, warrants the belief that its adoption in California is entirely practicable, that the benefits resulting cannot be too highly estimated. I refer to what is known as the elevator system—the child of necessity, of accidental conception and development.

In the early history and settlement of the States drained by the upper Mississippi and tributaries, New Orleans was the only market and sole outlet to the seaboard for the products of that vast and fertile region. Corn and bacon were flat-boated or barged down Nature's highways to the metropolis, "Orleans," at whose levees hundreds of these nondescript craft were to be seen at certain seasons of the year.

How Prices were Governed.

The merchants and traders of the Crescent city, knowing their advantage, dictated prices and terms which the producers or owners from necessity were compelled to accept, as there was no proceeding or returning with their property. The result of this arbitrary and jungle condition of business was precisely what exists in California. Exaction upon exaction, imposts upon demands were made, until the net returns from a load of corn or bacon (the result oftentimes of a year's labor of a neighborhood,) would be a sack or two of coffee, a few bolts of muslin (unbleached cotton), with perhaps, in fortunate ventures, the addition of some "kaliker and chicken fixings" for the family, a few sacks of rock salt, etc., which were sent "up river" by keel boats or steamers, the farmer footing his way home twelve or fifteen hundred miles through a howling wilderness. All interests in a country tributary to such a market languished; were virtually dead. The vast prairies that are now one waving field of grain, would still have remained the home of the deer and hunting ground of the savage, had it not been for the completion of the Erie and St. Lawrence canals, connecting the great lakes on our northern borders with the Hudson river and the ocean, opening a new outlet. A short canal from the head of Lake Michigan to tap the navigable waters of one of Mississippi's tributaries, the Illinois river, at Peru, completed the line of communication which has been productive of such wondrous results. Only a few years have passed, and all that now remains of the boundless expanses that stretched out from the tree-clad hills of Ohio and Indiana, towards the setting sun, exists in the memory of the pioneers of 1836 and 1840, or is noted on the page of history.

Origin of the Elevator System.

Chicago, which is the center of this granary of the world, receiving and distributing a larger amount of cereals than any other one city on the globe, if not the originator, can justly claim to be the school, wherein the elevator system has been perfected. Before the present style of constructing and operating grain warehouses, business was done in an expensive, tedious manner. Men with accipiters, bags and measures, handling the grain that was stored in the shallow bins, and on the floors of buildings constructed expressly for sustaining weight and great pressure; with frames of massive timber, thoroughly braced, which after all were liable to frequent casualties from bursting of the sides, crushing of timbers, etc. The question with grain growers and dealers of the West was, in what way, and by what means were these difficulties to be overcome. "To be or not to be," forced itself upon them. Continuing as they had been

doing was too expensive, too slow, too uncertain to accomplish much or to expect any great results. The profits of production were necessarily swallowed up in handling. Without pay, sensible farmers would neither sow nor reap; this point reached, and the machinery moving, our social system stops. A relapse then to barbarism is simply a question of time. Necessity, the acknowledged maternal progenitor of invention, finally interposed; with what success results will show.

Comparative Cost of Handling.

In 1852, the receipts at Chicago were 6,406,508 bushels, equal to 176,178 tons. The shipments for the same year were 161,845 tons. There were at that time but two or three small warehouses operating elevators by horse power, which, however, did most of the grain transferring from canal boats to schooners. The economy in handling was shown so conclusively by them that their owners realized fortunes in controlling the business; doing it for one-third to one-half less than it was possible for others in the ordinary manner. At present Chicago has 14 elevators operated by steam, with a storage capacity of 378,000 tons. There were received during the year 1873 2,829,582 tons of grain, and shipped through them 2,617,057 tons—a total of 5,446,639 tons moved. When it is understood that none of this grain is handled less than twice, being weighed in and out; that it is necessary to shift it frequently from bin to bin, to prevent heating, and from other causes, the labor and expense (if it were possible) required, it is easily seen, would not only absorb the grain but call for reclamations from the producer, provided it was done in the old way, or in our present style. Think of handling 45,273,312 sacks of grain not less than twice—a year's (302 days) labor, of 100 men moving 300,000 sacks each day! These sacks, for the receipts only, costing at 13½ cents each (with nothing added for twine, sewing, torn, ripped and damaged) \$6,111,897.12 in gold coin, every cent of which, and doubly as much more, is paid directly by the farmers of our State, simply on account, as it is claimed, of an "inexorable custom" on this Coast—a custom existing in no other grain market of the world.

Economy of the System.

In an article of this kind it is only possible to touch upon the main features and advantages of the system advocated. Considered in their order, the first is that of economy in the aggregation, handling and safe storage of grain, supplying the means for husbanding and holding securely those products justly considered as our monetary resource, being the basis of the majority of foreign exchange, which controls and regulates, in a great degree, all our banking, mercantile and individual transactions.

Second, Preventing individual or associate control of the trade, placing it beyond their power to force sales at a time most usually when prices are lowest, rendered so through fear of loss by the elements, a depressed or glutted market from an abundant harvest, a corner in ship charters, or by a sack and burlap ring. By securing lower and more favorable rates for ocean and inland freight cargoes could be relied upon, as grain deliveries would be uniform throughout the year, obviating the necessity also of extra expense and outlay by railroad and freighters, for meeting the demand of a rush, at particular seasons. The elevators at railroad stations, river landings, emporia and the seaports of the State serving as reservoirs, controlling and regulating the flow of grain, giving a healthy tone to business by equalizing it and by encouraging competition.

Third, By rendering grain available for obtaining money at minimum rates of interest, immediately upon being harvested and stored, without selling or parting with a direct interest in it. Finally, completely revolutionizing the present system, which has not one redeeming feature to sustain it.

Universality of the System.

Those inclined to regard these propositions as Utopian are referred to the successful workings of the system wherever used. The provings being so positive as to have forced its adoption universally throughout the West, New Orleans, St. Louis and the cities on the Mississippi and Missouri rivers, which were bitterly opposed and fought for years against it, controlled by like influences that have and still continue to affect California, had to succumb. No place east of the Rocky mountains pretending to a grain trade is without its elevator. The cities of the Atlantic seaboard are so provided. Montreal, Portland, Boston, New York, Philadelphia and Baltimore were compelled to take them for self-preservation. Before entering into the *modus operandi* for securing the proposed benefits, it is well to understand that by the elevator system is understood, the storing, moving, classifying and grading of grain in bulk, that it is not connected directly or indirectly with the ocean freighting of it, nor with any other mode of transportation.

The determining of what shall comprise a cargo, how it shall be stowed, and all pertaining thereto, is a matter for the owner or charter party's consideration, wholly united with that of the underwriter when insured. There is as much reason for supposing that those who build ships shall furnish freights for them as that farmers who raise the grain comprising a portion or all of a cargo, shall provide dunnage and appliances for stowing it, according to the caprice or whim of the stevedore, or relieving the ship from a legitimate charge in supplying what is necessary for its safety. That not only

grain of all kinds, but petroleum, molasses, oil, lime, coal, guano and rice, are shipped in bulk is well known. Custom in all grain markets, except this, has determined that ships taking grain as cargo must provide sacks in case they require them.

What an Elevator is.

An elevator building is merely an aggregation of hopper bottomed bins sustaining a light frame carrying the roof, and where the machinery required for elevating, weighing and distributing the grain to the several bins is located. The number and size of these bins determine the capacity of the house for storage. These vary from the leviathans of forty and forty-five thousand tons, to the modest one of twenty to fifty tons. The principle in construction is the same in all; it is that of laying strips of lumber 2x8 or 2x6 one upon another, spiking them securely as fast as laid, breaking joints also, continually. When completed this forms the only building able to withstand the downward and lateral pressure of large masses of grain. To estimate the cost, take as a basis the desired capacity, calculating 41 cubic feet to the ton. The cost of the required amount of lumber for enclosing the space, laid as indicated, with the nails, rods and work, etc., will give it. The character of the motive power for elevating the grain varies all the way from a \$20,000 engine to a blind horse at the end of a sweep. By a rough estimate a building of 30 bins 16x15 feet, 40 feet deep, 240 tons capacity each, total capacity of building, 7,200 tons, could be built on favorable ground, with lumber from \$16 to \$20 per M., for \$35,000 to \$40,000. Say that the actual space occupied in such a building was 6,000 tons, a charge of \$1.50 per ton for receiving, storing, delivering, weighing, etc., would make it a good investment. The rates of Chicago are \$1.33 per ton for five months' storage, beginning November 14th and ending April 16th; those for the summer beginning April 16th and ending November 15th, \$3.00 per ton. These rates cover all expenses except those of insurance vs. fire. Grain is graded and classified usually, soon after each harvest, according to its excellence, condition, etc. Samples are then secured and become the standard, governing arbitrarily the inspection for the coming year, or until from some cause it is necessary to change it.

When the grades are decided upon, a distribution of samples is made to all the Boards of Trade and produce exchanges, and are obtainable by all who desire them. The character of the grain being perfectly represented by these samples, a buyer in New York, Boston, Liverpool, London or France, can purchase advisedly by telegraph or letter, knowing precisely what the grain is better than if holding samples, obtained by his confidential agent, from sacks with a grain-tester.

How the Business is Done.

Warehouse receipts are issued for grain stored, stating upon their face the exact amount, kind and quality, rates of storage and date of receipt, guaranteeing a delivery of the same amount as received, risks by fire excepted. These receipts by statute of nearly all the Western States are made negotiable by simple endorsement of the person in whose name they are issued, conveying the property which they represent as absolutely and entirely as by bank notes or greenbacks. For carrying into operation the system proposed properly constructed warehouses are necessary. They can be built and managed by individuals, associations or corporations. Their locations to be determined by the interests of their projectors. To receive and store grain in bulk, issue receipts for same, which shall state on their face the amount, kind of grain, rates of storage, date of receipt, guaranteeing to deliver a like amount as received, upon the return of said receipt properly endorsed, and payment of charges as set forth therein. By making these warehouses the farmers' banks, as by proper safeguards, the receipts would have an acknowledged value at home and abroad, representing an actual paid up capital in the grain for which they are issued. These warehouses or quasi banks holding in their vaults (bins) the direct results of labor, the basis by which all values are measured, that which controls in being the staff upon which all lean—offer the best securities in their receipts. An adoption of such a system in California would go farther in remedying the evils complained of from want of money and extreme rates of interest, than all the banks present and proposed that can be organized, in diverting to its proper channel the domestic and foreign capital now employed in the wildest speculations of mining stocks and other schemes of no practical value to the great body politic.

As this communication is already more extended than was at first proposed, and much yet left unsaid, an offering of a few facts for general digestion will close it.

Superiority of California Wheat.

We have been taught to believe that the wheat of California is superior. The price it commands in all foreign markets proves it so. The economy of placing it on ship-board from points of production is unequalled. Nevertheless with these advantages California farmers in the year past (one in which it is claimed they have been greatly favored in obtaining extreme prices) have received in San Francisco on an average 19 cents per cental, \$3.80 per ton, less than was paid to western producers at Chicago for their inferior grain, which grain has been quoted in the Liverpool market during the season from 36½ to 40 cts. per cental, or \$7.30 per ton, below that of California.

A real difference of \$11.10 per ton, aggregating on the estimated season's export of 300,000 tons \$3,330,000, or over \$333 for every person actually employed in grain growing in the State.

Consequence Succeeds Cause.

The cause in this case can be stated in three words, absence of competition. The laws controlling trade are as fixed as those of nature. Wisdom and experience declare against investing absolute power in individual hands, or seeking freedom through the intervention of tyrants. He who assumes to have a greater share of the lacteal of kindness, or less inclined to reckon self, than his fellows, is justly stamped as a pretender, more dangerous far than one offering no such claims. Human nature has been, and ever will be the same; from the day of his creation until now there has been but one exception to the rule in man.

Yours, G. C. PEARSON.

Farmers Around Oakdale.

EDITORS PRESS:—To correct some errors, and to prevent further erroneous opinions of our vicinity as a farming section being formed, is the object, and my apology for this intrusion.

Your correspondent under signature of "C. M. D." in an article of "Notes of Travel in Tolueme and Stanislaus," in your issue of April 11, after referring to Oakdale and its picturesque beauty, speaks of myself and two other small farmers as the principal ones in this locality, which would be a very thin showing for any community of much farming pretensions. I am not so much of an aspirant for agricultural glory as to allow his injustice to my numerous brother farmers to pass uncorrected. Those are the Cotters, Parker, Dickenson, Ruterfords, Emerys, Clavy, Carny, Lovets, Green, Burgess, Booths, Miller, Fagans, Martin, Beard, Threlfall, Underwood & Co., Hopper, Bailey, Murphy, Richardson, Hamlin, Ordway, Langworthy, Crawfords, Brown, Crosby, Engles, Patterson, Lucas, Whitby, Leichter, Litts, Cavill, Snedigen, Huntly, Mourees, Crows, Leach, Lechart, Burnet, Watson, Crowl and many others within a radius of from six to eight miles of Oakdale, a majority of whom are more extensively engaged in farming than the three mentioned by your correspondent "C. M. D." C. N. CALLENDON.

Oakdale, April 20, 1874.

Worms in Horses.

EDITORS PRESS:—That worms should be in the intestines, or even in the stomach of horses is a very common thing. In fact, that they are at all injurious to the health when in limited numbers, is by some questioned. When the horse is put on very scanty feed, particularly if very dry food, worms seem to multiply and go prowling for food. I have not known of a case in California of worms troubling a horse in good care, and fed on a variety of food. I had a case last fall, so bad off that I was in doubt at first whether the case was not chronic neuralgia. Symptoms were very much the same, except the acuteness of the sense of touch. Deciding the case, worms, I treated, thus: First, confined in a roomy lot, fed on a bran mash, mixing in powdered nux vomica. 2d, feed, dry hay—acant. 3d, feed, green corn. 4th, feed, dry oats. 5th, feed, ripe tomatoes and a little hay. Water and salt in the lot at all times. On the third day of this line of treatment, a great amount of worms were passed. Oftentimes we grumble at the laziness of our horse, and think he is wearing out, when the cause is sameness of diet.

GEORGE KAY MILLER.

Vacaville, April 6th, 1874.

New Fruit Drying Factory.

EDITORS PRESS:—At a meeting of the Directors of the Centerville Fruit and Drying Factory, the following officers were elected: President, John L. Beard; Vice-President, M. B. Sturges; Secretary, Geo. W. Bond; Treasurer, H. Overacker. At the stockholders' meeting By-Laws were adopted and Directors elected as follows: John Lowrie, S. J. Marston, H. Overacker, M. B. Sturges and John L. Beard. We have \$16,500 subscribed of the capital stock, and the first assessment of \$20 per share paid in. The whole stock is one thousand shares at the par value of \$100 per share. The contract for the building will be let this week, and we expect to have the factory in running order in a month; \$9,000 will cover all our present estimated cost; that is, \$7,500 will cover it, but we allow \$1,500 for extras. Yours truly, JOHN L. BEARD.

Centerville, May 6th, 1874.

Inquiry About Water Pipes.

We have received the following communication, which speaks for itself: If the readers of the RURAL PRESS who have used redwood water-pipe, manufactured by Jewell & Co., in San Francisco, will give their experience with it, they will confer a great favor on several in this vicinity, as we will set ourselves to work putting it down, if reports are favorable.

It is asserted by some that gophers will gnaw and destroy it. If they will, it is of no use to us. We want a cheap and durable pipe for conveying water, and we hope to hear favorable reports of the red-wood pipe, as that appears cheapest in regard to price.

O. N. CADWELL.

Carpinteria, Cal., May 2d, 1874.

THE DAIRY.

Improvement in Common Dairy Stock.

It is not necessary that we should again define our position in regard to the propagation of blooded stock among the dairymen of this coast, for our paper ranks among the warmest advocates of this system; but the necessity for improving our common stock is quite as urgent as for disseminating the purer bloods, while the means for improvement presented by the former are more immediately available. They can at least be used to great advantage without any detriment to the former enterprise.

It must be apparent to all that the time is a long way off when blooded stock will replace to a great extent that upon which we now rely. The limited supply and consequent high prices of choice stock must necessarily preclude the great mass of our dairymen from its possession. And while they are not able to procure this, they cannot afford to retain any but the best of common stock. The time has passed even in this comparatively new country, when inferior cows can be economically kept, and even the ordinary ones should be gradually crowded off and their places supplied by those of the first class. The earnings or products of the cows in this country might be materially increased, without any outlay on the part of our dairymen, to the great advantage of the country.

Realizing as we do the propriety of introducing blooded stock into all parts of the country, still it is a question with us whether it would not have been as well for us had we expended the same money and persistency in improving the stock which we now possess. While we have been pampering our choice stock, even to their detriment, we have neglected our common stock to their injury and our loss. The introduction of blooded stock was like a panacea offered to a patient who is even reckless in the attempt at a speedy cure, while the plea for the gradual improvement of our common stock at once places his case among that uninteresting class in which "the patient must minister to himself." We all know the thoroughness of such cures; and for our part we would like to see that portion of our farmers who do not favor the importation of blooded stock, and that still larger portion who can not obtain it if they wish, exhibit a wholesome rivalry, and show to what a point of perfection our common stock can be bred.

Let them be continually on the alert, looking for good milking qualities in cows, seeking to secure such in their offspring; and be quite as persistent in getting rid of poor ones. When these properties are recognized in a cow, use all possible means for their further development. There is, apparently, more reliance to be placed on the transmission of a certain property than of general character; and families of good milkers might be reared out of common stock, upon which we could safely depend. People generally do not consider the care, attention and time required to breed blooded cattle up to their supposed standard; and, what is unfortunate, as well as inconsistent, they are not aware that much is required of the hands into which they fall, in order to keep up to this standard. Let them be as regardless of this point in managing this stock as they are with regard to the common, and they will find a rapid deterioration. On the other hand, let them treat the common stock as they are directed to treat the others, and they will soon find that care and judicious management will tell as well as blood. See to it that they are as well housed and fed in winter, and get their living as easily in summer; that they are not worried by dogs or boys; that they are milked as clean and as regularly; that they are watered, salted and cleaned as regular as their blooded rivals; and, finally, that you only trust them in such hands as you would leave the others; and we should in a very few years have a common stock of which we should be uncommonly proud. On the other hand, let the imported stock be subjected to the treatment that has been inflicted upon their poorer neighbors, and we should have a blooded stock of which we should be ashamed.

Artificial Butter.

The compound which, under the euphonious name of "Oleomargarine," has been seeking a foothold in the dairy markets of the country, is rapidly going the way of all humbugs. The Butter and Cheese Exchange of New York has taken in hand the subject of artificial butter, and at a recent special meeting a committee appointed to investigate the matter reported the following preamble and resolutions, which were unanimously adopted:

WHEREAS, The attention of the merchants of the Butter and Cheese Exchange of New York has been recently called to the manufacture of and the traffic in artificial butter, and upon investigation by a committee appointed by the Exchange for that purpose, it appears that during the past year there has been manufactured and sold to a considerable extent an article called "Oleomargarine," made from suet or tallow, and sold as a substitute; and

WHEREAS, While the manufacture and sale of this commodity as a substitute for butter is a matter not within the province of this Exchange, so long as it is sold under its proper name, yet in view of the great danger to the trade of any successful attempt to force this or any similar compound, or any other substance foreign to butter, upon consumers by admixture with

the pure article, it is of the first importance that every effort be made by the trade individually and as a body to insure the entire freedom from adulterants of the new crop, upon the purity of which depends the future of American butter as an article of export, and, indeed, the supremacy of the dairy in our agriculture; he it, therefore

Resolved, That the Butter and Cheese Exchange of New York, while it would encourage all experiments, inventions, or applications of science or of skill for the production of a pure article of this important staple of commerce, hereby emphatically condemns any process of adulteration or mixture, and the fraudulent attempt to sell such product for pure butter.

Resolved, That the dairymen and merchants, and all others interested in this trade throughout the United States and Canada, be and are hereby requested to report to the Secretary of the Butter and Cheese Exchange of New York all instances of this practice that may come within their knowledge, for exposure through the authority of this Exchange.

THE APIARY.

About Hives.

A tall hive, when extremes are avoided, usually gives the best results. The demand for box honey has increased over that for swarms. We want hives to accommodate us in that respect. The tall hive that was best for swarms gave but little. A hive with a large top will take on more boxes than the tall small one, and the bees will often fill them as quickly as the smaller number. This encouraged us to try a still larger surface for boxes. This was done by placing them at the side of the combs. The depth of our boxes is $5\frac{1}{4}$ inches; one placed on the other made 11 inches, just the height of our frames. Two courses can be set at the side of the comb, and enough can be put on both sides—when the length of ours—to hold eighty pounds, besides those on the top.

Some bee-keepers put several tiers of boxes on smaller hives. But experience shows us that those farthest from the body of the hive, are worked in very slowly. There is a great gain in having every box as near as possible to the main hive. I cannot think of another shape that will admit so much room for boxes in close connection with the hive. If the long hive stood on the end, making it a tall hive, the same number of boxes might be used, but they would have to be piled on each other, to a greater depth; making it more trouble to take off boxes, from the lower ones, when only those were full. The main combs of the hive would often become heavy, and break loose, and fall to the bottom. If a piece to support them were put across it would divide the comb so that the queen would keep the brood in the lower part. The space above would be filled with honey, and the boxes on the top would be about the same as if they were on a tier or two of boxes below them.—M. Quinby.

WHEN BEE KEEPING DON'T PAY—WHAT THEN?

—Hogs have sold for less than value of corn fed in fattening. Cattle brought less than cost of raising. Poultry could be had for less than value of food fed them. Yet all required as much care as if sold at a profit. We would, however, think that farmer very unwise who would quit the raising of live stock or grain, because of low prices, or severe winters. If bee-keeping farmers would use as much precaution in preparing pasturage and shelter for their bees as they do for other live stock, I doubt not that a few years of experience, backed with a comparative table of facts and figures, would convince them that bee-keeping would prove as remunerative as any business in which they are engaged. The man who expects a large crop of fine fruit each year, without pruning or cultivating his orchard; he who hopes to harvest a heavy crop of wheat, corn or oats, without properly plowing and pulverizing the soil; he who expects to cut a heavy swath of hay, every year, from a meadow which he devotes half the year to pasturage; and the bee-keeper who expects to get a large yield of honey without giving his bees any attention whatever, are all sure to be disappointed with their business, and will declare "it don't pay."—Bee Keepers' Magazine.

BEE STINGS.—If a person is stung while among bees he rarely escapes with one sting. The first sting is but the signal for attack. It does not remain a personal matter between the offending party and any particular bee; the whole community are "eager for the fray." This general attack, if any, is variously accounted for. Some assert that a person who is not scared while among bees is not likely to be stung at all by them; that fright provokes stinging, and that even one sting from some offended bee producing fright, other members of the hive sting because he is frightened. A celebrated bee keeper who has closely observed the character of bees, declares that when one of the hive has deposited his sting the rest, smelling the poison of the sting, go and follow suit, prompted by some mysterious concert of action, without regard to the offence of the party or the frightened state.

ALFALFA FOR BEES.—It is claimed by some bee-keepers that alfalfa, or lucerne, furnishes a long continued supply of food for bees. They do not attempt to class it among the best sources of bee-food, but they assert that bees can more than live on it; and that too in seasons when other supplies fail. If it meets even this requirement it will become still another inducement for favoring this valuable crop. We hope those who have bees in the vicinity of alfalfa fields will observe the operations of their stocks, noting also the quality of the honey made from it, and favor the PRESS with their views on the subject.

MISCELLANEOUS.

The Nebular Hypothesis.

Prof. Van der Weyde, of New York, in a lecture before the American Institute, some three or four years since, expressed the opinion that the nebular hypothesis of La Place might be modified, by the application of the demonstrated doctrine of the conservation of forces, to such a degree as to be elevated into a theory. This modification consisting in the substitution of gravitation as the principal cause of the contraction of the nebula, instead of cooling by radiation, has been accepted by La Place; ergo, instead of taking as starting point a nebula, expanded to an enormous bulk for reason of its high temperature, and contracting by the loss of heat, we accept now a cold nebula contracting by the action of gravitation to millions of nuclei, which in their turn, by the operation of the same law, fall together into different centers of gravity. Then, by the mutual destruction of the larger portion of their motion, heat is generated, which is greater in proportion to the amount of matter precipitated and the distance through which it fell; all according to the well-established laws of the mechanical equivalent of heat.

By modifying La Place's hypothesis in this way, we dispose of the fatal objection made to it by Prof. Pierce, that it does not account for the disposal of all the heat. Indeed, starting with a nebula expanded by a high temperature to an enormous bulk, far beyond the orbit of Neptune, La Place supposes it to cool until more than ninety-nine per cent. of its mass is concentrated in the sun, of which the temperature is still far beyond our conception. What then must have been the original temperature? and where has all this heat gone? No doubt that this hypothesis, accepted as starting point entirely too much heat, and is unable to explain what has become of it.

We see then how the principles demonstrated by the experiment of Count Rumford, who boiled water by horse-power; of Mayer, who heated air by compression; of Joule, who raised the temperature of mercury and other fluids by agitation, have served not only to solve the greatest mystery in the evolution of our planetary system, but of the universe in general.

The Magnetic Metals.

It is well known that, besides iron, there are a few other metals possessing magnetic properties, viz: nickel and cobalt in a strong degree; manganese and chromium in a feeble one. In the *Philosophical Magazine* we find a remarkable article on this subject, by Mr. W. F. Barrett, F. C. S., in which he endeavors to point out the similarity of these metals to each other in their physical and chemical properties. Thus, as to specific gravity, that of the thirty-eight known metals ranges from lithium 0.50 to platinum 21.5, a difference of nearly 21; whereas those of the three strongly magnetic ones are iron 7.8, nickel 8.3, cobalt 8.5, where the extreme difference is only 0.7. Their specific heat is nearly identical; their atomic one is the same; so also their conductivity for sound, heat and electricity. Their dilation by caloric, and the amount they lengthen by mechanical strain, are also identical. The enormous cohesive power of iron, nickel and cobalt, in the solid state, signalizes these substances as the most tenacious of metals, and their melting point is only exceeded by the platinum group of metals. They are not volatile at the temperature of the hottest furnace, but only by the electric spark, when they yield very similar spectra. As to their chemical properties, the combining weight of iron is 56.0; nickel, 58.5, and cobalt the same. Chemists class these three metals in the same group, from the similarity of their chemical behavior, and also the identity of their combining energy or atomicity. What has been said concerning the likeness of iron, nickel and cobalt, in many respects holds true of manganese and chromium. The former has latterly been used to replace nickel in the alloy of German silver. The compounds of all these five metals are conspicuous for the brilliancy of their colors.

FILING HANDSAWS.—In filing handsaws that are intended to cut only one way, the majority of mechanics file toward the handle, which leaves the teeth with more bevel on the back than on the front, which is caused by the taper of the file. A few persons file their saws toward the point, which gives more bevel to the front or cutting side of the teeth. Some think that the back side of the teeth should be filed nearly square across, and that the saw will cut equally well and remain sharp much longer. The front side of the teeth should be beveled to suit the timber; soft wood requires more bevel than hard wood.

DEEP SEA SOUNDINGS IN THE PACIFIC.—Despatches to the Navy Department report that the United States steamer "Tuscarora," Commander Belknap, engaged in taking deep soundings, left Honolulu March 18th, and arrived at Yokohama, Japan, April 22d, having made 72 casts—the deepest of which was 3,287 fathoms. She will now examine the southeast coast of Japan, and from thence carry a line of soundings to Tonago, Aleutian Islands, and from thence complete the arc of the great circle to the point reached last fall, from Puget Sound.

Another New Motor—A Marvellous Claim.

The "Keeley motor" is the latest novelty which, it is assumed, is to take the place of steam. Mr. John W. Keeley, of Philadelphia, is the "inventor," and a number of prominent engineers of Philadelphia, New York, Jersey City, etc., certify to having witnessed the exhibitions, and tender their names as references for the correctness of the wonderful claims which are put forth with regard to its efficiency and practicability. The medium employed is said to be a cold "vapor" of a density that enables it, when admitted to a cylinder, with a piston one and one-sixteenth of an inch in diameter, to raise a weight of 150 pounds suspended from a compound lever, connected as 1 to 42, which is estimated as equivalent to a pressure of 7,800 pounds to the inch. Yet with all that pressure, coupled with expansive energy, it is claimed that neither the vapor itself nor the cylinder in which it was confined exceeded in temperature the common air which surrounded it! The inventor has demonstrated a pressure of 10,400 pounds to the square inch—the utmost limit of safety—but has not yet reached the full capacity of the invention.

The force is said to be derived from a peculiar "mechanical device" hitherto unknown. The power is produced "without heat, electricity, galvanism, magnetism or chemicals." The whole thing is simple, inexpensive and universally applicable.

The principle of application is to work with a small generator capable of sustaining a pressure of 20,000 pounds per inch; but to reduce this extreme pressure by allowing the vapor to expand into an intermediate chamber, from which it may be used at common steam pressure in any ordinary steam engine, in place of steam. No fuel is employed!

It is intimated that the invention was suggested by the remark of Faraday, that "every drop of water contains force elements equivalent to a very powerful flash of lightning." Perhaps Mr. Keeley has succeeded in developing and controlling that "force element;" if he has not done that he seems to have succeeded in humbugging a goodly number of mechanical engineers of good standing among their fellows. "Every share of the stock has been taken, the offers of money having been greatly in excess" of what was wanted.

Keeley is not much behind the well-remembered charlatan Paine, who claimed that by his invention he could, with a two-quart cup, drive the largest sea-going vessels across the Atlantic at the highest rate of sailing speed; but those who invested in his enterprise made as little money as will the "eminent engineers" who are taking stock in the "Keeley motor."

GOLD AND SILVER.—One ton (2,000 pounds avoirdupois) of gold or silver contains 29,163 troy ounces, and therefore the value of a ton of pure gold is \$602,799.21, and a ton of silver, \$37,704.14. A cubic foot of pure gold weighs 1,218.75 pounds avoirdupois; a cubic foot of pure silver weighs 656.25 pounds avoirdupois; \$1,000,000 gold coin weighs 3,658.8 pounds avoirdupois; \$1,000,000 silver coin weighs 51,925.9 pounds avoirdupois. If there is one per cent. of gold or silver in one ton of ore, it contains 291.63 ounces troy, of either of these metals.

TO MAKE HAIR CURL.—The method employed by professional workers in hair is as follows: Wet the hair to be curled, wrap it smoothly around a cylindrical stick or tube of proper size, tie it in place, then put it in water and boil it two or three hours, remove it from the boiler, wrap it carefully in newspaper and bake it in a moderate oven for an hour. Thus treated, it will stay in curl permanently.

A WATER-PROOF PAPER, transparent, and impervious to grease is obtained by soaking good paper in an aqueous solution of shellac in borax. It resembles parchment paper in some respects; if the aqueous solution is colored with aniline colors, very handsome paper, of use for artificial flowers, is procured.

IMPORTANT TO SNAKES.—An English exchange says that carbolic acid is a deadly poison to snakes, and experiments have proved that a few drops are sufficient to cause almost instant death to the dreaded cobra, and suggests that it might be invaluable in India and other tropical countries.

UNDERGROUND RAILWAY PROGRESS IN LONDON.—The length of underground railways now in operation in London is about twenty miles, and they are being extended in various directions. The additional track now in progress of construction is about four miles. The rails are laid at from 20 to 40 feet below the street pavements.

AN INDELIBLE AND UNBLEACHABLE INK for writing and printing on cotton and woolen fabrics is made of equal parts of copperas and vermilion, powdered and sifted, then ground with linseed oil and finally pressed through linen; the thick paste thus obtained being used.

FOR SIZING LACE CURTAINS, make a strong solution of four parts of borax, in hot water, to which add twelve parts of white shellac, and three parts of starch and isinglass, the latter two being first reduced to the form of a jelly by hot water.

PRESERVING WOOD.—The nature of a new invention consists in filling the pores of the wood with lime, or a mixture of lime and sand.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

California State Grange.

OFFICERS:

Master—J. M. HAMILTON, Gueloc, Lake Co.
Overseer—O. L. ABBOTT, Santa Barbara.
Lecturer—J. W. A. WRIGHT, Borden, Fresno Co.
Steward—N. L. ALLEN, Salinas, Monterey Co.
Assistant Steward—W. M. JACKSON, Woodland, Yolo Co.
Chaplain—L. G. GARDNER, Grayson.
Treasurer—W. A. FISHER, Tapa City, Napa Co.
Secretary—W. H. BAXTER, 320 California street, S. F.
Gate Keeper—R. R. WARDER, Waterford, Stanislaus Co.
Ceres—MRS. G. W. DAVIS, Santa Rosa, Sonoma Co.
Pomona—MRS. S. C. BAXTER, Napa City, Napa Co.
Flora—MRS. R. S. HEGGELER, Bodega, Sonoma Co.
Merced—H. B. JOLLY, Merced City, Merced Co.
Assistant Steward—MRS. S. M. GARDNER, Grayson, Stanislaus Co.

Executive Committee:

J. M. HAMILTON, W. M., Chairman, of Gueloc, Lake Co.
I. G. GARDNER, Grayson, Stanislaus Co.
J. C. MERRYFIELD, Dixon, Solano Co.
H. B. JOLLY, Merced, Merced Co.
THOS. A. GAREY, Los Angeles, Los Angeles Co.
G. W. COLBY, Nord, Butte Co.
A. B. NALLY, Windsor, Sonoma Co.

List of Organizing Deputies.

COUNTY.	DEPUTY.	POST OFFICE.
Alameda.	A. T. Dewey.	Oakland or San F'co.
Butte.	Wm. M. Thorp.	Nord.
Colusa.	J. J. Hick.	Grand Island.
Contra Costa.	R. G. Dean.	Antioch.
Lake.	J. M. Hamilton.	Gueloc.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Merced.	H. B. Jolly.	Merced City.
Monterey.	J. D. Fowler.	Hollister.
Napa.	W. H. Baxter, (Gen'l Dep.)	San Francisco
Sacramento.	W. S. Manlove.	Sacramento.
San Francisco.	I. G. Gardner.	General Deputy.
San Joaquin.	R. C. Hiale.	Ellis.
San Luis Obispo.	A. J. Mothershead.	Moro.
San Mateo.	B. V. Weeks.	Pescadero.
Santa Clara.	W. G. Henning.	San Jose.
Solano.	R. C. Hiale.	Suisun.
Solano.	J. C. Merryfield.	Dixon.
Sonoma.	Geo. W. Davis.	Santa Rosa.
Sonoma.	A. B. Nally.	Windsor.
Stanislaus.	J. D. Spencer.	Modesto.
Yolo.	Wm. M. Jackson.	Woodland.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Santa Barbara.	O. L. Abbott.	Santa Barbara.
Ventura.	Milton Wasson.	San Buenaventura.

Farmers desiring to organize Granges, can apply to J. M. Hamilton, (W. Master), Grayson, Lake Co.; W. H. Baxter, (Lecturer), Borden, Fresno Co.; or to the nearest Deputy to their locality. Thos. H. Merry, (W. Ex-Lecturer) of Healdsburg, is also deputized to organize Granges.

Attacks on Our Friends.

There are no direct attacks upon the Patrons of Husbandry as an Order. In fact, we would prefer to have something of this kind, in order to arouse just a little of the spirit of combativeness on the part of our friends. But its enemies are not dead, nor even sleeping. Their principal point of attack, at the present time, is upon the representative men of the Order, evidently hoping thereby to arouse a spirit of jealousy, and weaken confidence in our leaders.

It must be evident, to all careful observers, that one of our greatest needs at the present time is men of financial ability and large business experience. In opportune time such men have come to the front, and are now doing efficient service. They are men who present a clean outside record, and have thoroughly identified themselves with the Order, and are among its most earnest workers. We must bear in mind that the Order, in taking its business out of the hands of unfaithful stewards, and in establishing financial institutions that shall be friendly instead of inimical to it, has assumed a task which requires experience, tact and systematic training; and now that we have inaugurated a reform in the transportation system, there is an imperative demand for ability to carry it out.

Fortunately we have among our own brotherhood men who possess these requisites. They deserve our confidence; and in performing the task we have set before them, they need our co-operation. We should show the same manliness in standing by our friends that we have manifested in overcoming our enemies. In the sinister attacks that are now being made upon these conspicuous brothers, who, in serving the interest of the Patrons, have crossed the path of monopolists, it is against the Order, and not these individual members, that the blows are really aimed.

It needs but little strategic insight to foresee that it is at this and similar points of attack that we must prepare our defenses. In the social position and aims of the Patrons of Husbandry we have the best wisest of the country at large; and simple prudence will deter politicians from making war upon us. But in bettering the condition of the farmer, it will become necessary for the Order to make its power felt in the financial and business world; and we already find that at the very threshold we have come in contact with and aroused a sinister spirit that is already actively at work. The principal, if not the only, doubt which our opponents are now striving to arouse in the minds of the people, is in regard to the financial stability of the Order. In their attempts to weaken the faith of the Patrons in this respect, their main point is manifestly to injure us through attacks upon our friends.

POTTER VALLEY and PETALUMA GRANGES have each adopted a resolution, declaring that they will purchase no more sewing machines of those companies which have gone back upon their agreement with the Executive Committee of the State Grange.

"How About the Grangers' Bank?"

This is a question often asked at the present time in this city, and probably in various other places. It is somewhat curious to note the evident different phases of interest with which the enquiry is made. First come the true friends of the enterprise who manifest a certain degree of impatience to see the institution in active operation; then there are many who are not really unfriendly to the undertaking, but who are rather weak in the faith that the Patrons can do anything but talk; while those who are inimical to the Order, and whose schemes would be partially frustrated by the existence of banks favoring the agricultural interests of the country, manifest an unfriendly anxiety in regard to the opening of the Grangers' bank. No effort should be made to dispel the anxiety of these opponents of the Order; but to alleviate the uncomfortable position of those who are still "on the fence," and to quiet the impatience of the brotherhood, we would say the work of establishing a bank under the auspices and for the especial benefit of the Order is progressing with due energy, and also with due prudence. The most enthusiastic of our friends must, we think, concede the propriety of withholding from the public the minutiae of such labors. In throwing aside the trickery of the financial world we must not fail to avail ourselves of its lessons of prudence, and its necessary shrewdness.

Grange Resolutions.

The following resolutions were unanimously adopted by Healdsburg Grange, May 2, 1874: In behalf of our sisters of Healdsburg Grange, we would most respectfully submit to our Brother Patrons the following preamble and resolutions for their approval and adoption:

WHEREAS, We realize that the sale and use of intoxicating drinks are the principal cause of crime, sorrow and poverty in our land; and

WHEREAS, Many who now drink intoxicating liquor would gladly abstain from its use, and become frugal and industrious citizens if the tempter were removed out of their sight; therefore

Resolved, That we most earnestly recommend the passage and enforcement of the Local Option law in our township, and in every township in this State.

Resolved, That we deem it the imperative duty of our Brother Patrons and all legal voters to be found at the coming election firmly resolved to vote "No License."

Resolved, That we heartily believe the passage of said law would be a moral, social and financial blessing to the liquor dealers, thereby enabling them to engage in some respectable and useful occupation.

Resolved, That we fully endorse this stand which our local paper has taken for the right, and wish it all possible success.

Resolved, That a copy of these resolutions be sent to the Russian River Flag and the Rural Press for publication.

SARAH A. PECK,
ACHRA ALEXANDER, } Com.

New Grange.

EDITORS PRESS:—I have just organized "Vineland Grange" in this county with a full charter list of 30 members. This Grange is located at Tustin City, where seven months ago I organized "Fruitland Grange," also with a full charter list. Fruitland Grange now numbers 70 members, and the new Grange will probably start with a class of 20, as soon as they receive their charter.

This is rather unparalleled in the history of Granges in this State, and, perhaps, in the United States, especially when we consider that five years ago not a solitary soul, house, or improvement of any character existed at that locality. It speaks volumes for us and our county, particularly the region in the vicinity of Richland, Tustin City, Santa Ana, Westminster and Anaheim. The officers elect are: Dr. A. B. Haywood, M.; G. W. Freeman, O.; M. Osborn, L.; L. S. Robinson, Sec'y.; C. R. Stine, A. S.; N. T. Harris, C.; C. Tuatin, T.; R. L. Freeman, S.; W. K. Robinson, G.K.; Mrs. M. Tustin, Ceres; Mrs. C. A. Harris, Pomona; Miss J. E. Haywood, Flora; Miss H. C. Freeman, L.A.S. Yours fraternally,

THOS. A. GAREY.

Los Angeles, May 2nd, 1874.

THE enterprise displayed by the Sacramento Council of the Patrons of Husbandry deserves commendation, and the example set by it will undoubtedly be followed by other Councils in looking after the interests of their calling in their special localities. The Sacramento Council has formed a joint-stock fruit-drying company, with a capital of \$50,000, and will erect suitable buildings at once, so as to be prepared to go into operation with this year's fruit crop. It has been decided to procure five Alden fruit-driers and set them up soon. The experiment of drying sweet potatoes and other vegetables by this process will be made.

VISALIA GRANGE celebrated May-day in company with Deep Creek Grange, which extended their invitation to all the surrounding country. The invitation was responded to most heartily and generally, and the occasion was a most delightful one. Visalia Grange initiates in the first degree on the first Saturday of every month, and follows up in order to the close.

BRO. G. P. KELLOGG, formerly State Grange Agent, is now one of the substantial men of the Salinas valley, where he has a large tract of land, well stocked with cows, and is doing a fine dairy business. Brother K. seems to prefer to be a Granger in practice as well as in name, and prefers country life to a residence in the city.

May-day Address.

[BY R. C. HAILE, MASTER OF SUISUN VALLEY GRANGE.]

MR. PRESIDENT, LADIES AND GENTLEMEN:—

We have assembled here to-day, I hope and believe, for true social enjoyment, the interchange of kindly and friendly greetings and the promotion of fraternal love. We have done so partly in obedience to an almost universal and time honored custom, and partly because it is right and proper for us to do so.

It is eminently right and proper that we should leave the cares and perplexities of business once in a while and meet together for social enjoyment, because it is good for our health. It is right and proper, because, if rightly conducted, these meetings make us better men and better women, better boys and better girls, and it is right and proper, because we shall certainly be happier for the meeting.

It is altogether right that this should be the day, because it is the "spring time of the year," the time of green woods, of bright and beautiful flowers, and of birds singing their sweetest notes. And it is not only right and proper, but for us in this country, it is an actual necessity that we have these meetings.

It is a fact well known to all persons who have been in California any considerable length of time, that there is a great lack of sociability here, particularly in the rural districts, where there should always be the most.

It is also a fact well known to us who have tried it, that it is extremely difficult to induce our people to unite on any one time, any one place, and any one mode of spending a day occasionally, socially together, for mutual enjoyment and the cultivation of friendship and brotherly love.

The fact is, my friends, we are too full of business, too full of selfishness, for any such purpose. We do not have time! I once knew a man that was proverbial for never doing any work, or anything else of importance, and yet was always in a hurry, and ask him when you would, to assist you about anything of importance, or go with you anywhere, and his invariable answer was, "I haven't got time."

What time of the year then more appropriate for a meeting of this kind than the first day of May—"May-day?" May-day! What a world of meaning clusters around that word! Those of you present, who, like myself, have passed the meridian of life, will bear witness with me, that it has a magic spell about it that brings vividly to our view a time way back in the dim distance of the past,

"In life's morning march, when our bosoms were young,"

When we were boys or girls, when we were young men and young women—when twenty, thirty or forty years ago, to-day, we went hand in hand with her or him we loved better than all else beside, to some beautiful grove like this to spend the day in love, friendship and mirth, with our neighbors and friends.

To us Californians it is singularly appropriate that we should meet on this day for this purpose. For magnificently grand and beautiful it is, after a long, wet and gloomy winter, like the one we have just passed through, for a company like this to meet together in a grove like this, for the purpose of spending a day like this in complete social enjoyment. Beautiful wild flowers greet us on every side with their perfumes; myriads of little songsters make music for us as they flit across our path, and all nature seems to join them and us in paying homage to the day.

Let us then, my neighbors and friends, for this day at least, lay aside all religious and political differences, all sectional prejudices and personal animosities, and spend the day happily together in social enjoyment and brotherly love, and, as far as may be possible, in the cultivation of those grand and noble virtues, of faith, hope, charity and fidelity; faith in God who made and has preserved us all along the journey of life; who has given us this rich, beautiful and healthful country, and who blesses us this day with health and strength sufficient. The day is propitious, and the place suitable for this meeting. Let us have faith in each other as neighbors and friends, and faith in the final triumph of right over wrong—of good over evil.

Hope in a bountiful harvest and good prices—not an extravagant or unreasonable hope, but a well-grounded hope; hope in the success of our reasonable undertakings, and hope in the ultimate happiness of all good men; charity that will divide a crust of bread with a suffering fellow-being; charity that will cover over and hide a multitude of faults in another, and that will enable us to weep with those that weep, and rejoice with those who rejoice; fidelity that will make us true to ourselves, true to our fellow-beings around us, and true to our country—that fidelity which will enable us to perform all the duties of life in such a manner that, when we come to die, we shall be entitled to and receive that welcome plaudit: "Well done, good and faithful servants."

Let us vie with each other, then, to-day, in the effort to make each other happy for the present, and so far as may be, for the future as well. Let each one of us try to be in a better humor and more pleasant than the other. And finally, let us deport ourselves in such a manner to-day, that we can look back to it in after years, as one of the brightest of the bright marks along the pathway of life.

We, who have already traveled a long way on this road, find now, that we can count too few of these marks in the long road behind us. We have let too many precious opportunities go by

without improvement; when by a kind word, a friendly and cordial shake of the hand, a joyous laugh, or a generous-hearted, open-handed action, we might have made others happy and thereby have been more happy ourselves.

For the future then, let us resolve to do better in this direction. Let us see to it, that we spend more of our time in social intercourse with each other.

To these young folks, these girls and boys, these young ladies and young gentlemen, let us say, enjoy yourselves while you may, endeavor with all your might and main to make each other happy. Not by intemperance or dissipation of any kind, but by generous, open-hearted and open-hearted kindness, by true friendship, sociability and love.

You are, many of you, native born Californians; you will contribute largely in making the future history of this grand State. Prepare yourselves to do it in such a way that future generations will be proud of you as ancestors. I know of no better helps in this direction than these social gatherings, at which we should always endeavor to strengthen the ties of friendship, love and truth.

And in conclusion let me say, that in after years, when you come to reflect on your own conduct and experience in your past history, you will remember with the greatest pleasure those times, when you used your talents and your means liberally, in making your companions comfortable and happy; and as a consequence, you were made comfortable and happy yourselves. The fact is, these acts of doing good to others are always a source of pure happiness, and are about all in our past lives that are worth remembering. Let us all then hope that

"Long, long be our hearts with such memories filled,
Like the vase in which roses have once been distilled;
You may break, you may ruin the vase, if you will,
But the scent of the roses will cling round it still."

How Suisun Valley Grange kept May-day.

EDITORS PRESS:—Suisun Valley Grange, No. 9, kept May-day by having a picnic in Gordon valley. It was a success in every particular. The rain of the previous day kept down the dust and made the air fresh and invigorating. The clouds were somewhat threatening at intervals, but brought forth nothing to mar the pleasures of the day. The spot selected by the committee, (on the ranch of Mr. Gordon, a brother Granger), I can find no suitable words to describe; will merely say: If when from Eden banished, our first parents had found this lovely spot and settled in it, their loss must have been but little; it is truly a beauty spot on the bosom of Mother Earth. With its purpling rivulets, spreading trees, grassy slopes and flower-covered hillsides, it was a fit home for faeries, the lovely and the pure. From early morn till noon the Grangers and their friends came pouring in, until there must have been not less than 1,500 present, laden with the "goodies" prepared for the occasion by the lady Grangers and their friends.

The order of exercises was as follows: First, singing Grange songs; second, a speech by Hon. R. C. Haile, W.M. of our Grange, which our Grange directed me to have published in the PACIFIC RURAL PRESS and California Granger; third, singing other Grange songs; fourth, lunch—when everything that epicurean stomachs could desire was spread in wondrous profusion beneath the shady oaks, where all that multitude partook of that which they liked best till they were filled, and of the fragments were taken up many baskets full. Then the dance began; those who wished united in it, and all went merry as a marriage bell, till eve appearing in her robes, half light, half dark, warned all that night was following in her train, when all with happy hearts departed to their happy homes. Fraternally yours, A. F. HATCH.

Suisun city, May 4th, 1874.

DAVISVILLE GRANGE TO INCORPORATE.—We are informed by Secretary Krimmer, that this Grange having devoted much of its time of late to initiations, harvest feasts, etc., now proposes to go into hard and profitable work, and as a preliminary thereto, the Grange will incorporate with a capital stock of \$50,000, to engage in warehousing, buying and selling grain, merchandising, etc. The Grange has also subscribed liberally to the capital stock of the Grangers' bank of San Francisco, and proposes after a while to establish a branch bank at Davisville. An active interest is manifested among the members generally, in relation to these business propositions, and much good is expected to result.

THE GRANGE AND SABBATH SCHOOL.—A UNION PICNIC.—Bro. Henning speaks of a Grange and Sunday school picnic which he recently encountered on the road, somewhere in the Salinas valley, which consisted of 125 wagons, 45 of which were full of Grangers. They were on their way to a neighboring grove, where it was estimated that 2,000 people were assembled to enjoy the occasion.

WILLIAM ERKSON has been elected Master of San José Grange, in place of L. F. Chipman, resigned. Brother Erkson is quite a young man, but is said to possess in an eminent degree the qualities which fit him for such a position.

THE EXCELLENT MAY-DAY ADDRESS by F. J. Woodward, of Castoria Grange, delivered on the occasion of the late Union Grange May-day festival, in San Joaquin county, is on file for publication next week.

Letter from Brother Wright.

Growth of the Order in the Southern States.

EDITORS PRESS:—Two months have passed since the National Grange adjourned its Seventh Annual Session; it is a matter of interest as reports of growth come in, to learn that the increase of Granges is not merely as rapid as it was last year, but even more so in many States. This is a pleasant evidence that the acts of that important meeting were at least not disapproved by the farmers of America. The RURAL has already published the proceedings as fully as they were permitted to be made public. It may be well to remark that no one inclination was more fully shown in that body than to guard the work of our Order with more secrecy than has been formerly done. None who have heretofore been aiding in building up our Order will deny the importance of more secrecy. Beyond question, secrecy is the very keystone of our success.

I find that throughout the Southern States, in spite of considerable discouragements, the Patrons are acquiring great strength. The mass of our people here take a deep interest in our Organization. Surely none can be more benefited than they can by a proper application of our principles. Alabama now has over 500 Subordinate Granges; Mississippi over 600. In the county of Tuscaloosa, Alabama, near me, there are 23 Granges. The Order has grown with great rapidity in Kentucky, Tennessee, Virginia, Texas, Arkansas and Georgia since the National Grange met.

The growth in Illinois, Indiana, Kansas, New York, Vermont, New Jersey, Pennsylvania and Maryland has been no less rapid. The work is progressing in Connecticut, Delaware, Massachusetts and Maine. Also, in Canada, Idaho and Montana. The Order now exists in 35 States and 5 Territories. Truly the ranks of our peaceful army of reform are rapidly filling up. What cause for rejoicing! Let us press forward the work to its completion.

Iowa, with over 1,900 Granges, shows what good can be accomplished by presenting an unbroken front of large numbers. The Senate of that State has asked to have a bill drawn up which shall place the much needed restrictions on railroad freights and fares according to their views. What a misfortune that California must wait two years for such a measure. Let us never lose faith in our cause, and let us require of all our members a strict adherence to our noble principles of integrity and fairness.

I enclose you a copy of the amendments proposed to the constitution of the National Grange, as I am not sure whether you have yet received or published them. To become law they must be ratified by three-fourths of the State Granges of the Union. So, none of these enactments will be in force until we are notified in each State by the Secretary of the National Grange that they have been so ratified. It will be seen that no radical changes are proposed.

Opening the way for the fifth degree to be conferred on other Patrons besides members of the State Grange will no doubt be generally well received.

Our unwritten work has been made much clearer by this valuable meeting, and will be found even more complete and acceptable now than previously.

The question what offices should our lady members hold in the Grange came up at the St. Louis meeting, and the decision was that that question ought to be left to the good sense of each Grange to decide which offices alone it is proper for men to hold, and which are suitable for our lady members.

There will probably be found to be enough changes to meet the views of those who thought some change desirable.

I shall hope soon to meet you and other Patrons in California in good health and spirits, but for some time after my return must remain at home to look after the very important experiment of irrigating my wheat crop in Fresno.

Yours fraternally,

J. W. A. WRIGHT.

Hale County, Ala., April 14.

THE WITS AT FAULT.—Is it not time to look for something witty in regard to the Grangers—something that will run as long as the "want to be a Granger" parody? It would seem as though the "hay seed" in the heads of anti-Grange wits ought to be sprouting by this time. Was this seed bad or was it sown on barren places? The opposition to the Patrons of Husbandry is beginning to lack that spiciness which we have a right to expect. Perhaps the wits, out of respect to age, have retired from the field temporarily, in order to give all possible advantage to those who are arranging the programme for the political disruption of the Order; but we fear that the wit that waits for this to transpire will spoil in the keeping.

THE ORDER TO BE PLANTED IN NEVADA.—It was expected that immediately after the return of Bro. Hamilton from the East, Bro. Baxter, Secretary of the State Grange, would have been commissioned to visit the State of Nevada, and institute the numerous Granges that have made the preliminary organization there for receiving the work. But as Brother Baxter is so constantly engaged in the work of his office in this city that it will be impossible for him to leave for the present, Brother Hamilton himself will undertake the work, and will leave California for that purpose by the first of June.

From the Granges.

DANVILLE GRANGE, CONTRA COSTA COUNTY, met on Saturday, May 2d, to confer the fourth degree upon one of the largest classes that has yet been admitted to the honors and privileges which this Order dispenses. The day was one of the finest that we have had this year, and all nature smiled in grateful thanksgiving, as did every Granger as he gazed upon the many baskets that were soon to be opened, to display the toils of the fair gleaners of the day. We were not disappointed in our expectations, for at the "table round" none seemed more charmed or more charming, than he who partook, and she whose dainty hand had spread the table cloth.

The pantry, orchard and farm-yard contributed most bountifully; and although there was a full attendance, and each strove to do his level best in rendering justice, there was enough for as many more. The relish and enjoyment of the feast was comparatively small to the genial warmth of conversation and the liberal exchange of ideas upon the thousand important topics of the day.

When the feasting had finished, our Worthy Master called the meeting to order for the transaction of business. The most important item was the ways and means of obtaining a Grangers' Hall, to be located at Danville. The subscription papers were placed in the hands of a committee, which made a report before the close of the meeting, as having received the promise of nearly twelve hundred dollars. I am safe in saying that although our Grange is one of the youngest in the State, that there is none that takes more interest in the proceedings and has the welfare more at heart than ours. Its growth has been rapid, as there is now upon the roll-call 96 names and ten applications; yet with so much vitality it has not become rank; but our unity is our strength, and our hopes are for a bright future. Yours fraternally,

P. OF H.

SACRAMENTO GRANGE.—EDITORS PRESS:—The late showers have proved beneficial to the husbandman; fear was entertained during the dry north winds of a failing crop; but since the rain the weather is cool, and a happy smile is seen on the countenance of every tiller of the soil, where'er you meet him.

All are busy in each of their varied duties. The "small fruit culturists" have combined and selected a Granger (a fruitist) as agent for the sale of all fruit that will follow during the coming season. He will open a house at once. As strawberries are now ready for market, fruit of all kinds will be abundant. "Select the best" will be the motto, and dry the remainder. The process of drying establishments is agitated.

Other agents will soon be appointed by Council for other departments for the general good of all.

As harvest approaches the mowers and reapers are being set in order; while others are applying to the agents for implements. A general awakening is being felt in the farming community which has never existed before. We may soon expect to hear the "Patron's harvest song" echoing on the breeze to the lines:

"Hear the reapers rattling!
See the strong arms battling
With the sheaves of grain!
Toss them to the master!
Quickly, toss them faster
Ere the falling rain!"

Granges are busy at work. The meeting of May made happy all the young folks, and the older ones fell in line. A. S. Greenlaw is our general fruit agent.

G. R.

BENNETT VALLEY GRANGE, SONOMA COUNTY. "G. N. W." writes under date of May 9th: Our Grange is prospering finely. We had a May-day picnic on the first of May, which proved a grand success for pleasure and recreation. Some 2,000 people participated in the enjoyments of the day and evening. Crops are looking fine in this part of the county. There has been a larger amount of land planted to corn this summer than ever before in this valley.

This Grange at its last meeting passed the following resolutions:

Resolved, That we will not buy any sewing machines of the companies that went back on their contract with the State Executive Committee.

Resolved, That we are well pleased with the late action of the Executive Committee on the work they have done for the good of the Order throughout the State.

Resolved, That a copy of these Resolutions be forwarded to the PACIFIC RURAL PRESS for publication.

TABLE BLUFF GROVE, HUMBOLDT COUNTY. Our Grange is growing rapidly. The farmers have just begun to see that the only way for them to become a part of a huge, happy and prosperous band, is to become members of the Grange, so we confer the second degree on a class of 19 on the 16th of this month, and still they knock at the gate. We elected our County Council last Saturday, which holds its first meeting in Eureka, on the ninth; with the present class we number 64. I learn that Bro. T. H. Meiry is on his way overland to pay our county a visit, and I assure you that he will meet with a warm reception from his many friends here. We have had quite a heavy rain for the last four days, which has been a great benefit to bottom land in this locality, from the fact that the north winds had dried it out so fast that it had become considerably crusted. Grain crops look fine, so far as they are up. There are but few potatoes planted as yet on the bottom lands. Yours fraternally,

B. H. C. POLLARD, Sec'y.

LAKEPORT GRANGE, LAKE COUNTY.—This Grange numbers 96 members. Its members are to have a grand celebration to-day, in which all the other Granges in the county unite. Music, a dinner, speaking and toasts will be the order of the day.

FUNK SLOUGH GRANGE, COLUSA COUNTY.—J. G. Wolfe, Secretary of this Grange, writes that that Grange is now conferring the degrees on a class of five, with six other applications already in for the next meeting.

OUR DELEGATES TO THE NATIONAL GRANGE.—Brother Hamilton, Master of California State Grange, and delegate to the National Grange, which recently held its session at St. Louis, has returned, and paid us a call on Wednesday last. Bro. H. is looking well, and informs us that he enjoyed his trip much. He has no doubt gained much information which will be of interest and importance to the Order in this State.

A private note from Brother Wright, dated Hale county, Alabama, April 14th, informs us that he expects to be in California early in May. We presume he will be here by the time this issue goes to press. We give under the department of "Patrons of Husbandry" an interesting letter from him with regard to the progress of the Order at the South, and we shall give a second letter next week furnishing some particulars about the extraordinary rains which have fallen in that region during the last three months. This last explains the protracted absence of our Brother, who already longs to again enjoy the invigorating atmosphere of California. Both letters reached us the same day, though mailed ten days apart.

THE LOUISIANA SUFFERERS.—Secretary Baxter, of the California State Grange, has received a dispatch from the Master of the State Grange of Louisiana, calling the attention of the Order in this State to the suffering of many of their brethren in Louisiana, and asking such assistance as the Order here might think proper to bestow. Brother Baxter will receive contributions and forward the same. He has received contributions from several parties. The case is no doubt one which should receive the active sympathies of the Order in this State.

FARMERS IN COUNCIL.

San Jose Farmers' Club.

The Club met at the usual hour, May 9th, and was called to order by President Casey.

On motion, the question of cultivating orchards instead of plowing them, was selected for discussion next week.

Mr. Hobson asked the cause of the curled leaf in peach trees; he understood that it was worse some years than others.

President Casey said it was his opinion that it was caused by the frost searing one portion of the leaf and the remainder of the leaf growing faster than that which is affected by the frost, causing it to pucker and curl.

Mr. Bergland said it was a disease of the root. That some trees would be free from it, and others close by would be affected.

Mr. Casey said that he had some varieties that were entirely free from it.

Mr. Holloway wanted to know if the curled leaf uniformly destroyed the fruit.

Mr. Casey said it would fall more, but the tree would have as much fruit as it ought to hold.

Mr. Hobson said that as fine fruit as he had ever seen, was grown on trees affected with the curled leaf.

To avoid the effect of frost, Mr. Bergland said that sprinkling the trees with cold water in the morning before the sun came out, would save the fruit.

Mr. Holloway said that he had tried this plan with good results.

Mr. Rousseau said he had washed orange trees in this manner with water from the well, and they had died.

Mr. Bergland said well water was some degrees warmer than the atmosphere, and therefore aided the efforts of the frost. The water should be of the same temperature as the atmosphere.—Mercury.

Fruit Growers' Association.

At a meeting of the San Lorenzo Currant Growers' Association, held on May 7th, of this week, the following resolution was adopted:

Resolved, That W. C. Blackwood, E. T. Crane and William Meek be appointed a committee with full power to fix the price of currants sold to the trade; also to fix the price of currants turned over to the canning factories, and the currant growers and commission merchants in San Francisco be bound by the action of said committee.

The resolution was unanimously adopted, and the association then adjourned to meet on Thursday, the 14th of May, at 10 o'clock p. m. It is the purpose of the committee to fix the price so as the currant grower may receive a moderate compensation for his labor, and yet so low as to bring this desirable fruit within the reach of all.—Advocate.

SEVERAL of the ranchers in Amador county are experimenting with cotton on a small scale this year, in order to test the question as to whether it will grow and thrive in the foothills.

CATTLE BREEDERS.

California Thoroughbred Cattle Breeders' Association.

This association was organized during the State Fair of 1872, at Sacramento, by a few breeders there exhibiting, as the "Short Horn Breeders' Association," the original object being to purchase and import short horns into this State, and to hold annual joint sales under its auspices. Jesse D. Carr was elected President, and G. N. Swezy Secretary, for the first year. At the annual meeting held in February, 1873, the project of importing stock was abandoned, and it was decided to form a society that would embrace breeders of all classes of thoroughbred cattle, in order that through their combined influence some radical and much needed changes in the management of agricultural fairs, so far as the stock department was concerned, might be insisted upon. The time and place for holding meetings was fixed upon as follows: The annual meeting at San Francisco, on the first Tuesday in April; the semi-annual meeting, at Sacramento, during Fair week. The old officers were re-elected, and Wilfred Page was made Treasurer. It was at this meeting that the present name of the association was adopted. At the semi-annual meeting held in September, 1873, the then Secretary withdrew from the association and the Treasurer was elected to fill his position. From the date of this meeting, it may be said, that the breeders commenced to act in concert and stand firmly by their rights. The State Board of Agriculture was made aware of the existence of the society by the receipt of a couple of protests against some of the actions of the former body. The Association also decided on this occasion to commence the fight against any and all pedigrees in this State which were or might hereafter be considered incorrect or spurious. The second annual meeting of this association was held in this city on the 7th ult., and some lively discussions were held with reference to the actions of the State Agricultural Society during the fair of 1873; at this meeting also the propriety and desirability of holding an annual joint sale was again considered, and a resolution to this effect was passed at the adjourned meeting held on the 2d inst., the proceedings of this last being fully reported in our issue of 9th inst. In this connection we would call the attention of breeders, stock-raisers, dairymen and farmers generally, as at the sale to be held in San José, in September or October next, it is probable that some very desirable stock will be disposed of at reasonable prices. Breeders desiring to sell should communicate either with one of the committee appointed for the purpose or with the Secretary of the Association. The society now counts the following among its members: Jesse D. Carr, of Monterey Co., President; Wilfred Page, of San Francisco Co., Secretary; Robert Ashburner, of San Mateo Co.; R. S. Carey, R. Beck and J. Brewster, of Sacramento Co.; L. Pierce and R. B. Cannon, of Solano Co.; W. S. Chapman, H. Page and G. D. Horse, of San Francisco; J. L. Chambers, of Colusa; E. Comstock, of Yolo; Chas. Clark, C. B. Polhemus, Wm. Quinn, Cyrus Jones, C. B. Emerson, Wm. Wilson, A. L. Boggs and L. J. Hanchett, of Santa Clara; Wm. Flemming, of Napa Co.; J. H. Patterson and G. R. Vernon, of Alameda Co.; W. L. Overhiser, of San Joaquin Co.; J. B. Redmond, of Marin Co.; J. R. Rose, of Sonoma; Moses Wick of Butte Co., and S. G. Reid, of Portland, Oregon. There are other breeders in this State, such as Messrs. J. B. Haggin, A. Maillard, G. H. Howard, John Judson, S. Daniels, R. G. Sneath, Wm. Bihler, H. P. Livermore, D. M. Reavis, Dr. H. J. Glenn, R. Blacow and others, whose names should appear in the above list, whether they take an active interest in the proceedings of the Association or not. The Association, like the interests it represents in this State, is in its infancy, and should meet with every encouragement. If the breeders will but hold and work together it will not be long before the public commence to appreciate the great advantage to be derived from improving their breed of cattle. The annual fee is one dollar. Applicants for membership should address the Secretary, Wilfred Page, at 304 Davis street, San Francisco.

MAXIMS IN CATTLE BREEDING.—James N. Brown, of Illinois, was a noted breeder of short-horn cattle, and these are some of his ideas: Use pure-blooded males. Keep no more stock than you can keep well—and the young should always be improved. Never sell to the butcher or anybody else your best and thriftiest young females. Calves should be dropped from 1st of March to 1st of May. Never allow calves to run with their dams and suck at will; it injures both. Milk the young cows as long as possible. All cattle-breeders should have two pastures for summer grazing, and change the stock from one to the other frequently. Land intended for winter grazing should not be grazed in midsummer. The summer growth is needed for winter protection. To render stock-growing as profitable as it should be, good grass for winter and summer is indispensable.

BRASS TIPS ON CATTLE'S HORNS.—Screw them on with any kind of a wrench that will fit the button. If the horn is slender, the point which protrudes through the button should be cut off. They are not usually put on until the animal is at least three years of age. We do not remember seeing them on any animal younger than that.—Country Gentleman.



Two Graves.

[Written for the Press by JAMES ROANN REED.]

The south wind was laden with dew,
It had kissed from the lips of the clover;
While a faint breath of rose odors, too,
Betrayed the caress of fond lover,
As the gate opened for two to pass through,
Two hearts that with sorrow were numb,
To the graves of their dead were now come
To live all their grief again over.
And the south wind sighed low, and was dumb.

One sought out a monument, proud,
Of marble all sculptured and graven,
That with cold, lifeless letters avowed
The tribute affection had given.
But the crushed, bleeding heart, there that bowed
Only felt in the white tomb a shroud
That barred out all the sweet light of heaven.
And bitter she wept that the pall,
That had darkened her whole life, should fall,
At the last o'er the tomb it had given!

The other passed by a low mound,
On which green, matted grass was fresh growing;
No pile of carved marble was found,
Either true or false praise vain bestowing.
But daisies and violets fair
Were nestling contentedly there,
And many a red rose was blowing.
And the heart of the mourner was glad
When she saw the companions he had
Were the purest and best earth could bring.
For the loves of the life that had fled
Now cluster to cheer his lone bed—
And her grief hath no more its sharp sting.

Then the south wind passed on till he came
To his own trusting sweetheart's, the clover;
And the cheek of each bloom was aflame,
As she tiptoed to kiss her fond lover.
But why such rare tender caress,
He lingering gave, none could guess;—
But the south wind thought pondered over:
There is that which gold never can buy;
Love demands love again, or 'twill die!
Whether rose queen, or humble brown clover,
So he stooped with another warm kiss
For the red lips, that reached up to his
So gratefully fond; and from this
Gave he love to his lowliest lover
—The Den, May 1, 1874.

AN AUDACIOUS trick, says the *Court Journal*, was lately played by a "sneak thief" at a London club. He entered the hall without attracting the notice of the porter, and proceeded to empty the pockets of the great coats he found ranged in a corridor. While selecting a few of the best, he was interrupted by a member, who in astonishment asked him what he was doing. "Oh, this is my regular business," he said. I am employed to clean the gentlemen's coats in several clubs. I take all the grease out of their collars." "Indeed," said the gentleman, interested, thinking he had got hold of one he could turn to account. "How long do you take?" "Why, I will be back with these in an hour." "If so you may as well take mine," said the master, adding his coat to the heap, and escorting the "sneak thief" past the porter. "What great conveniences you have in London!" remarked this country gentleman to a group of his friends. "I have just given my coat to a man I found in the corridor, who cleans coats for the club." "To whom do you say?" cried two or three. "The man I found carrying the coats out. Wait—I have his card." But the knowing ones did not wait; they hurried out to find the pockets of some great coats empty, and other coats altogether gone.

HIGHLANDERS have the habit, when talking their English, such as it is, of interjecting the personal pronoun "he" where not required, such as "The King he has come," instead of "The King has come." Often, in consequence, a sentence or an expression is rendered sufficiently ludicrous, as the sequel will show. A gentleman says he has had the pleasure of listening to a clever man, the Rev. Mr. —, let his locality be a secret, and recently he began his discourse thus: "My friends, you will find the subject of discourse this afternoon in the first Epistle general of the Apostle Peter, chapter 5th and verse 8th, in the words, 'The Devil he goeth about like a roaring lion, seeking whom he may devour.' Now, my friends, with your leave, we will divide the subject of our text to-day into four heads. Firstly. We shall endeavor to ascertain 'Who the Devil he was?' Secondly. We shall inquire into his geographical position—namely, 'Where the Devil he was?' And thirdly. We shall endeavor to solve a question which has never been solved yet—'What the Devil he was roaring about?'"

A GOOD THOUGHT.—If God had given us a life full of attractions, we should have had no desire for another. It is natural to love an abode in which we find delight: whatever attracts us to earth abates the ardor we may have for heaven; the inward man is renewed when the outward man decays, and our faith is built upon the ruins of our fortune. When the dove found out of the ark the unchained winds, the overflow of waters, the flood gates of the heaven open, the whole world buried under the waves, she sought refuge in the ark. But when she found valleys and fields she remained in them. My soul, see the image of thyself.

The Right Kind of a Wife.

When I came to New York, a few years ago, my wife said to me one morning:

"Israel, we must have a home of our own."

Said I: "Charity, it's just impossible; hain't the means."

Said she: "Israel, we hain't the means to pay the rent that the people charge, that's quite clear."

She began washing up the breakfast things, and off I went to duty.

In the evening Charity said to me as we sat down to supper: "Israel, I have bought a lot."

I sprang up from my chair saying: "You've bought what?"

"A lot," said she.

"A lot?" says I.

"A lot," says she.

"Well," said I, and I sat down again, and she went for the tea and biscuit. When I came to I said to my wife: "Just explain yourself, Charity."

"I bought a lot," said she. "Dr. Dodd says the fifty dollars down are satisfactory, and the mortgage may run at six per cent. Twenty feet front, one hundred feet deep, two thousand feet at ten cents a foot, two hundred dollars. Fifty paid, and one hundred and fifty due."

"But, Charity, dear, how about the new house?"

"All right, Israel, I've made a contract with Chips & Cullings. House, shed and fence, fifteen hundred and fifty."

"Charity."

"Israel, don't talk, please. You men!"

"Charity, are you?"

"Deranged, eh? No, not a bit."

"One hundred dollars cash when possession is given."

"But, Charity!"

"Stop a minute. You know, Israel, we can never get our large bureau, nor our high-post bedstead, nor our large secretary, nor our wardrobe into that little four-room house. That's clear, ain't it?"

"Well?"

"Well, then, we'll sell them all, and the proceeds will meet these two cash payments."

"Exactly so, with a little in difference, may be."

"Do you see?"

"But how can you do without these articles?"

"As easy as you will do without cigars; as easy as you will be your own barber and boot-black; as easy as we will both take our breakfast without half-dollar butter; as easy as I'll make all my winter clothes carry me through next winter; as easy as I'll carry you through nice and genteel-looking on the same principle; as easy as—"

"Charity!"

"As easy as I'll do without a 'mooner' and 'night cap,' and my cigars and theater tickets, and—"

"Exactly, old glow-worm!"

"Well, well! Suppose we should do without these things, and I should be dead before it is paid; where would our home—my Charity's home—he then?"

"Oh! you can get your life insured, and make that all safe."

"Darling, here's a with you!"

"I never squared debts off so soon. Two hundred, and fifteen hundred, and one hundred and fifty cash off, paid by proceeds of this surplus furniture, leave fifteen hundred and fifty. Fifty dollars a month pays that off in—no, not in thirty-one months, because the interest and insurance payments put it off somewhat, and the taxes and a couple of commissions keep it running longer, say for three years, and then we have a home of our own, every foot of it worth fifty cents, making a clear gain of eight hundred dollars, and we are!"

"Stop, husband; let me tell it. We have a home—delightful home—and I have a husband who never knew that his soul-debasing indulgences had brought him down so far that none but his own wife denied his fallen state, or hoped to lift him up again. We have three children, of whom we are proud, and—"

"Charity!"

"What, love?"

"I have just been thinking that if—"

"Nothing more is needed, Israel."

"Let me say it out, dear. If you were only single how I would like to court you over again."

"Not for long, for I would drop plump into your arms at the first time for asking." And Charity suited the action to the word.

"It's all right, no doubt, for young men to love the girls," said Israel; "but no girl was half so lovable as this young wife, who has given more than half the years of her life to make me happy, and leading me out of the way of folly and sin; and our darling babies are all like her."

And Charity broke in with an "amen" so emphatic that little Abe shouted from his chair—"This meeting are dismissed."

DR. REID, the celebrated medical writer, was requested by a lady of literary eminence to call at her house. "Be sure you recollect the address," said she, as she quitted the room—"No. 1, Chesterfield street." "Madam," said the doctor, "I am too great an admirer of politeness not to remember Chesterfield, and, I fear, too selfish ever to forget number one."

ONE of the most foolish things yet done by Commissioner Watts was to send West, among other flower-seeds, one variety called "Honesty." All such plants ought to be sown in Washington, and in the experimental grounds near the capitol.

Domestic Advantages from Planting Trees.

Gentle and ever patient reader of the *RURAL PRESS*, do not allow the heading of this article to induce you to pass it over unread, thinking that it is inadvertently out of place in the "Home Circle." For we are not at present going to urge upon you the planting of trees to grow forests, for wind-breaks or for lumber; nor are we now considering the future demands for fruit. Nor is it with a wish to encourage the planting of trees and shrubs simply to beautify your home. Anything to this purpose would probably be deemed appropriate in this department, but we have an object even more intimately connected with the "Home Circle."

Nothing so much attaches a person to a locality as the planting and nursing of trees. It is not necessary that a man should at the time of planting possess any defined tastes in the matter; or that he should consider the future profit or pleasure to be derived from it. When a man plants a tree he plants a purpose with it—even this is a decided gain to human nature—which soon produces buds of unselfish interest and finally blossoms into affection. This affection grows with the growth of the tree; and is of so enduring and unvarying a character that it almost deserves to be classed among the domestic affections. With this development of local attachment comes a corresponding growth of taste, which in its turn sobers the habits and accumulates knowledge.

This is not a matter of theory or sentiment. It is as realistic as anything which we have to deal with in this world; and although it is a subject in which statistics are not available, our observations, and we believe those of our readers will corroborate our own, afford satisfactory proof that there is such an attachment innate in human nature. Have our readers never seen instances of this character? We have seen many; some of them very impressive. There was one California boy, who, though he was not disposed to shirk domestic cares and labors, could never be brought to manifest any regard for the estate as a "home;" in fact, ridiculed gardening and the like, as unsatisfactory in every respect, and was rather inclined to promote a family emigration to "anywhere but here." But returning from a swimming excursion, he brought with him a slip of willow; he did not believe what somebody had told him, that by simply sticking it into the earth without any roots, it would grow into a tree. So he tried it, and it grew very rapidly; but the changes in condition were not more rapid than were those in his own feelings in regard to it; for the development of the different stages of curiosity, gentle anxiety, careful interest and downright affection was as progressive and as palpable as the growth and expansion of the tree, and his attachment to the spot became as firmly rooted as the persistent willow.

Other particular instances could be given where mothers have induced uninterested sons to set a tree here and there, "just for the look of the thing," and thereby created or brought forth an ardent attachment to the old home; and we believe that the woman whose husband is lacking in attachment to home can find no reader or more effective means of conversion than to get him to plant something about the premises, if it be nothing but a currant bush. There are no attachments more unselfish or more enduring than this, nor is there anything about it that is not in keeping with the strictly domestic affections. For we really do not possess more than the germs of these; the presence of something to be loved being necessary to develop them. Men who have been indifferent, or decidedly adverse to the society of women, often become, as we all know, the most ardent in their attachments when the right woman makes her appearance; and in regard to children, one of the most gratifying of social surprises is the change from a dislike for children to a fondness that makes all kinds of allowances for them, and "loves on to the close."

NOT TO BE FRIGHTENED.—An old French shoemaker, who boasted that nothing could frighten him, was put to the test by two young men. One of them pretended to be dead, and the other, going to the shoemaker, induced him to "sit up" with the supposed corpse. The shoemaker was in a hurry with some work he had promised to have completed the next morning. So he took his tools and leather and began working beside the corpse. About twelve o'clock at night a cup of black coffee was brought him to keep him awake. He drank it and resumed work. About one o'clock, the coffee having exhilarated him, forgetting that he was in the presence of death, he commenced to sing a lively tune, keeping time with his hammer. Suddenly the corpse arose, and exclaimed in a hollow voice: "When a man is in the presence of death he should not sing." The shoemaker started, then suddenly dealt the corpse a blow on the head, exclaiming at the same time: "When a man is dead he should not speak." It was the last time they tried to scare the shoemaker.

At a christening, while the minister was making the certificate, he forgot the date, and happening to say: "Let me see, this is the thirtieth!" "The thirtieth!" exclaimed the indignant mother, indeed it is only the eleventh."

How many troubles might mankind be spared if they would stop to hear each other's explanation! How many ailments, both of body and soul, would be cured if explanation only came more frequently and freely!

For What is a Wife Wanted?

It is not to sweep the house, make the bed, darn the socks and cook the meals, chiefly that a man wants a wife. If this is all that he needs, hired help can do it cheaper than a wife. If this is all, when a young man calls to see a lady, send him into the pantry to taste the bread and cake she has made; send him to inspect the needle-work and bed-making; or put a broom in her hands, and send him to witness its use. Such a thing is important, and the wise young man will quickly look after them.

But what the true man wants with a wife is her companionship, sympathy and love. The way of life has many dreary places in it, and man needs a companion to go with him. A man is sometimes overtaken by misfortunes; he meets with failure and defeat, trials and temptations beset him, and he needs one to stand by and sympathize. He has some hard battles to fight with poverty, enemies, and with sin; and he needs a woman that, when he puts his arm around her, he feels he has something to fight for; she will help him to fight; that will put her lips to his ear and whisper words of counsel, and her hand to his heart and impart inspiration. All through life, through storms and through sunshine, and conflict and victory, through adverse and through favoring winds, man needs a woman's love. The heart yearns for it. A sister's or a mother's love will hardly supply the need.

Yet many seek for nothing further than success in housework. Justly enough, half of these get nothing more; the other half, surprised beyond measure, have got more than they sought. Their wives surprise them by bringing out a noble ideal in marriage, and disclosing a treasury of courage, sympathy and love.

HAPPIEST PERIOD OF LIFE.—I am sure there is only one answer to the question, "What is the happiest period of human life?" It is now. If I am doing my duty, to-day is the best day I ever had. Yesterday had a happiness of its own, and up to this morning it was the best day of all. I would not, however, live it over again. I string it, as a new bead, on the chaplet of praise, and turn to the better work and the higher thoughts of this present time. Of all the many days of my life, give me to-day. This should be our feelings always, from the cradle to the hour when we are called to come up higher. Childhood is best for children, manhood is best for men, and old age for the silver-haired. We will all join in a chorus of common thanksgiving to God, and when asked, "Which is the happiest period?" will say—childhood, manhood and old age alike—"O, Father, it is now."—Geo. H. Hepworth.

NEGATIVE KINDNESS.—Do the doctors know that half the wives in the world die of this complaint? "He never spoke an unkind word to his wife." Yes, but did he remember now and then, to speak a kind one? Did he have any sympathy for her bodily or mental ills? Or was he blind and deaf to both, treating them with that cutting indifference which in time chills the most loving heart and silences its throbs forever? Men are very guilty in this regard. They take a young girl from the warm atmosphere of a loving, cheerful home, and, after a few brief weeks of devotion, leave her to battle single-handed with new cares and new duties, and to bear sickness with what courage she may, and go their ways into the tangled paths of life, without a thought of the responsibilities they are shirking or the solemn vows they have really broken.

"SOUND" REASONING.—Beating a gong, as a saloon-keeper did lately, to repel the attack of the temperance crusaders in a Western city. Still this was not the "last resort" of the anti-crusaders; for a shoemaker who was noted for being generally on hand when the call was uttered to "come up boys and have a drink," manifested his disgust by throwing lasts at the praying ladies. There is said to be a perceptible "leaning" towards a reaction in some places, and the most "tried" of the veteran drunkards refuse to desert their posts. Still the ladies are hopeful, and do not stagger under these difficulties.

A STRONG mind always hopes, because it knows the mutability of human affairs, and how slight a circumstance may change the whole course of events. Such a spirit, too, rests upon itself; it is not confined to particular objects, and if, at last, all should be lost, it has saved itself its own integrity and worth. Hope awakens courage, while despondency is the last of all evils; it is the abandonment of good—the giving up of the battle of life with dead nothingness. He who can implant courage in the human soul, is its best physician.

A HOUSE full of children composes as powerful a group of motives as ever moved a heart or hand, and the secret of many a struggle and triumph in the world's battle may be found thronged in the mother's lap at home, or done up in a little bundle of white flannel. A nation's hope, before now, has been found in a basket of bulrushes. Get ready to be afraid of the man that children are afraid of, and he sure that he who hates them is not himself worth loving.

A CORRESPONDENT at Portsmouth (England), describing the preparations in that town to welcome the troops from the Gold Coast, says that a huge flag with the inscription, "Welcome Home!" had been hoisted over the police station. It was fortunately seen and removed in time.

Sands of Sense.

Anyone can drift. But it takes prayer, religious principle, earnestness of purpose, constant watching to resist the evils of this world—to struggle against the tide.

Christians pray with outspread, but clean hands; with uncovered head, because they are not ashamed; and without the aid of a prompter, because we pray from the heart.—*Tertullian*.

In the depths of the sea the waters are still; the heaviest grief is that borne in silence; the deepest love flows through the eye and touch; the purest joy is unspeakable; the most impressive preacher at a funeral is the silent one whose lips are cold.

Every parent is like a looking glass for his children to dress themselves by. Therefore, parents should take care to keep the glass bright and clear, not dull and spotted, as their good example is a rich inheritance for the rising generation.

Empty vessels make the greatest sound. Good to begin well, better to end well. He who peeps through a key-hole may see what will vex him.

The worth of a thing is best known by the want of it.

Wit is folly unless a man hath command of it.

Drive thy business, let not thy business drive thee.

When men speak ill of thee, live so as nobody will believe them.—*Plato*.

KILLING A CAT.—There is a man on Franklin street, in Danbury, Conn., (says the *News* man), who has been engaged for the past few months in a mighty effort to kill a cat. In that time that unfortunate animal has explored the bottom of every sheet and stream of water within six miles of Danbury, has had an unintentional taste of the several new varieties of powder, and has got so that it can tell in the dark, without looking around, the difference between a half brick and a whole one. The man himself hasn't got a whole piece of clothing in his wardrobe, and has almost entirely lost the use of one leg from rheumatism, contracted while drowning the cat, and more scratches on him than the survivor of four wives. His aged father says he will take a chair out in the yard on a pleasant afternoon, and sit there two hours at a time, and look at that cat and swear.

REST IN OLD AGE.—I covet rest neither for myself nor my friends, so long as we are able to work; but when age or weakness comes on, and hard labor becomes an unendurable burden, then the necessity of work is deeply painful, and it seems to imply an evil state of society wherever such a necessity generally exists. One's old age should be tranquil, as one's childhood should be playful; headwork at either extremity of human existence seems to me out of place. The morning and the evening should be alike peaceful; at mid-day the sun may burn and men may labor under it.—*Dr. Arnold*.

A PARISIAN who was known as a free-thinker met a Parisian friend the other day, and, taking him by the hand, said, "I have become a Christian." "I am glad to hear it," he replied: "Suppose we now have a settlement of that little account between us. Pay me what thou owest." "No," said the new-born child, turning on his heel; "religion is religion, and business is business."

A FRIEND of Delaware having put forth the claim that this little State "has the honor of growing about all the peanuts in the country," a southern champion comes to the front with the following retort: "If all the peanuts Georgia produces in a single year were poured into Delaware, they would blot out the State as effectually as Pompeii was blotted out by the ashes of Vesuvius."

"WHAT do you feed to your pig?" asked a neighbor of a Manayunker, who bought such an animal last November. "Corn," he said. "Do you feed it in the ear?" "Do you think I am a fool?" said the Manayunker, sarcastically.

CHOOSE GOOD FRIENDS.—There is nothing which contributes more to the sweetness of life than friendship; there is nothing which disturbs our repose more than friends if we have not the discernment to choose them well.

"HAVE you seen my black-faced antelope?" inquired Mr. Leoscope, who had a collection of animals, of his friend Bottlejack. "No, I haven't." "Whom did your black-faced antelope with?"

A GENTLEMAN at a musical party asked a friend in a whisper, "How shall I stir the fire without interrupting the music?" "Between the bars," replied the friend.

THE *Golden Globe*, a Colorado newspaper, has unavoidably suspended—a Vigilance Committee having previously suspended the editor.

MRS. PARTINGTON is collecting autocrats, and will be grateful for any specimens of the handwriting of extinguished characters.

THE "bump of destructiveness"—A railway collision.

SILENCE is wisdom.

YOUNG FOLKS' COLUMN.

March.

In the snowing and the blowing,
In the cruel sleet—
Little flowers begin their growing
Far beneath our feet.
Softly taps the spring, and cheerily—
"Darlings, are you here!"
Till they answer: "We are nearly,
Nearly ready, dear."

"Where is winter, with his snowing?
Tell us spring," they say;
Then she answers: "He is going,
Going on his way.
Poor old winter does not love you—
But his time is past;
Soon my birds shall sing above you—
Set you free at last!"

—M. M. D., in *St. Nicholas*.

The Months.

"Dirty days hath September,
April, June and November;
From January up to May
The rain it rained every day.
All the rest have thirty-one,
Without a blessed gleam of sun.
And if any of them had two and thirty;
They'd be just as wet and twice as dirty."

GIRLS FOR ERRANDS.—The boy readers of our paper will not, we are sure, accuse us of partiality when we declare that of girls and boys of the same age, the former are far the most reliable to carry messages or to transact such business as children are sometimes called upon to do. Girls have better memories in small, every-day matters, than boys. They are more correct in their endeavors, and more desirous to please. Consequently they do please. And we all know a very important part of that kind of business which is done by message, is to have agreeable messengers. So, in the division of labor between the children, let the girls attend to errands and business matters. Probably the boys would "just as lief they would, and a little rather."

A few weeks ago a baby was taken into a church to be baptized, and his little brother was present during that rite. On the following Sunday, when baby was undergoing his ablutions and dressing, the little brother asked mamma if she intended to carry Willie to be christened. "Why, no," replied his mother: "don't you know that people are not baptized twice?" "What?" returned the young reasoner, with the utmost astonishment, "not if it don't take the first time?"

AN exchange tells us that a school boy's toothache generally commences at eight A. M., reaches its highest altitude at a quarter to nine, when the pain is intense to an extraordinary degree; commences to subside at nine, and after that disappears with a celerity that must be very comfortable to the sufferer. If at night that boy hasn't got four quarts of walnuts spread out to dry up stairs, it is because there is no place up stairs to do it.

A LITTLE urchin who was sent to meet his father and bring him home on pay day, was induced to enter the tabernacle of Bacchus. The novelty of the scene entertained him for a little, but at length, being out of patience, and having little hope of getting his father home until he had got his usual, he, knocking his father significantly on the elbow, exclaimed: "Haste ye, father, an' get drunk, an' come awa home."

AN uneasy boy on a train the other day, whose mother tried to quiet him by telling him that the conductor sometimes swallowed naughty boys, astonished her a few minutes after, as the portly form of the conductor appeared at the door, by creeping back of her and exclaiming: "Ma, I guess he has already swallowed one."

AN advertisement in a daily paper wants "a boy to open oysters about fifteen years old." We should think that situation ought to be filled by a boy with a strong stomach and a terrific cold in his head, for those oysters must be extremely fragrant now. But why the advertiser desires to open them we cannot imagine.

AN old lady with a large family, living near a river, was asked if she did not live in constant fear that some of her children would be drowned. "Oh, no," she replied, "we have only lost three or four in that way."

COMPREHENSIVE.—Preceptor: "Now, can any of you tell me anything remarkable in the life of Moses?" Boy: "Yes, sir. He was the only man who broke all the Commandments at once."

A LITTLE boy heard his mother tell of 18 head of cattle being burned the other night. "Weren't their tails burnt also?" inquired the verdant youth.

SHUT your ears when evil things are said. Only of sin and evil be afraid.

WE expect everything, and are prepared for nothing.

ANTICIPATION of evil, is the death of happiness.

KIND words cost nothing, but are worth much.

A "YOUNG shaver."—A barber's baby.

GOOD HEALTH.

Extract of Meat.

In a report by Dr. Koechlin on the nutritive value of bread and of extract of meat, submitted to the Chemical Section of the Societe Industrielle de Mulhouse, and published in their Bulletin for January, 1874, we find the following details and opinions given: The trial of mixing extract of meat with bread is worthy of attention. This extract, which until lately was considered the perfection of concentrated food, did not increase the nutritive qualities of bread in doses of from five to twenty grammes a day given to a carnivorous animal. When the product first appeared in commerce, it became the object of general infatuation, which still exists with some people. Numerous trials of its nutritive properties have been made, and science has now obtained results which somewhat diminish the high opinion at first entertained of it. It has been proved: 1st, that in large quantities the extract of meat becomes a poison; 2d, that it cannot be looked upon as a true aliment but only as a condiment. Kemmerich having fed some rabbits upon Liebig's extract, they invariably died when given a dose representing from 800 to 1,200 grammes of meat. The writer himself, having consumed fifteen grammes of the extract per diem for three days, experienced very severe palpitations. Other experiments have proved to him that these dangerous effects were not attributable to the creatine and other nitrogenous principles of the extract, but to the salts of potash, of which it contains about one-third of its weight. In small quantities these salts have a beneficial action upon the digestion, and promote the circulation of the blood, but in larger doses they bring about paralysis of the heart. Many doctors can certify to the ill effects consequent on an abuse of the extract of meat. The right quantity to use is two and a half grammes for a basin of soup, and five grammes, or a dessert spoonful, per diem. Secondly, it is not an aliment. The same experimenter fed two young dogs of the same age, one with pure water, and the other with water containing five grammes of extract. To his great astonishment the dog fed upon the extract died on the twelfth day much wasted, while the other was still very lively. He attributes this effect to the salts of potash, which hastened the action of denutrition.

Liebig himself admitted that the extract alone was not an aliment, and chemistry has arrived at the same conclusion, since the nitrogenous principles of the extract at a degree of oxidation are higher than those which form animal tissues, and it is well known that our organs are meant to oxidize and not to reduce the principles furnished by digestion. Moreover, the creatine, which is the principal nitrogenous element of the extract, is a crystallizable substance, organic but not organized, and this latter seems to be the only substance proper to reconstitute our tissues. But the extract of meat decidedly possesses an agreeable flavor—that of good bouillon; this taste sharpens our organs and excites the stomach to act upon the other aliments. This is precisely that which constitutes a condiment; that is to say, a substance which facilitates the utilization by the stomach of other really alimentary substances. The same author has proved this by new trials. Two dogs were fed with meat which had been boiled and strained; to one was given half the meat, to which was added a corresponding quantity of extract, whilst a little salt only was added to that of the other. The dog fed upon the extract fattened rapidly, while the other became lean. These effects could be produced at will on the one dog or the other, by changing their food. The substitution of mineral salts for the extract gave nearly the same results, and shows the importance of the salts of potash in this product. The conclusion to be drawn from these experiments and others, which have led to the same results, is that the extract of meat is not a real food, but a precious aid to digestion and to the whole system. If the quantity of five grammes per day be not exceeded, it possesses over other stimulants, such as coffee and alcohol, the advantages of favoring nutrition, by facilitating the digestion of other food, and it is thus a valuable substance for convalescents, or persons weakened by chronic illness. As for its economical use, it is always restricted to the preparation of soup when butchers' meat is difficult to procure; and also in those cases where there is no time to cook meat; and under this last head it is to be hoped that it will in time come into use by our laboring population, in whose kitchens the time and the knowledge necessary in the preparation of a good soup, or *pot-au-feu*, are often wanting.

ACCORDING to Pettenkoffer, the air in our houses becomes unwholesome when the carbonic acid in it, provided it be derived from the respiration of animals, rises from the normal proportion of 4 parts in 10,000 to 1 part in 1,000. The experiments of Dr. Angus Smith and Dr. Hammond have shown that the organic matter in the air, which increases in proportion to the amount of carbonic acid, is by far a more deadly impurity than the gas.

PURRID blood injected into the veins of a living animal is not mortal unless several drops are used; but the blood of an animal thus poisoned causes death in less than two days, in such minute quantities as a trillionth of a drop.

LAUGHTER AS A MEDICINE.—A short time since, two individuals were lying in one room, very sick, one with brain fever, and the other with an aggravated case of the mumps. They were so low that watchers were needed every night, and it was thought doubtful if the one sick of fever could recover. A gentleman was engaged to watch over night, his duty being to wake the nurse whenever it became necessary to administer medicine. In the course of the night both watcher and nurse fell asleep. The man with the mumps lay watching the clock, and saw that it was time to give the fever patient his potion. He was unable to speak aloud, or move any portion of his body except his arms, but, seizing a pillow, he managed to strike the watcher in the face with it. Thus suddenly awakened, the watcher sprang from his seat, falling to the floor, and awakened both the nurse and fever patient. The incident struck the sick men as very ludicrous, and they laughed heartily at it for some fifteen or twenty minutes. When the doctor came in the morning he found his patients vastly improved; said he never new so sudden a turn for the better, and now both are up and well. Who says laughter is not the best of medicines? And this reminds the writer of another case. A gentleman was suffering from an ulceration in the throat, which at length became so swollen that his life was despaired of. His household came to the bed to bid him farewell. Each individual shook hands with the dying man, and then went away weeping. Last of all came a pet ape, and shaking the man's hand, went away also with its hands over its eyes. It was so ludicrous a sight that the patient was forced to laugh, and laughed so heartily that the ulcer broke, and his life was saved.—*The Sanitarian*.

HYGIENE OF DWELLINGS.—Remarkable testimony as to the permeability of the ground, and of the foundations of our houses, has been given by gas emanations into houses which had no gas laid on. I know cases where persons were poisoned and killed by gas which had to travel for twenty feet under the street, and then through the foundations, cellar-vaults and flooring of the ground-floor rooms. As these kinds of accidents happened only in winter, they have been brought forward as a proof that the frozen soil did not allow the gas to escape straight upwards, but drove it into the house. I have told you already why I take frozen soil to be more air tight than when not frozen.

In such cases the penetration of gas into the houses is facilitated by the current in the ground-air caused by the house.

The house being warmer inside than the external air, acts like a heated chimney on its surroundings, and chiefly on the ground upon which it stands and the air therein, which we will call the ground-air.

The movement of gas through the ground into the house may give no warning that the ground-air is in continual intercourse with our houses, and may become the introducer of many kinds of lodgers. These lodgers may either be found out, or cause injury at once, like gas; or they may, without betraying their presence in any way, become enemies, or associate themselves with other injurious elements, and increase their activity. The evil resulting therefrom continues till the store of these creatures of the ground-air is consumed. Our senses may remain unawares of noxious things which we take in, in one shape or another, through air, water or food.—*Pettenkoffer, Sanitarian for May*.

EUCALYPTUS AS AN ANTI-MIASMATIC.—If the statements made in the journals and newspapers of America and Europe, in regard to the influence of the eucalyptus in preventing malarious disease, are to be relied on, there is no longer any occasion for the human family to be afflicted with diseases of that character. An excellent opportunity of putting the question to the test is afforded in California, where there are many districts esteemed malarious, which are remarkably well adapted to the growth of the tree. Indeed there is scarcely a locality on this coast where the tree would not grow. It is easily cultivated and its growth is remarkably rapid. The trees which have been planted about the dwellings, amid the ancient oaks of Oakland and Alameda, and which are only six or seven years old, already tower up above the surrounding forest and at a distance look like so many lofty steeples. Apart from sanitary considerations, there are many inducements to plant the eucalyptus over the valleys and plains of the Pacific slope. Not to mention the relief they would afford to the eye of the beholder, they would give shelter to cattle, protect the earth from the parching sun, supply a source of lumber and fuel, and possibly modify the climate and invite rain to some valleys now almost uninhabitable for want of it.—*Pacific Medical and Surgical Journal*.

LIME WATER FOR WASP STINGS.—Dr. Danverne writes to a French journal that some time ago he was stung on the head and face by a number of wasps. The pain was great, and he had no ammonia at hand, nor was there a druggist near by. Recollecting the fact that lime water was good for burns, it occurred to him to try it for the relief of the burning sensation produced by the stings. It answered the purpose perfectly, and he has since advised its use in some twenty cases of wasp stings, and it has always caused an instant cessation of the pain. The remedy is a simple one, and worth "making a note of."



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, May 16, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Read's Road-Making and Ditching Machine; Beautiful Naps; The "Rural Press" as a Medium of Advertising; Poisonous Bugs; Spurious Guano—Mistaking Guano for Plaster; Present Supply of Wheat in England, 305. Improved Chimney Stacks; The Vegetable Market of San Francisco; "Base Insinuations," 312. A New Threshing Engine; The Excelsior Cheese Factory; The Date Palm; Ships Wanted; Progress of Farming in California, 313. Patents and Inventions, 316.

ILLUSTRATIONS.—Read's Road-Making Machine, 305. The New Style "Headley" Variable Cut-Off 15 Horse-Power Portable Engine, 313. Brownell's Improved Chimney Stacks, 312.

CORRESPONDENCE.—Grain Elevating and Warehousing System; Farmers Around Oakland; Worms in Horses; New Fruit Drying Factory; Inquiry About Water Pipes, 306.

THE DAIRY.—Improvement in Common Dairy Stock; Artificial Butter, 307.

THE APIARY.—About Hives; When Bee-Keeping Don't Pay—What Then? Bee Stings; Alfalfa for Bees, 307.

FARMERS' IN COUNCIL.—San Jose Farmers' Club; Fruit Growers' Association, 309.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 308-9.

CATTLE BREEDERS.—California Thoroughbred Cattle Breeders' Association; Maxims in Cattle Breeding; Brass Tips on Cattle's Horns, 309.

HOME CIRCLE.—Two Graves (Poetry); A Good Thought; The Right Kind of a Wife; Domestic Advantages from Planting Trees; Not to be Frightened; For What is a Wife Wanted? Happiest Period of Life; Negative Kindness; "Sound" Reasoning, 310.

SANDS OF SENSE; Killing a Cat; Rest in Old Age; Choose Good Friends, 311.

YOUNG FOLKS' COLUMN.—March (Poetry); The Months (Poetry); Girls for Errands; Comprehensive, 311.

GOOD HEALTH.—Extract of Mest; Laughter as a Medicine; Hygiene of Dwellings; Encalyptus as an Anti-Miasmatic; Lime Water for Wasp Stings, 311.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

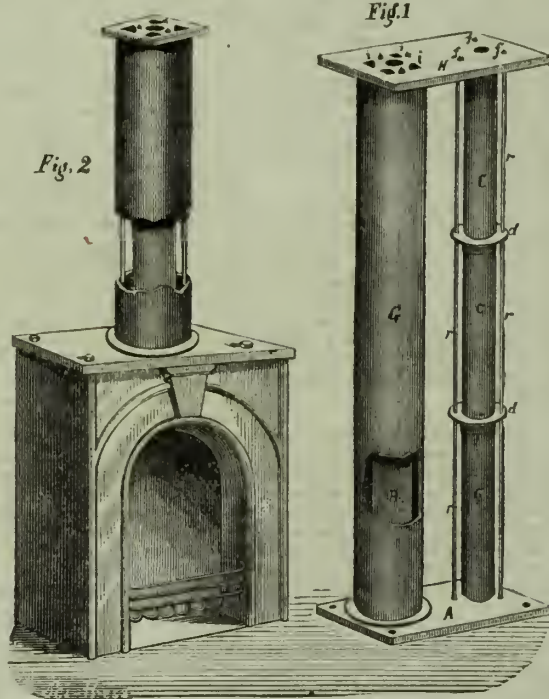
AGRICULTURAL NOTES from various counties in California and Nevada, 316.

MISCELLANEOUS.—The Nebular Hypothesis; The Magnetic Metals; Filing Hand-saws; Deep Sea Soundings in the Pacific; Another New Motor—A Marvelous Claim; Gold and Silver; To Make Hair Curl; Important to Snakes; Underground Railway Progress in London; Preserving Wood, 307. How Chromes are Made; Household Hints; Sulphide of Cadmium for Coloring Soap; Looking into Death's Eyes; How to Soften Hard Putty; Galvanized Iron; Imitations of Leather; Machine Combinations; Compartment Ships; Improved Steam Carriage; Improved Culinary Tongues; Diamonds Made of the Carbon of Sugar; Paper in the Arts; Hydrogen a Metal; A New Comet; Aluminum for Burners, 314. The Transit of Venus; How to Set the House on Fire; Sales of Mineral Lands, 315.

Improved Chimney Stacks.

We illustrate in this issue an improved form of chimney stack, recently patented through the SCIENTIFIC PRESS Patent Agency by J. Browell, of this city. The main features of the invention are its strength and lightness. In a country like this, where we are frequently subject to earthquakes, chimneys constructed on the principle of this one are less dangerous than the heavy brick structures in such general use. Mr. Browell claims that his chimney is earthquake proof, and is at the same time efficient for the purposes for which it is made.

Fig. 1, in the cut, represents a perspective view of chimney; Fig. 2, part of chimney with ventilator; letter A, the base upon which chimney, B, rests, which is usually above the fire-place. The sections of chimney, C, C, C, are constructed of fire-clay, earthenware, cement, or artificial stone, which are made in the form of a tube and placed one upon another. For protecting and securing the joints, a metallic band or ring, D, is employed; the annular channel is filled with cement or other hardening fire-proof substance, which hermetically seals the joints and fixes the bands in place. Outside of the chimney, C, C, C, is a metallic tube, G, which is larger than the chimney, C, C, C, so that space is left between the two for ventilation. The rods or bars which secure the chimney are represented by R, R. The construction of the chimney is easily



BROWELL'S IMPROVED CHIMNEY STACKS.

seen by referring to the cut. In the manner which it is made, a chimney can be put in the second story of a house or anywhere else, without the necessity of building from the ground. The longitudinal rods have the effect of keeping the stack perfectly firm and solid. The weight of a chimney is very sensibly diminished by using one of this construction. They can be readily set on any fire-place, or outside of brick or frame buildings; in fact, can be placed in any part of the house with perfect safety, without going to the foundation. They can be applied to cooking stoves, ranges, blast furnaces, pottery kilns, etc. The sections of pipe are joined together in their upright position in a novel manner, and the joints are thoroughly protected. The chimneys can be transported readily from one place to another, and can be set up by any mechanic. For further information concerning this chimney, address the inventor, Mr. J. Browell, at No. 442 Jackson street, in this city.

FARMERS' UNION.—Articles of incorporation were filed in the Clerk's office of Santa Clara county, on Monday of this week, preliminary to establishing a union store in San José, with banking and commercial departments. The capital stock of the corporation is to be \$100,000. The purpose and object for which this corporation is formed is the establishment and conducting of warehouses; the buying and selling of goods, machinery and agricultural implements and products; the borrowing and loaning of money, and the conducting of a general commercial and mercantile business. The following are the names of the officers elected for the first year: Wm. Erkson, San José; D. Campbell, Milpitas; J. P. Dudley, San José; C. T. Settle, San José; Thos. E. Snell, San José; Horace Little, San José; E. A. Braly, Santa Clara; James Singleton, San José.

FARMERS and others who are in want of any skilled or unskilled labor are referred to advertisement in our columns of A. Zeelandelaar, 715 Montgomery street, formerly of California Labor Exchange.

"Base Insinuations."

Mr. P. R. Beckley forwards the following to us for publication:

At a meeting of Franklin Grange, Sacramento county, the following resolutions were unanimously adopted:

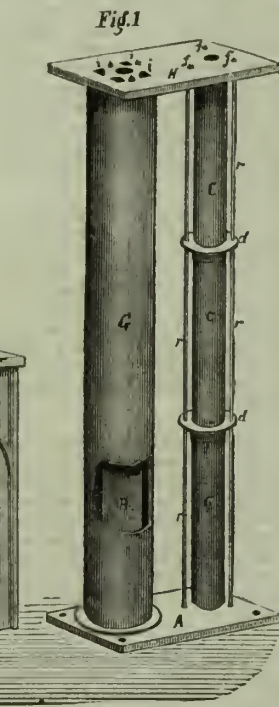
Resolved, That the article in the RURAL PRESS, of April 25th, 1874, under the head of "Is it True?" contains direct charges and base insinuations against the farmers of California, which are not true, and which we, as farmers, feel called upon to repel.

Resolved, That the charge of a want of "an honest desire on the part of the farmers to do the right thing" by their farm help, is a gratuitous insult, is untrue, uncalled for, and unexpected from a paper that claims to be the friend of the farmer, and one that looks particularly to that class of people for support.

Resolved, That while there may be isolated cases in some portions of the State, as referred to by the correspondent of the Press, we do not believe they are common in any portion of the State, and we know they do not exist in Sacramento county. Therefore such charges cannot be made against the farmers of California with any greater degree of propriety than can a charge that all newspapers are venal and corrupt, because some are.

Resolved, That the advice of newspapers to farmers as to the manner they should treat their employees, is gratuitous and not appreciated, for the reasons, first, such advice seems to be based on the hypothesis that farmers are too ignorant or too dishonest to treat their employees fairly; second, the farmers are singled out apparently, as being the only class who are guilty of ill treatment to their help; third, that as a class farm hands are better treated, better fed, and much better paid than the same quality of labor can obtain elsewhere.

Resolved, That on a very large majority of farms in California, the employees of the farm eat at the same table, and associate on terms of equality with the family of the employer. Does the drayman, the hostler, the gardener and the cook, who are employed by the mer-



BROWELL'S IMPROVED CHIMNEY STACKS.

chant, the doctor, the lawyer and the editor, eat at the table and associate on terms of equality with the families of their employers? If not, whose ears are closed to "that piteous protest founded on the claims of common humanity, 'we are men,' which arises from a consciousness of neglect, yet they are men, and may possibly have occupied higher spheres in life than their present humble calling would indicate?"

Resolved, That as the communication over the signature G. E. H. does not purport to come from a "farm hand," it is presumed he belongs to that very large class of persons who have an abundance of time to attend to their neighbors' affairs, but have no time to attend to their own.

Resolved, That a copy of these resolutions be sent to the RURAL PRESS for publication, as a reply to the article published April 25th, 1874, under the head of "Is it True?"

P. R. BECKLEY, Sec'y.

Franklin Grange, May 2nd, 1875.

[We can only request the gentleman who drew up these resolutions to read again the article referred to, and also our comments on previous correspondence. We have done so, and find neither "direct charges nor base insinuations against the farmers of California." The tone of the whole article is quite opposed to the interpretation which has been placed upon it, and it is indeed humiliating to learn that our language is unintelligible. It is unnecessary to remind readers of the article referred to that we are utterly misquoted. For instance, instead of "a charge of a want of 'an honest desire on the part of farmers to do the right thing,'" read: "A little attention, backed by an honest desire to do the right thing, will accomplish wonders." We offered no advice, and made no suggestion that farm help should "eat at the table and associate on terms of equality with their employers;" we simply claim for farm help fair treatment. We have before distinctly asserted our opinion that ill usage is the exception and not the rule. But nglly cases occur, which can not be suppressed. These only who have read all the communications and our remarks are fully competent to judge, and by them our position is in no danger of being misunderstood. We thank the author of the resolutions for sending them to the RURAL, that they may be read by those who have also noted our course in the matter.—EDS. PRESS.]

[We can only request the gentleman who drew up these resolutions to read again the article referred to, and also our comments on previous correspondence. We have done so, and find neither "direct charges nor base insinuations against the farmers of California." The tone of the whole article is quite opposed to the interpretation which has been placed upon it, and it is indeed humiliating to learn that our language is unintelligible. It is unnecessary to remind readers of the article referred to that we are utterly misquoted. For instance, instead of "a charge of a want of 'an honest desire on the part of farmers to do the right thing,'" read: "A little attention, backed by an honest desire to do the right thing, will accomplish wonders." We offered no advice, and made no suggestion that farm help should "eat at the table and associate on terms of equality with their employers;" we simply claim for farm help fair treatment. We have before distinctly asserted our opinion that ill usage is the exception and not the rule. But nglly cases occur, which can not be suppressed. These only who have read all the communications and our remarks are fully competent to judge, and by them our position is in no danger of being misunderstood. We thank the author of the resolutions for sending them to the RURAL, that they may be read by those who have also noted our course in the matter.—EDS. PRESS.]

[We can only request the gentleman who drew up these resolutions to read again the article referred to, and also our comments on previous correspondence. We have done so, and find neither "direct charges nor base insinuations against the farmers of California." The tone of the whole article is quite opposed to the interpretation which has been placed upon it, and it is indeed humiliating to learn that our language is unintelligible. It is unnecessary to remind readers of the article referred to that we are utterly misquoted. For instance, instead of "a charge of a want of 'an honest desire on the part of farmers to do the right thing,'" read: "A little attention, backed by an honest desire to do the right thing, will accomplish wonders." We offered no advice, and made no suggestion that farm help should "eat at the table and associate on terms of equality with their employers;" we simply claim for farm help fair treatment. We have before distinctly asserted our opinion that ill usage is the exception and not the rule. But nglly cases occur, which can not be suppressed. These only who have read all the communications and our remarks are fully competent to judge, and by them our position is in no danger of being misunderstood. We thank the author of the resolutions for sending them to the RURAL, that they may be read by those who have also noted our course in the matter.—EDS. PRESS.]

[We can only request the gentleman who drew up these resolutions to read again the article referred to, and also our comments on previous correspondence. We have done so, and find neither "direct charges nor base insinuations against the farmers of California." The tone of the whole article is quite opposed to the interpretation which has been placed upon it, and it is indeed humiliating to learn that our language is unintelligible. It is unnecessary to remind readers of the article referred to that we are utterly misquoted. For instance, instead of "a charge of a want of 'an honest desire on the part of farmers to do the right thing,'" read: "A little attention, backed by an honest desire to do the right thing, will accomplish wonders." We offered no advice, and made no suggestion that farm help should "eat at the table and associate on terms of equality with their employers;" we simply claim for farm help fair treatment. We have before distinctly asserted our opinion that ill usage is the exception and not the rule. But nglly cases occur, which can not be suppressed. These only who have read all the communications and our remarks are fully competent to judge, and by them our position is in no danger of being misunderstood. We thank the author of the resolutions for sending them to the RURAL, that they may be read by those who have also noted our course in the matter.—EDS. PRESS.]

[We can only request the gentleman who drew up these resolutions to read again the article referred to, and also our comments on previous correspondence. We have done so, and find neither "direct charges nor base insinuations against the farmers of California." The tone of the whole article is quite opposed to the interpretation which has been placed upon it, and it is indeed humiliating to learn that our language is unintelligible. It is unnecessary to remind readers of the article referred to that we are utterly misquoted. For instance, instead of "a charge of a want of 'an honest desire on the part of farmers to do the right thing,'" read: "A little attention, backed by an honest desire to do the right thing, will accomplish wonders." We offered no advice, and made no suggestion that farm help should "eat at the table and associate on terms of equality with their employers;" we simply claim for farm help fair treatment. We have before distinctly asserted our opinion that ill usage is the exception and not the rule. But nglly cases occur, which can not be suppressed. These only who have read all the communications and our remarks are fully competent to judge, and by them our position is in no danger of being misunderstood. We thank the author of the resolutions for sending them to the RURAL, that they may be read by those who have also noted our course in the matter.—EDS. PRESS.]

[We can only request the gentleman who drew up these resolutions to read again the article referred to, and also our comments on previous correspondence. We have done so, and find neither "direct charges nor base insinuations against the farmers of California." The tone of the whole article is quite opposed to the interpretation which has been placed upon it, and it is indeed humiliating to learn that our language is unintelligible. It is unnecessary to remind readers of the article referred to that we are utterly misquoted. For instance, instead of "a charge of a want of 'an honest desire on the part of farmers to do the right thing,'" read: "A little attention, backed by an honest desire to do the right thing, will accomplish wonders." We offered no advice, and made no suggestion that farm help should "eat at the table and associate on terms of equality with their employers;" we

A New Threshing Engine.

It has been rumored for some months past that a firm in this city were to bring out a new threshing engine this season which for simplicity and economy was to eclipse any previous efforts in that direction. A sample engine has arrived and is now on exhibition at Treadwell & Co.'s; and we have the pleasure this week of laying before our readers a partial description of its merits and the two accompanying illustrations showing a side and end view in perspective.

It is an "Improved Hoadley", and is manufactured by the same parties East who have hitherto made the old Hoadley engine so well known throughout the country.

The agents claim that with an engine weighing 1,000 lbs. less, and consuming fifty per cent. less fuel, they are able to accomplish a greater amount of work than with the old style 8x12 engine.

This result is accomplished by means of several radical changes. Mr. Hoadley, who is considered one of the most thorough engineers in the United States, seems to have taken an entirely new departure in the construction of his present engine. A noticeable feature, which at once strikes the eye on seeing the engine, is the absence of the old governor with its attending steam pipes and throttle valves, all of which tended materially to decrease the pressure of the steam on its way from the boiler to the cylinder, by condensation and what is termed "wire drawing."

In the new engine the cylinder and valve chest are surrounded by a steam jacket. The valve is of the style known as the "balanced piston," and, through the eccentric, is acted upon directly by a governor of peculiar but simple construction placed on the crank shaft and entirely within the run of the drive wheel. It controls the engine steadily, and can be easily set to vary the speed, and should it from any cause get out of order the engine will at once stop.

The valve is constantly surrounded by steam at full boiler pressure consequently, the initial pressure on the steam piston is very nearly equal to the pressure in the boiler. The regulator acts by cutting off shorter or following the piston at greater length as the case may require, the initial pressure being the same under a heavy or light load. This idea of

making an automatic variable cut off with an ordinary slide valve and the use of but one eccentric is a valuable invention. In a trial which took place on the evening of the 23rd inst. in Fremont street, near the corner of Market, the efficiency of the new spark-arrester, which is placed on all these engines, was thoroughly tested.

The spark is so constructed as to obviate the necessity of any hood or wire screen being used, leaving the top always open and free for the escape of the gases of combustion, thereby in no manner impeding the draught. Steam being raised to one hundred pounds, a powerful brake was applied to the fly wheel. The valve was thrown wide open, and with the exhaust due from an engine of that size working at full 30-horse power, not a spark was seen issuing from the pipe, although fuel of the lightest kind (shavings and wood) was used and well stirred during the trial. The test seemed to be thorough and most satisfactory. The fire box is steel throughout, while the shell is of very heavy iron and double riveted. Ample facilities are offered for cleaning by hand—hole plates, mud plugs in each corner of the fire box; and a mud trap is attached to the under side of the waist of the boiler, so that if sediment is deposited no difficulty will be experienced in removing it.

We notice an improvement in the style of check valve used, which is so constructed that should anything occur to prevent its proper working, it may, by means of a secured valve placed between it and the boiler, be at once removed without the necessity of blowing off the steam. The running gear is of the most approved construction, the wheels being built in the strongest manner possible with very wide and heavy tires; the old style of attaching the hind axle to the fire box by means of flanges has been discarded in favor of the more expensive bent axle. In a word, the engines seem to be well and faithfully made; and anyone interested in such matters will be well repaid by a visit to the house of Messrs. Treadwell & Co.'s where ample opportunity is offered for a thorough examination of their merits.

Crops around Altamont look well; about Medway and Ellis, not so good. Alfalfa, in the hands of Judge Murphy, has proven a great success in that vicinity.

Twenty settlers from Kentucky and Tennessee lately settled near Cross creek, Tulare county.

The Excelsior Cheese Factory.

Among the worthy industries of San Luis Obispo county, as yet unnoticed by the press, is the Excelsior Cheese Factory, owned by Mr. S. Williams, and located on the old stage road between Cambria and San Luis Obispo. It is, perhaps, second to no institution of the kind in the State. The building is a two-story frame. The lower floor is divided into two apartments, one for the vats and one for the curing process. Being surrounded by a very excellent dairy country, the factory is kept in operation the year round. Its capacity is 1,500 pounds per day. The average is about half that quantity. It is set out with all the modern improvements used in cheese making. There are two 600-gallon vats, and one of smaller size. The proprietor is an old dairy man and practical cheese maker, and the result is this factory turns out cheese that brings the first market price. It may be of interest to some of our readers to know the process employed in the manufacture of this almost indispensable article of home consumption. The milk is received and weighed at the factory, each dairyman receiving his share of the product. From the scales it goes into a vat where it is heated to a temperature of 82° Fahrenheit.

The coloring and rennet is then put in. Mr. Williams uses extract of annatto in coloring. It comes in small 20-pound boxes, prepared by Faulkner & Jones, of Utica, New York, and is perhaps as good as anything now in use. It

stands in this vat from 30 to 40 minutes. A thin 15 bladed knife is then run through the coagulum. This is in order to separate the curd from the whey. After being broken up carefully with the hands, the heating process is resumed. It is heated gradually to 90° of temperature, and constantly stirred, lest the coagulum scorch. After 30 minutes it is again broken up and the temperature increased to 98°. This finishes the scalding process. It is then drawn off into a sink and salted, in the proportion of two pounds of salt to 100 pounds of curd. From this it goes into the presses.

This factory has 15 large screws, each capable of pressing four cheeses of 25 pounds each. The vats are insulated and heated by means of steam pipes. The factory gets \$2.50 per 100 pounds for manufacturing. There are now on hand over a thousand cheeses. Shipments are made every week. It is shipped from Cass' landing, at Cayucos, 10 miles from the factory. In a letter to Mr. Campbell, who gets his manufacturing done here, Sterns & Smith, commission merchants in dairy and farm produce, of San Francisco, write that the cheese is, without exception, the very best that they can get hold of. T. H. Hatch also writes, confirming this opinion. The factory is a very prosperous institution, and a credit to that part of the country.

THE SACRAMENTO RACES.—The impression has gone abroad that races will always pay; and that losses incurred in other departments of agricultural exhibitions can be made up from this. But the races of last week are pronounced a failure, financially, and though everything was done by the Agricultural Society to make them attractive, the attendance was not sufficient to meet the outlay, and the society is supposed to have lost money in the undertaking. This result may possibly create a doubt in the public mind as to whether the races, after all, are not more dependant upon the agricultural exhibitions for their financial support than these exhibitions upon the races.

TOONGUA CUCUMBER.—We have received from Geo. H. Williamson, grower and dealer in seeds, Gallatin, Tenn., a single seed of the Toongua cucumber, from China. It is claimed that it attains to the weight of 70 pounds, flesh two inches thick of splendid quality. We are going to try that one seed, and will report result.

The Date Palm.

It is somewhat remarkable that so little attention has been paid to the cultivation of the date palm in California. There can be no question as to its perfect adaptability to our soil and climate. And it is certainly the second, if not the first, in value of all the noble order of Palms. In all eastern countries, which are congenial to its growth, it forms a most important portion of the subsistence of man.

It holds such an intermediate space between the fruits of the temperate and tropical climates, that it may be classed with either, but it is more of a temperate than tropical growth. Immense forests of dates are found in southern Europe, particularly in Spain, Italy, Greece, Turkey, and in the Islands of the Mediterranean. It is indigenous all along the northern portion of Africa, in Palestine and Arabia. It will flourish abundantly almost everywhere between the 30th and 40th degrees of latitude—the latitude of central California. As an ornamental tree it has no superior, and it lives many hundred years. Indeed it continues slowly to increase in height until it is 250 or 300 years old. We have been led to these remarks at this time because of the recent importation here of a small invoice of trees from the Peninsula of lower California. Mr. Jacobs, formerly a resident of Santa Clara, now of Lower California, sent by the last steamer a out 150 young palms, which have

Progress of Farming in California.

Some very successful experiments have been made in reclaiming salt meadows along the creek below Napa. A well known citizen has a large farm about four miles below Napa, which includes about 600 acres of salt meadow. Very substantial dykes have been built around this meadow on the sides subject to overflow. The salt water has been effectually cut off, and the rains of winter and the sun have bleached and freshened this meadow. The sod of a salt marsh is the toughest in the world. No plan has yet been invented which will effectually subdue it. Nor have any implements been found by which it could be plowed at a cost much less than the estimated value of the land after the dykes had been built.

Last year the owner sowed timothy seed over a considerable area of this meadow. This year there is a good stand of timothy. The salt marsh is now a meadow with a firm sod, on which is growing one of the most desirable grasses known to the farmer. Experiments have also been made with alfalfa on the same meadow, and with a good prospect of success. It has been found that there is no necessity for breaking up the sods in order to put them into grass. It is only necessary that the marsh should be freshened and that thereafter salt water should be kept out.

The roots of timothy grass penetrate beneath this sod to a point where there is an abundance of moisture, and thus, without irrigation, this grass is perennial. The experiments with alfalfa on these meadows have not yet been pushed far enough to speak definitely of results. The grass, however, has been started, showing that the roots will penetrate the salt meadow sod. The theory is, that where it finds moisture beneath, alfalfa will do as well as timothy. It costs but a small sum, comparatively, to defend with dykes against the mere overflow from tides. If after a year of freshening, these meadows are thus in a condition to sow with the seed of two of the best grasses known to agriculturists, then it would follow that every acre of salt marsh can be converted into the most productive land at a small expense. The experiments made in this instance are in advance, in some respects, of any we have yet noted. Salt meadows have been reclaimed, but generally at a far greater cost than along the Napa creek.

We have before noted the fact that the fruit crop in this State promises to exceed that of all former years. The amount will far exceed the demand for local consumption. A limited outlet has been found for grapes and pears through shipment overland by rail. But only the best fruit, maturing in advance of that grown at the East, can be shipped at a profit. The two or three organized fruit-drying establishments have attained fair success. But they can hardly make an impression on the vast amount of fruit which will be grown this year. Within a year or two fruit-drying machines have been invented, admirably adapted to the resources of small orchards. They will do the work as well on a small scale as that done at the large establishments.

There is practically no limit to the sale of dried fruit if it is well done. And there is no excuse for letting so many hundred tons of fruit decay on the ground every year. When apples, pears and peaches will not pay any profit on shipments made to the local markets, then they ought to be converted into a product at home that will pay. Experiments have been pushed far enough in this State to demonstrate that with suitable apparatus, such as any orchardist can procure, nearly all surplus fruit can be utilized by drying, at a better profit than to put it in the market green, except at the highest prices. Unless some such method is adopted this year the orchards will be covered with decaying fruits, and we shall have the old story repeated, with many variations, that fruit-growing does not pay in California.

The trespass law is working beneficially wherever it has taken effect. The barbarous system of marauding and raiding on lands and even on cultivated crops, has nearly ceased. Very few trespass suits have been brought thus far; cattle-owners who have heretofore followed the old plan are now inclined to accept the situation without further contests.

The prospects of an immense wheat harvest will make all sorts of bay craft in good demand. Wherever small sailing vessels can go, up creeks, estuaries, and along the larger rivers, grain can be transhipped to market by this means cheaper than any other. There are not enough small vessels afloat to meet the demands for grain shipments, provided no adverse influences come in to affect the wheat harvest. Already there are signs of a general overhauling of bay craft for the new business in prospect.—Bulletin.

Ships Wanted.

There is manifestly an imminent want staring us in the face which claims immediate attention. There is a want of tonnage for transporting the present crop of wheat. Fortunately for the shippers, but rather unfortunately for us at the present time, there is and has been for some months past an active demand for ships from other quarters, especially from China. Vessels upon which we could have relied under ordinary circumstances have been attracted thither by more remunerative prospects than our wheat shipment offered. No possible good can come from glossing over our present uncomfortable position. In fact, prudence demands that it be made known at once, both at home and abroad. Cannot our importing firms and corporations do something in this emergency toward supplying the want of tonnage? The lack of importation to this coast is apparently the cause of ships withdrawing from this to other trading routes, where a larger portion of return freights can be secured. Anything that would add to this inducement by increasing local importations would be of decided advantage to the country.

Shippers are unusually active in chartering vessels for several months to come; and it is evident that if there is any "going a begging" within that period, it will be done by the shippers and not by the ship owners.

MISCELLANEOUS.

How Chromos are Made.

Chromo-lithography is the art of printing pictures from stone, in colors. The stone used is a species of limestone, found in Bavaria, which is wrought into thick slabs, with finely polished surface. The drawing is made upon the slab with a kind of colored soap, which adheres to the stone, and after the application of certain acids and gums, enters into chemical combination with it. When the drawing is completed, the slab is put on the press and carefully dampened with a sponge. The oil color, or ink, is then applied with a common printer's roller. The parts of the slab which contain no drawing, being wet, resist the ink, while the drawing itself, being oily, repels the water, but retains the color applied.

In a chromo, the first proof is a lightground-tint, covering nearly all the surface. It has only a faint, shadowy resemblance to the completed picture. The next proof, from the second stone, contains all the shades of another color. This process is repeated again and again, occasionally as often as thirty times. The number of impressions does not necessarily indicate the number of colors in a painting, as the colors and tints are greatly multiplied by combinations created in the process of printing one over the other. In twenty-five impressions, a hundred distinct shades may sometimes be produced. The last impression is made by an engraved stone, which produces that resemblance to canvas noticeable in all the finer chromes.

The production of a chromo, if it is at all complicated, requires several months, sometimes several years, of careful preparation. At every stage of the process equally great skill and judgment are required. The mere drawing of the different and detached parts on so many stones is of itself a work that requires an amount of labor and a degree of skill which, to a person unfamiliar with the process, appears incredible. Still more difficult, and requiring still greater skill, is the process of coloring. This demands a knowledge which artists have hitherto almost exclusively monopolized, and in addition to it the practical familiarity of a printer with mechanical details. "Drying" and "registering" are as important branches of the art as drawing and coloring. On proper registering the entire possibility of producing a picture at every stage of the progress depends. Registering is that part of a pressman's work which consists in so arranging the paper in the press that it shall receive the impression on exactly the same spot on every sheet. The difference of a hair's breadth would spoil a picture, for it would hopelessly mix the colors.

The paper used is white, heavy "plate paper," of the best quality, which has to pass through a heavy press, sheet by sheet, before its surface is fit to receive an impression.

After the chromo has passed through the press it is embossed and varnished, and then put up for the market. These final processes are for the purpose of breaking the glossy light, and of softening the hard outlines which the picture receives from the stone. These processes impart to it the appearance of a painting on canvas.—*N. Y. Tribune.*

Household Hints.

At this season of the year it is important for all housekeepers to be on their guard against the insidious attempts of the various species of ants and the detestable cockroaches to invade the kitchen and pantries or store rooms. Sprigs of wintergreen will make the small red ants leave their cherished haunts. Borax powdered and put into the crevices where cockroaches abide will finally cause them to disappear, but we have found concentrated lye melted into a sort of paste and applied with a knife a more expeditious mode of destroying these noxious insects. Scalding alum water is also certain death to cockroaches.

To take stains out of mattresses, apply a paste of soft soap and starch over the spots, and wash it in with a damp sponge; if not clean at first, put on another paste, and repeat this until the spots disappear.

Most housekeepers have felt the need of a receipt for mending knives, or rather for fastening knives and forks to their handles. The following mixture is recommended for this purpose in the *Scientific American*: Mix together one pound of rosin and eight ounces of sulphur, and keep it either in bars or reduced to powder; mix one part of this powder with half a part of iron filings, fine sand or brickdust, and the cavity of the handle is to be filled with this mixture. Heat the stem of the knife or fork and insert it hot, and when cold it will be found tight.—*Ex.*

SULPHIDE OF CADMIUM FOR COLORING SOAP.—The coloring power of the above mentioned material is so great that its price is of little importance. It is, however, frequently adulterated with zinc white, which may be readily discovered by digesting the suspected substance in acetic acid, filtering, and adding a solution of carbonate of soda, which produces a white precipitate if zinc be present.—*Sci. Am.*

THERE is a piece of track on the Kansas Pacific railway that is 30 miles long without a curve, and no grade that is more than three feet to the mile. The light of an engine can be seen for a distance of 14 miles on this strip.

Looking Into Death's Eyes.

The power of the eye is most strikingly illustrated by the fact that when two bodies of infantry meet in a charge of bayonets, the front rank on one side or the other almost invariably gives way directly the bayonets are crossed; that is before the cold steel enters the body of either party. The front ranks give way, the rear ranks are generally broken, and a rout ensues. The dreadful passion and fixed resolve in the front rank on one side overpowers that of their antagonists, whose hearts fail before them. Calculations have been made to supersede this, by the order that each soldier's bayonet shall not take the man directly in front of him in the enemy's ranks, but the next man to the left. A systematic mutuality of reliance was thus provided, and the effect of the enemy's eyes superseded. It was a horribly clever idea. But in vain; the eye of the weaker will only shimmer, and wavers between the two—trembles for the mandrill—and no doubt gives the preference to the man whose bayonet point is within a few inches of the *juste milieu*. Between the two he generally falls or takes to flight. The single minded glare of the devil of war reflects the perfidious horror of the cold steel point. It is remarkable, on examining the dead bodies on a field of battle, after there has been a successful charge of bayonets, how few have been killed by the point in charging thrusts. The men have died from thrusts during flight, or from the clubbed, i. e. butt-end blows, or have been perished when on the ground, or trampled to death.

How to Soften Hard Putty.

It is well known that the common putty, with which glass window panes are fixed in their frames, is made of powdered chalk and linseed oil. When old, it becomes so hard that, in case its removal is necessary, a chisel and hammer must be resorted to. In fact, it becomes like a stone, harder than the wood itself, pieces of which often break off unless peculiar care is taken in removing the putty. This hardness becomes a serious inconvenience when a large pane, say of valuable plate-glass, has to be removed for the purpose of repairs in the wood-work, or for some other cause. Here the use of chisel and hammer on the putty surrounding the glass may cause serious damage along the edges, or even total fracture. An agent to soften the putty in such cases, so that it may be removed with ease, is, therefore, of some value. This may be effected with a paste of caustic potassa, easily prepared by mixing the caustic alkali, or even carbonate of potash or soda, with equal parts of freshly burnt quicklime, which has previously been sprinkled with water, so as to cause it to fall into powder. This mixture is then mixed with water to a paste, and this is spread on the putty to be softened. Where one application is not sufficient, it is repeated. In order to prevent the paste from drying too quickly, it is well to mix it with less water, adding some soft-soap instead.—*Am. Homestead.*

GALVANIZED IRON.—The zinc in galvanized iron exists in two states. The state which constitutes its value is that of an actual alloy with the iron, but besides there remains a considerable quantity of zinc which is merely adherent mechanically. A method has long been required for ascertaining with facility, and a certain degree of accuracy, the extent to which the zinc has combined with the iron, and if this combination is perfect throughout the plate. Mr. T. Bruce Warren has recently discovered a mode effecting this desideratum. When mercury is rubbed over a perfectly galvanized iron plate, it adheres nowhere; but if part of the zinc is merely mechanically attached, in that place the mercury forms an amalgam with it and attaches itself firmly. To estimate the exact amount of zinc combined with the iron, Mr. Warren detaches a sample from the particular set of plates or wires to be tested, cleanses it with dilute sulphuric acid, and then immerses it from four to eight hours in mercury. The difference between the weights before and after immersion will be the amount of uncombined zinc. The piece is then heated in a deoxidizing flame, and the weight once more taken; the amount lost will, in this case, represent the quantity of zinc which was actually alloyed with the iron.—*Ex.*

IMITATIONS OF LEATHER.—A process has recently been introduced by which paper and cloth, or either of these materials separately, are prepared so as to answer in many cases as a valuable substitute for leather, not only possessing the color and appearance of the latter but being proof, for all practical purposes, against injury from water, perspiration or moisture, the same as leather.

In this process the cloth or paper is first covered upon one or both of its surfaces with lithographic ink, corresponding in color to that of the leather intended to be imitated. The lithographic ink is applied to the surface of a stone, and the material to be prepared is placed upon this stone and subjected to the ordinary transfer operation of a lithographic press. The material being now removed from the stone, and the ink surface allowed to dry, a coating of shellac varnish, or other effective water-proof substance is applied to both sides. A superior article is made by applying a series of coats of lithographic ink, one after another, waiting for each successive coat to dry. In this way, morocco, or sheepskin, either green, blue, black or red, is almost perfectly imitated in external appearance.

Machine Combinations.

The combination of several functions in the same machine is one that has much to do with manufacturing machinery, and constitutes what we may term a principle in construction.

The reasons that favor the combination of several functions in one machine, and the effects that such combination may have on the product of machines, are so various that it has led to a great diversity of opinions and practice among both those who construct and those who employ machines.

It may be said too, that a great share of the combinations we see in machines, such as those to turn, mill, and bore, slot and drill in iron fitting, are due not to any deliberate plan on the part of the maker so much as to an opinion that such machines are novel, and represent a double or increased capacity.

So far has this combination in machines been carried, that in one case that came under the writer's notice, a machine was arranged to perform nearly every manipulation required in finishing the parts of machinery; completely organized, and displaying a high order of mechanical ability in design and arrangement, but practically of no more value than a single machine tool, because but one operation at a time could be performed.

To direct attention to certain rules that will guide opinions and practice in this matter of machine combination, the following propositions should be considered.

First.—By combining two or more operations in one machine the objects gained are economy in framing, the same supports answering double purpose, and a saving of floor room.

Second.—In a machine where two or more operations are combined the capacity of such a machine is only as a single one of these operations, unless they can be carried on at the same time without interfering one with the other.

Third.—Combination machines can only be used with success when one attendant performs all the operations, and when the change from one operation to another requires but little adjustment and rearrangement in each case.

Fourth.—The arrangement of the parts in a combination machine have to be modified by the relations between them, instead of being adapted directly to the nature of the work to be performed.

Fifth.—The cost of special adaption and the usual inconveniences of fitting combination machines when their parts operate independently, generally equals what is saved in framing and floor space.—*Journal of Franklin Institute.*

COMPARTMENT SHIPS.—Notwithstanding the numerous losses of compartment ships, confidence in their superior safety has by no means abated. The late disasters to the "Ville du Havre" and the "Enrope" are fully understood. Both of these, though compartment ships, went down very suddenly—the former in twelve minutes, because the doors between the compartments were left open, and the latter from some unexplained carelessness, although her abandonment is now believed to have been unwarranted. In contrast to the two ships here named, we have only a few days since learned of the unnecessary abandonment of a third—the "Amcrique"—which was encountered the next day by a passing steamer, with only six feet of water in her middle compartment, and safely towed into port. This latter case affords a good illustration of the value of compartments.

It is obvious that, if a vessel were divided into the proper number of water-tight compartments, the chances of loss from leakage or collision must be very much reduced. So well assured are shipbuilders of this fact that this plan of construction will be more generally followed than heretofore, and the number and strength of bulkheads materially increased. Heretofore six or seven compartments have generally been given to a ship 400 feet in length. The compartments are now, however, being increased to double or treble that number. As an extreme example in this direction we may instance the new British war steamer "Inflexible," which is to have 127 water-tight compartments. Perhaps compartment ships may yet lead to the desired solution of the shipping-in-bulk question in relation to California wheat crops.

IMPROVED STEAM CARRIAGE.—Mr. Charles Randolph, of Glasgow, has invented an improved steam carriage, adapted to street locomotion, which is said to be free from the objections urged against steam carriages in general. It is 15 feet in length, and consists of three divisions, viz.: the driver's box in front, the boiler and engine house in the rear, with a compartment for passengers in the center. It is carried on four wheels, two at each end. When filled with passengers, and provided with water, etc., for a journey, its entire weight is only about 4½ tons, and it will travel at the rate of about eight miles per hour on the average. A few weeks ago this machine was tested in the presence of the Duke of Sutherland, Lord John Hay and others, and the result of the experiment was in every way satisfactory. Mr. Randolph anticipates that the mode in which he applies steam power to his carriage may be adapted to tramway cars, omnibusses, etc.

IMPROVED CULINARY TONGS.—This is a pair of wire tongs, of which the middle part of the lower prong is bent upward above the other, and has a coil formed in it to give it elasticity, so that the points are held closely together. A thumb piece is affixed to the bend, by pressing down which the prongs are forced apart.

Diamonds Made of the Carbon of Sugar.

Mr. Emile Monier (France) publishes a statement in regard to the carbon of sugar. When large white crystals of sugar are perfectly burned, they leave only one hundredth part of one per cent. of ashes; and when heated to about 1,800° Fahr. in a closed vessel, without contact of air, the hydrogen and oxygen are distilled off, mostly in the form of watery vapor, while a very pure carbon is left behind, the quantity of which, according to the formula for sugar C12 H11 O11 (corresponding with 72 parts carbon, 11 hydrogen, and 88 oxygen), should be 42 per cent.; practically, however, less than half this amount (18 per cent.) is realized as a very pure carbon, which is so hard that it will cut glass like a diamond, while its hardness is greater in proportion as the sugar is purer. But being quite porous, those parts which cut the glass are crushed at the same time. Mr. Monier has succeeded in increasing this hardness by mixing the sugar with syrup, about 25 to 30 per cent., to a paste, which is then introduced into a porcelain tube hermetically closed at one end, and only partially closed at the other, so as to give escape to the gases, while it is burned at a red heat. In that way he obtained a carbon cylinder much harder which could cut glass, and was only crushed with difficulty, but still porous.

Honey also gives a dense carbon of the same properties as that described, and we should like to see experiments made by inclosing honey or sugar in cylinders of refractory clay, and exposing them to the flames of the hydro-oxygen blowpipe, or to submit them, as soon as most gases have escaped, to great pressure and heat at the same time. It may not be impossible to produce black diamonds in some manner of this kind.

Some of our readers may be aware that white transparent diamonds can be made, very small to be sure, but still genuine diamonds, by the slow crystallization of the carbon out of certain carbon compounds of organic origin; and it is believed that this is the true origin of the natural diamond.—*Manufacturer and Builder.*

PAPER IN THE ARTS.—The numerous uses to which paper and paper pulp are applied in the various departments of general industry, form one of the most interesting chapters in the history of recent mechanical and chemical progress. We have paper doors and window blinds, paper billiard balls, boats, and wash basins, paper clothes and curtains; and, not the least important, as recent experiments have demonstrated, paper car wheels. From an exchange we learn that a Connecticut railroad is about to make trial of these new wheels, which have been known to car builders for some time, though their general introduction has been hindered by the expense. These wheels are made by the following process: Sheets of common straw paper are forced into a compact mass by a pressure of three hundred and fifty tons. The solid mass of paper thus formed is placed in a lathe and turned perfectly round. After which, a hub is forced into a hole in the center, under a pressure of twenty-five tons. This paper wheel, or disk, is now forced, under a pressure of two hundred and fifty tons, into a steel tire, with a one-half inch bevel upon its inner circumference. Two circular iron plates are then bolted on to the tire to keep the paper filling in place. By this arrangement the steel tire rests upon the paper only, and is thus rendered more elastic, a quality of great importance, as regards both the safety and comfort of travelers.—*Builder.*

HYDROGEN A METAL.—M. Dumas has communicated to the French Academy some curious experiments of MM. Troost and Hautefeuille on the hydrates of mercury or combinations of hydrogen with that metal. These combinations, it is said, so strongly resemble those which constitute the amalgams of mercury with silver and other white metals, that it is hardly possible to doubt that they are themselves amalgams, and hence that hydrogen is a metal, a fact apparently indicated in many other analogies.

A NEW COMET.—The discovery of a new and very bright telescopic comet is announced. Its appearance was first announced to the Academy of Sciences at Vienna; but it has since been carefully observed in this country. On the 17th of April it rose at 2 a. m., east one-half south, and a half hour earlier on the 24th. At that rate of motion it would rise at this time (May 8th) about half-past 12 a. m. Its motion is towards north and east.

THE DIAMOND SAW MACHINE for sawing stone, which was noticed in these columns some months ago, is still making its way into favor. Those which have been put into operation still continue to give satisfaction, and the invention is gradually working its way outward from the home region of the invention. This invention will most undoubtedly prove a most important advance step in the important industry in aid of which it has been devised.

ALUMINUM FOR BURNERS.—J. Kidd, of 27 Leadenhall street, London, has patented improvements in gas burners, which consist in the application to argand or other burners of aluminum pure and alloyed, together with an adjustable check valve to the burner which regulates the light.

A TEST for sulphate of alumina is that good alumina should be neutral, and such is almost soluble in absolute alcohol.

The Transit of Venus.

The most important expedition that has ever been sent out by the United States is nearly ready to start, its object being the observation of the transit of Venus, which occurs on the 8th of December next. Eight parties are to be sent out from the United States, and, as above noted, arrangements have been completed to compare and exchange their results with the experiences and observations of the German, French, Russian and English expeditions. Three of the parties are to be established in the northern and five in the southern hemisphere. The observations are to be made at Wadwtok, in Siberia, under charge of Prof. Hall, of the Navy. Another party will proceed to Asia, and there they will divide. One party, under Professor Davidson, of the Coast Survey, is to make the observations at Nagasaki, Japan. The other, under Prof. Watson, of Ann Harbor, Michigan, will proceed to Peking, China, and there make their observations of the transit. The corps who are to observe the transit of Venus in the southern hemisphere are to sail from New York in the United States sloop-of-war *Svatara*.

This vessel has been docketed at the Brooklyn Navy Yard, and is being thoroughly prepared for the long voyage she is to make. Her upper decks have been entirely rebuilt, and her guns taken ashore. On the upper, or spar-deck, eight large staterooms have been built, for the accommodation of the scientific gentlemen of the expedition. The after part on each side of the stern has been built out, making two large windows, and enlarging the Captain's room materially. Below, on the next deck, a ward-room pantry has been built under the Captain's room, and six fine, large staterooms have been built, on each side of the wardroom, for the accommodation of the *Svatara's* officers. A partition has been run across the vessel, dividing the wardroom from the staterooms. On each side of the stateroom five staterooms have been built, for the use of petty officers of the vessel. Still further forward is the berth-deck, where the men are to sling their hammocks and quarter.

After the *Svatara* sails from New York she will proceed first to Rio Janeiro, and making a short stay there, will cross to Cape Town. At Cape Town the last preparations for the comfort of the expedition will be made, and stores will be taken on board to last until the vessel reaches New Zealand. From Cape Town the *Svatara* will proceed to a group of islands called Crozette's Islands. There a party of observers, under Captain Raymond, of the Army Engineer Corps, are to be landed, and the *Svatara* will return for them on her home voyage.

From the Island of Desolation, Captain Chandler is to proceed to New Zealand, by way of Sydney. At Tasmania he will leave a party under Lieutenant Peters, United States Navy, to make observations of the transit and other scientific explorations. From Tasmania the *Svatara* will go to the Chatham Islands, in the Southern Indian Ocean, and there Captain Chandler will land another party under Professor Smith, of the Coast Survey.—N. Y. Times.

How to Set the House on Fire.—1st. Rub your furniture with linseed oil, and preserve carefully the old greasy rags used for this purpose, in a paper box in an out-of-the-way place. 2d. If the fire in the stove does not burn well, pour benzine or kerosene on it from a well-filled gallon can. 3d. When you light your cigar or the gas, throw the burning match—no matter where, and don't look after it, even if it gets into the waste-paper basket. 4th. Put a burning candle on the shelf of a closet, and forget all about it. 5th. Always read in bed until you fall asleep, with a burning candle near you. 6th. Especially for builders: Put the ends of the wooden beams into the flue walls; and if you build hot air furnaces, be careful to use as much wood as possible in their construction. 7th. Always buy the cheapest kerosene you can get.—Builder.

SALES OF MINERAL LANDS.—Sales of mineral lands under the Acts of 1866, 1870 and 1872, reported to the General Land office to March 1st, 1874, amounted to 44,292 acres, as follows: Arizona, 210 acres; California, 28,031; Colorado, 23,250; Idaho, 7; Montana, 916; Nevada, 1,740; New Mexico, 52; Oregon, 1,346; Utah, 4,801. In the Central City District of Colorado there have been 500 entries, with an average of two acres to each entry. Many of these entries contain less than a quarter of an acre.

HEALD'S BUSINESS COLLEGE
BRYANT & STRATTON
24 POST ST. SAN FRANCISCO
SEND FOR CIRCULARS

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars
E. P. HEALD,
246-tf President Business College, San Francisco.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.
This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

Grangers' Bank of California.

NOTICE!

The Stockholders of the

GRANGERS' BANK

Of California, are hereby notified that a meeting has been called to be held in Corinthian Hall, No. 31 Post street, San Francisco, on Thursday, May 21, A. D. 1874, at two o'clock, P. M., for the purpose of adopting the By-Laws of the Corporation, as required by law.

SPECIAL ATTENTION

Is called to the importance of the Stock being represented either in person or proxy, as it is necessary that a majority of all stock subscribed be represented in adopting the By-Laws of the Bank. By order,
ALFRED F. WALCOTT, Pres't.

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court,
San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,
Subscribed, \$3,000,000. Paid in, \$1,500,000.
Remainder subject to call.

DIRECTORS IN LONDON:—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Scholfield, Isaac Seligman, Julius Sington.

MANAGERS:

R. G. SNEATH and IGNATZ STEINHART,
SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v7f-cowbp

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,

36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps).....7
Spud, Reaping Hook and Shepherd's Crook.....7

Send P. O. Money Order with your order to W. H. Baxter, room 12, 320 California street, San Francisco. It will save Express collections and overland Express charges.

JOSEPH SEYMOUR & SON,

12v7-3m Syracuse, N. Y.

FEED-CUTTER ROLLERS

Covered and made new in the best manner at usual rates, at H. ROYER'S Belt Factory, 437 Brannan St.

19v7-3m

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to
ELWOOD COOPER,
President Board of Directors.
22v6-1v

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.
WILLIAMS & MOORE, Prop'rs.
3v7-3m Stockton, Cal.

OUR SPECIALTY: "BEYOND THE MISSISSIPPI."
GO WEST, YOUNG MAN! GO WEST!
Gold by the Bushel! Silver by the Ton!
Capital required: Nerve and Honest Industry
THE FAR WEST,
The Great Treasure Chamber of America.
All about its Resources, Mines, Railroads, Lands, Indians, Climate, and Developments Illustrated and Described in
CROFUTT'S WESTERN WORLD,
for \$1.50 a year. With \$10 Premium Chromo,
AMERICAN PROGRESS,
free to each subscriber.
Two sample WORLDS sent for 10 cents. Agents wanted.

POISON!

WAKELEE'S PATENTED

Granulated Squirrel Exterminator.

A NEW AND MOST DESTRUCTIVE POISON FOR THE WORST PEST OF CALIFORNIA.

For years the farmers of the Pacific Coast have been spending money in experimenting to find a safe, cheap and efficient way of ridding their grain-fields of their worst enemy, THE SQUIRRELS, which destroy Millions of Dollars' worth of grain every year; and unless a strong and combined effort is made to kill them off, they will become more numerous every year.

Wakelee's Granulated Squirrel Exterminator is just the thing the farmers of California have been looking for. It is sure DEATH. One or two grains of it will kill a Squirrel so quick that if it is five feet from his hole it dies before it gets there. The Poison is put up in dry and in granular form, and easily handled; in one pound tins, at \$1 per pound. It goes a great way, as 10 to 15 grains of it are sufficient to place at each hole. Also successfully used for killing Gophers and Rats. It has been thoroughly tested in different parts of the country, and gave universal satisfaction. It is kept and sold by druggists and dealers generally through the country. The following are some of my testimonials, viz.:

SANTA CLARA, April 20th, 1874.
H. P. WAKELEE, Esq.—Your Squirrel Exterminator was used according to your directions, on my *Quito Farm* with excellent success, and in my estimation is just the thing the farmers want to kill their Squirrels.
Yours,
J. R. ARGUELLO.

SAN LEANDRO, Cal., April 3d, 1874.
H. P. WAKELEE, Esq.—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,
J. M. ESTUDILLO.

DOUGHERTY STATION, Alameda Co., Cal.
MR. H. P. WAKELEE, San Francisco: I have used your Squirrel Poison and found it to be just what you claim for it. It is sure death. Yours,
C. M. DOUGHERTY.

GRANGERS,

TAKE NOTICE.

WE ARE SELLING

FRENCH CHINA, GLASSWARE,

PLATED WARE, ETC.,

CHEAPER THAN ANY OTHER HOUSE

ON THE PACIFIC COAST.

O. LAWTON & CO.,

MARKET STREET,

Under the Grand Hotel, SAN FRANCISCO.

FARMERS' LINE.

FOR LONDON DIRECT.

THE MAGNIFICENT A 1 CLIPPER SHIP,

MONETA,

621 Tons,

W. SINCLAIR.....Master.

FOR LIVERPOOL DIRECT.

The magnificent A 1 Clipper Ship,

SEA WITCH,

1288 Tons,

BAKER.....Master.

These fine vessels have nearly full cargoes engaged and will have very quick dispatch. Freight taken in lots to suit shippers.

Will be followed by the splendid A 1 Iron Ship

GLENGARRY,

1769 Tons,

Due here in May; or by other first-class vessels.

Liberal advances made on shipments of produce consigned to our Liverpool house, Messrs. Robert Rodgers & Co.
RODGERS, MEYER & CO.
19v7-3m

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and

Kearny, SAN FRANCISCO.

21v2-1v

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,

OIL CAKES and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.
Office, 3 and 5 Front street.
Works, King street, bet. Second and Third. fe15-cow

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

Saul & Co., 579 Market Street, San

Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

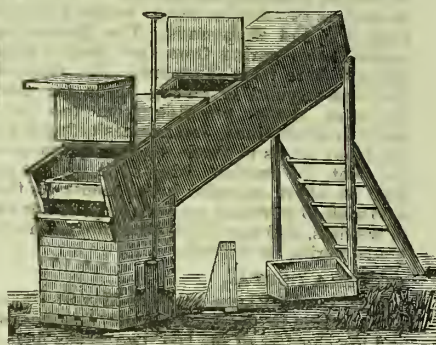
Warner & Silsby Manufacture all kinds of

Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Traders' National Bank, N. Y.; Edwanger & Barry, Rochester, N. Y.; W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

Ryder's American Fruit Drier.

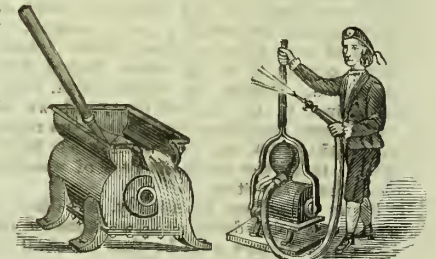


This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent,
306 California street, San Francisco

THE CELEBRATED

SLUTHOUR PUMP,



Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING AND THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from 1/2 to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.
Agents for Eastern Manufacturers, 306 California street, San Francisco.

ARE YOU GOING

TO PAINT?

THEN USE THE BEST.

THE AVERILL CHEMICAL PAINT

WILL LAST THREE TIMES AS LONG as the best lead and oil, without CHALKING; is of any desired color. It is prepared for immediate application, requiring no Oil, Thinner or Drier, and does not spoil by standing any length of time. It is equally as good for inside as outside work; over old work as well as new; in fact, where any paint can be used the AVERILL CHEMICAL PAINT will be found superior to any other. Any one can apply it who can use a brush, which truly makes it the FARMER'S FRIEND.

IT IS JUST THE PAINT FOR THE AGE.

IT IS SOLD BY THE GALLON ONLY.

One gallon covers 20 square yards 2 coats.

For further information send for sample card and price list.

HEALY & JEWELL, Agents.

Office—Corner Fourth and Townsend streets, San Francisco.
16v7-cow-bp-3m

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.
PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F.
14v7-3m

AGRICULTURAL NOTES.

CALIFORNIA.

AMADOR.

COTTON.—*Dispatch*, May 9: Several of the ranchers in this vicinity are experimenting with cotton, on a small scale, this year, in order to test the question as to whether it will grow and thrive in the foothills. We can see no reason why it should not do well.

MORE RAIN.—Several small showers of rain fell here on last Tuesday night, Wednesday and Wednesday night. The farmers say that no more rain is now necessary to insure good crops.

CALAVERAS.

RAIN.—*Citizen*, May 9: During the week the weather has more resembled that to be expected in March rather than that of May, and has been a succession of storm and sunshine. The grass in all parts of the county is excellent, and larger crops are assured than ever before.

LARGE FLEECES.—Last Wednesday Mr. Schroebel, a pioneer sheep raiser of this county, showed us two fleeces which weighed respectively 24½ and 26 pounds. The fleeces were sheared this spring from two Merino bucks, brought here from Vermont. Mr. Schroebel has been engaged in raising sheep for nearly 20 years, always breeding from the purest stock to be obtained, and not hesitating at paying fancy prices to obtain such. By an advertisement, in another column, it will be seen that he offers superior inducements to those who wish to purchase graded sheep, either ewes or wethers, and also 175 buck lambs of the best grade merino in the State.

CONTRA COSTA.

OUR LATER RAINS.—*Gazette*, May 9: Our late rainy season is closing out most auspiciously, and the showers of the last two weeks have revived all our vegetation and repaired to a great extent the damaging effects of the early April north winds, which gave occasion for so much fear that the crops of whole broad districts would fail of their previous promise. Altogether we may not have had more than half an inch of rain from the late showers; but, with the cool and cloudy weather their improving effect on grass and grain, especially that late sown, has been incalculably larger than the mere measure of rain alone would have caused. It is, at this writing, clear, but there are still indications that we may have more of these gracious showers while they may do good. But should we get no more, and are not afflicted further with "northerly," our grass and grain crops will do finely.

EL DORADO.

RAIN.—*Republican*, May 7: On Thursday last we had the rain of the season, and beyond doubt the last for the season. It commenced just before daylight and continued until after noon, giving the earth a jolly soaking. For about 15 or 20 minutes, about eleven o'clock, it fairly poured, 9 in. of water falling during that time. During the storm 2.2 in. fell. It came just in the nick of time, and we have heard many ranchmen remark that the rain was worth \$50, \$100, and even as high as \$250 to them. If so, the storm has been of incalculable value to the State.

FRUIT is setting beautifully, and there can now be scarcely a doubt about an immense yield. The only fear now need be that we shall neglect to secure adequate facilities for preparing it properly for market.

FRESNO.

A FINE FARM.—*Expositor*, May 9: We visited the farm of Mr. Ang. Wiehe, situated about four miles east of town. J. D. Forthkamp, the courteous Superintendent, showed us over the place. Every variety of fruit tree and vine has been planted that is obtainable. We noticed gum trees, maples, poplars, cottonwoods, almonds, lemons, orange, cinnamon, apple, apricot, plum, banana, pepper, eypress, and twenty other varieties of trees, besides grape, blackberry and strawberry vines. Flowers of various kinds adorn the grounds and add to the charms of the place. About thirty acres of land have been planted in alfalfa, about the same amount will be put in cotton, and 640 acres of as good wheat as ever grew out of doors, and 180 acres of barley partly make up the items on this fine farm. It is contemplated by the proprietor to raise trees, vines, etc., to sell. After showing us over the farm, Mr. Forthkamp supplied our better half with a large basketful of garden truck—green peas, lettuce, radishes and sweet potatoes. The latter were raised on the farm last year, and were preserved through the winter in dry sand, and are as fresh and solid as when taken from the ground. This place is worth visiting.

FINE GRAIN.—We received, a few days ago, a sample of wheat from the farm of B. C. Libby, situated about four miles from Fresno. The stalks averaged about four feet in height, and the heads four and one-half inches in length. We were assured that this was but a fair sample of 1,400 ac res, but being a little skeptical, we visited the field, and were convinced that the sample was but a fair average. In many places the stalks loomed up to six feet in height, and the heads were fully six inches in length. The field looks most promising, and we think is a most conclusive evidence of the fertility of our soil. Mr. Libby has got a branch of one of the King's river irrigating ditches flowing through his land, and he will try the cultivation of cotton. He will plant about forty acres.

KERN.

Courier, May 9: The most of this week has

been rainy. We have had two falls of rain, at least, that would have done honor to the rainy season at its height. So much rain at this season is very unusual here. It is a Godsend to many of our new comers who had planted crops with the intention of constructing irrigating ditches afterward, and which, most of them finding it more work than they anticipated, could not have accomplished in time.

LOS ANGELES.

CROP REPORT.—*Herald*, May 3: Mr. T. D. Hancock adds his testimony as to the favorable condition of crops. Farmers will commence heading their barley in about fifteen days. That which was planted early gives evidence of furnishing a first-rate crop, averaging probably from 75 to 80 bushels per acre, and of the best quality for brewing purposes. The wheat crop will be harvested later, and it is difficult to say now just how it will turn out, but the indications are fair thus far. Wheat in this locality is somewhat subject to rust, but of the several varieties, the Sonora wheat is least liable to injury. It is feared that farmers through the country are cutting too much hay, and that there will be a surplus of fodder during the next season. Where grain in any fair quality and quantity can be secured from a crop it should be harvested. Mr. Hancock thinks that, with a proper system of farming introduced here, there is no need of having a failure in crops oftener than once in ten years, even without irrigation.

TOBACCO PROSPECTS.—The Los Angeles Tobacco Association have already set out something over 20 acres of young plants, all of which are doing remarkably well. The association will continue the work with no loss of time until the entire lot is in the ground. Of the plants already set out, nearly every one is growing. The loss in this respect is so slight as to be scarcely worthy of notice. Every experiment in tobacco culture made in this valley tends to strengthen the opinion of old tobacco growers that a superior article may be produced here with but little labor or expense. The certainty of the crop is also commented upon and urged as strong evidence that the article will speedily become a staple product of our valley. The consumption is immense, and the supply seldom or never exceeds the demand. If what now seems an established fact is confirmed, a large area of this valley is adapted to this culture, and a new and profitable industry is opening, which only needs development and attention to secure our people a large increase in their annual earnings.

MONTEREY.

HEAVY SHOWER.—*Democrat*, May 9: Wednesday, during the forenoon, it rained heavily in the Pajaro bottoms, this side of Watsonville, where, very strangely, not a drop fell. Tuesday there was considerable rain about Soledad, in the locality where it is most needed at this time.

PROSPECT OF MAY.—The hay of last season is very scarce and dear, but never since we have been in the county has there been such luxuriance of grass as there is this season. In another month hay will be cheap enough.

The effects of the late rain, good in certain localities, have been injurious in others. We hear of the "lodging" of barley and wheat in a sufficient number of places to make it a matter of some concern.

NAPA.

FROM RUTHERFORD.—*Cor. Reg.*: The weather is quite stormy up here for this season of the year. It is doing good to the crops, however, and farmers are rejoicing.

Mr. Horton, living about a mile from Rutherford, has 800 acres of grain in, and it is looking well. Mr. H. has a well stocked farm, and understands his business.

We will have a large grape crop this year if Jack Frost lets us alone.

The fruit crop, in general, will be much larger than it has been for a number of years.

HOPS.—*Press*, May 9: Mr. A. Clock, of St. Helena, the pioneer hop cultivator of Napa county, is making arrangements to increase his business largely the present year. He is planting out new orchards of hops, and is having 30,000 hop-poles shipped down from this place. Mr. Montgomery, of the same place, is also going into the business on a larger scale. Both of these gentlemen are sanguine of good results of the business.

THE GRAPE CROP.—*Reporter*, May 9: Prospects were never better for a grape crop in this country than at present. Our vine-growers have every indication of an abundant crop, and, as we learn from a telegram, from Major Snyder to Mr. Krug, that there is a great demand in the Eastern markets for Napa wine, there is a certainty of good prices as well as abundant crops.

In Napa county grain of all kinds is reported looking extremely well. The fruit crop, especially grapes, will also be abundant.

PLACER.

WHAT CAN BE DONE.—The *Herald* states that on two acres, near Auburn, the yield in orchard and small fruits this year, it is estimated, will be worth at usual rates \$1,085. Good for Placer!

The late rains have been most acceptable to the county, and our reports from exchanges are very promising.

SANTA BARBARA.

FARMERS in Santa Barbara complain that the wheat grows too rank. The bean crop will be a large one. There are few fences and little fruit as yet, but at present rate of progress the county will soon be a leading one, in agricultural matters. The soil is said to be as rich as

any in the State, and the summer fogs give abundant moisture.

SAN JOAQUIN.

RAIN has fallen in larger quantities than usual of late. On May 5th one and a half inches, the heaviest shower of the season, fell. Grain prospects are very good indeed, and farmers will realize largely, if prices do not fall too far.

SONOMA.

GOOD.—*Democrat*, May 9: The farmers of Sonoma Valley are joyous over the beautiful rain, and gave expression to their joy last week, by a succession of most enjoyable picnics and excursions. An immense crop of hay and cereals is insured, and should the valley be exempt from frost, the grape crop will be greatly in excess of previous years.

SOLANO.

RAIN.—*Vallejo Chronicle*, May 9. Quite a heavy shower of rain fell about ten o'clock this morning, but the weather soon cleared. In ordinary seasons a rain at such a date as this would do great injury to the hay crop, but owing to the unusual backwardness of the present harvest, the hay is not yet out and therefore no damage done.

SUTTER.

ALL the grain looking finely; summer fallow presenting the most flourishing appearance. Only the late sown grain looking badly. Grape prospect extremely fine.

TUOLUMNE.

AGRICULTURAL prospects looking very brightly, and an abundant harvest prophesied. The late rains have benefited the county thousands of dollars.

YOLO.

CROP prospects reported as looking very flattering, wheat being rank and heavy.

NEVADA.

HOPS IN THE FOOTHILLS.—*Tidings*, May 9: California hops are said to be so far superior to those raised in any other part of the world—attributable to absence of rain during the season for maturing and curing—as to command a much higher price and find a ready market. Many of our foothill valleys are peculiarly adapted to the hop, as witness the following from a correspondent of the *Amador Dispatch*, writing from Ione Valley: Dr. Morse, the proprietor of the Q ranch, has ten acres under cultivation, a part of which has been set out this spring. Norman Johnson, who has lately bought a part of the above ranch, is setting out six acres. William Collins, who owns 30 acres in the Q ranch, has nine acres in hop culture. The McDonald Bros., on leased land adjoining, have 10 acres which they are now planting. These latter gentlemen are the pioneers of this industry here; they commenced in '61, on a candle-box full of cuttings, for which they paid \$52. The cost of raising hops and getting them ready for market is 11 cents per lb. They require the second year of their growth two poles to the hill, which makes 1,600 poles to the acre. These have to be cut (they are from 12 to 18 feet long) and hauled to the yards, sharpened, distributed and stuck, which costs about two cents per pole. The sharpened ends that are stuck in the ground, decay and break off every year, unless smeared with coal tar, which preserves them sound. Mr. Collins raised last year on five acres 8,000 lbs. Mr. Collins is a countryman of Joseph Arch, and has solved the labor problem for himself to his entire satisfaction, without the intervention of government or emigrant aid societies. Sixteen years ago he worked by the month on the Q ranch. He is now the owner of a fair slice of the best land in the valley.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., May 12, 1874.

FOR WEEK ENDING April 28, 1874.

LIFE BUOY AND SAFE.—Oliver C. Reid, S. F., Cal.

FARM GATE.—Ezra L. Brooks, Smith Ranch, Cal.

AIR COMPRESSOR.—Wm. H. Fauntleroy, Eureka, Nevada.

COTTON AND HAY PRESS.—Walter W. Inman, Lone Pine, Cal.

ORE-DRESSING APPARATUS.—Jas. Scrimgeour, Enima Mine, Utah.

BUNGS.—William Webster, S. F., Cal.

TRADE-MARK.

GRAIN BAGS.—Edington Detrick, S. F., Cal.

"The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

HINTS FOR INVENTORS.

We will send on receipt of stamp for postage, FREE, our 52-page Circulars containing 112 Illustrated Mechanical Movements: a digest of PATENT LAWS; information how to obtain patents, and about the rights and privileges of inventors and patentees; list of Government fees, practical hints, etc., etc. Address DEWEY CO., Publishers and Patent Agents, San Francisco.

THE END-SHAKE THRESHING.—The following letter is from Wm. P. Harkey, Esq., Sheriff of Sutter county, referring to the value of the Lanfengberg End-Shake Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.
MENSRS. TREADWELL & CO., San Francisco.—Gentlemen: In regard to the Lanfengberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I used it throughout the season on a Russell Separator, which I had run previously with a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain. I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thrasher.
WM. P. HARKEY.

13v7-3m

VINE AND FRUIT GROWERS,
TO RAISE LARGE CROPS,
YOU MUST IRRIGATE.
To irrigate successfully, you must have the power that does not give out when the wind fails.

Laufkotter Bros. & Churchman's Horse-Power,



(PATENTED FEBRUARY 15TH, 1871.)
Never fails to supply more water than four or five Windmills, even supposing you had all the wind you want. It is also suitable for running light machinery, such as Barley Crackers, Corn Shellers, Fanning Mills, Grain Separators, or for Sawing Wood. They are never failing, cannot get out of order, easily worked, substantial, and always give satisfaction wherever they have been used. One horse can easily work two 6-inch pumps, with a continuous flow of water. Force Pumps, from 3,000 to 10,000 gallons per hour. Windmills of all kinds manufactured to order. Wells Bored, Windmills and Horse-Powers set in any part of the State, and repairing of all kinds done.
Manufactured and for sale by
LAUFKOTTER BROS.,
20v7-2m-3m
Cor. J and 10th Sts., Sacramento.

THE CELEBRATED NEW DRAW-FEED WHEELER & WILSON

SEWING MACHINES

Are without exception the most desirable for family use. They are the LIGHTEST RUNNING Machine in the market, and sew from the thinnest to the thickest material with equal facility. These machines have, since their invention, stood at the head of the list in public favor, and the recent improvements to them have increased their superiority still more. Buy no Sewing Machine until you have tried these.

WHEELER & WILSON MAN'G CO.

E. W. HARRAL, Agent,

20v7-4m-15p 427 Montgomery street, S. F.

The Guadalupe Island Company—San Francisco, California.

Notice is hereby given, that at a meeting of the Directors, held on the 8th day of May, 1874, an assessment of ten (10) cents per share was levied upon the capital stock of the corporation, (the Guadalupe Island Company) payable immediately to Arthur Rodgers, Treasurer of the company, at its office, 306 Pine street, San Francisco, California.
Any stock upon which this assessment shall remain unpaid on the 15th day of June, 1874, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on the 3d day of July, 1874, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

ARTHUR RODGERS,
Secretary of the Guadalupe Island Company,
No. 306 Pine street, San Francisco, California. m16-41

W. M. BRANDON. JACOB W. ROGERS.

BRANDON & ROGERS, California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.
20v8-1y-16p

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to
B. F. CLAYTON, San Jose.
Or C. J. CLAYTON,
Clayton, Contra Costa Co., Cal.

10v7-6m

FANCY POULTRY.

A FEW CHOICE FOWLS FOR SALE.

Two trios Silver Spangled Hamburg, \$30 per trio; 1 trio Silver Spangled Poland, \$20; 1 trio Golden Spangled Poland, \$20; 1 trio Dark Brahma, \$15; 1 trio Light Brahma, \$15; 1 trio Buff Cochins, \$15. White face Black Spanish, \$15 per trio, or \$50 per dozen. Spanish Eggs, \$4 per dozen. GEORGE A. HILL,
19 New Montgomery St., (Florence Sewing Machine Agency). m16-11

WHALE OIL SOAP,

—FOR—

Destruction of Bugs on Plants, Etc.

PHOENIX OIL WORKS.

517 Front Street.....SAN FRANCISCO.

20v7-1m

SMALL FARM IN SONOMA FOR SALE.—A farm of 70 acres, handsomely improved, with orchard and vineyard, and 25 acres in wheat, plenty of wood and water, etc., situated within one and a half miles of the town of Sonoma, and same distance from the steamboat landing; price moderate; terms easy. Apply to BERRY & CAPP, 418 Montgomery street, Real Estate Agents. 20v7-1m

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

(By our own Reporter.)

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, May 13, 1874.

There have been but few changes in the Produce market this week. Prices have generally remained about as last quoted. Such movement as has taken place, however, has been for the better in most instances.

Our reports from various crop sections of the State, to be found on another page, indicate satisfactory prospects in all quarters. The late showers, unusual for our climate, have been welcomed by the farmers, and are expected to add much to the anticipated harvests. The change in tone of our rural exchanges has been remarkable; complaint has given place to rejoicing, and the evil effects of backward weather are now considered less than was at first anticipated.

Beans.

Prices are unchanged and moderately strong. New York reports more favorable. Supplies are beginning to run light in that market, and a single shipment of 400 barrels to Japan relieved holders noticeably.

Broom Corn.

No further information available. We understand five tons changed hands this week at private rates.

Dairy Produce.

Butter is doing much better. For best Point Reyes 32¢ per lb., wholesale is obtained to-day. This price calls for only the very finest samples, and really good Butter will sell only at a lower figure.

Eggs.

Eggs are a shade higher. The ordinary price for good and fresh is 22¢ to 23¢. At present prices there is little inducement to ship from Oregon, and of course no Eastern supplies can be profitably forwarded.

Feed.

Barley is ordinarily sold at \$15 per ton. Middlings are \$1 weaker. Choice Wheat Hay commands \$20, and the range is now from \$15 to that price. Good Stew goes at \$1 per bale.

Flour.

A sale of 500 barrels Superfine was made yesterday at \$4.75. Jobbing price of Extra is \$5.75 to \$6. Market steady.

Fresh Meat.

Rates are in accordance with the season and favor the buyer.

Grain.

Our extreme quotation for Milling Wheat can only be obtained by the very best. There is not much being done. Liverpool quotations show a decline. Considerable Barley has changed hands, a large lot having been sold yesterday on private terms. Oats are very quiet. Rye is at a decline, having fallen off 20¢ for the month.

Hops.

The Hop market is very quiet. Receipts are small and irregular. A New York telegram to a city daily says: There is no change to note in the general situation of the market. Choice Hops are scarce, but entirely nominal, and only occasional sales have been made. California stock is offering at a shade lower prices, and very little business doing; quoted, 32¢ to 37¢.

Nuts.

Peanuts are strong at 6¢ to 7¢. California Walnuts job at 12¢ to 14¢. Market steady.

Potatoes.

Prices have recovered somewhat from the depression noted last week. Best kinds, old crop, are worth \$1.20 per cental. New Potatoes are becoming quite plenty and have fallen considerably.

Poultry.

Turkeys have improved in price, selling now at from 13¢ to 16¢. Broilers range from \$4.00 to \$7.50, fine plump ones bringing almost as much as Hens.

Provisions.

Provisions are in fair request. Bacon is particularly active. Lard is very firm, with a slight advance in price.

Seeds.

The planting season being well over. Seeds are dull.

Wool.

Quotations are slightly higher. Choice Spring Clip commands 26¢. There is little or no Fall Clip now in market. At Boston there is no change of importance. New Spring California has been arriving more freely and meets with ready sale at 30¢ to 33¢ per lb. A very choice lot of 37,000 lbs, known as the Whitney clip has been sold at a higher figure, supposed to be 40¢ per lb; but this is considered about the best clip grown in California, and the price realized can scarcely be looked upon as a criterion. Sales of Fall California have been 164,500 lbs, mostly from 22¢ to 27¢ per lb, and 206,500 lbs of Spring at 28¢ to 40¢.

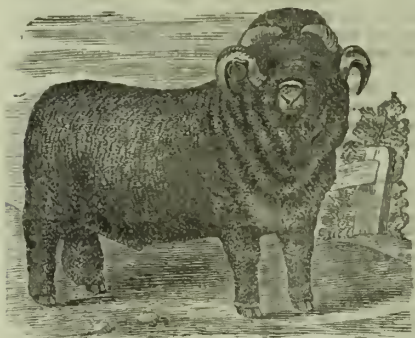
LEATHER.

Wednesday M., May 13, 1874.

Jodot Leathers are very scarce in New York and not over plentiful here. It is reported that some 2,000 cases of fine skins were lost in the French steamer *Kurage*. Prices have consequently advanced East, and are stiffer here. Trade is much better than previously noted and now is comparatively active.

City Tanned Leather, # D.	25.00
Santa Cruz Leather, # D.	25.00
Country Leather, # D.	24.00
Stockton Leather, # D.	24.00
Jodot, 8 Kil, per doz.	55.00
Jodot, 10 to 12 Kil, per doz.	58.00
Jodot, second choice, 11 to 16 Kil, # doz.	55.00
Cornellian, 12 to 16 Ko.	57.00
Cornellian Females, 12 to 13.	60.00
Cornellian Females, 14 to 16 Kil.	60.00
Beattyville, # D.	60.00
Simon, 18 Kil, # doz.	61.00
Simon, 20 Kil, # doz.	65.00
Simon, 24 Kil, # doz.	72.00
Robert, 14 Kil, # 9 Kil.	35.00
French Kid, # D.	1.00
California Kip, # D.	40.00
French Sheep, all colors, # doz.	8.00
Eastern Calf for Backs, # D.	1.00
Sheep Roams for Tanning, all colors, # doz.	5.00
French Kid, for Linings, # doz.	9.00
California Russett Sheep Linings.	1.75
Best Jodot Calf Boot Legs, # pair.	5.00
Good French Calf Boot Legs, # pair.	4.00
French Calf Boot Legs, # pair.	4.00
Brass Leather, # D.	5.00
Hair Bridle Leather, # doz.	48.00
Skirting Leather, # D.	34.00
Welt Leather, # doz.	30.00
Wax Leather, # doz.	17.00
Wax Side Leather, # foot.	17.00
Eastern Wax Leather.	—00

Stock Notices.



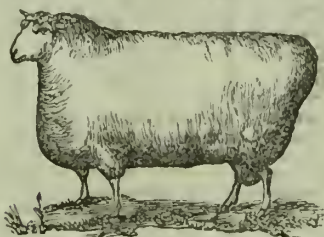
Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado county,
California.

U. S. LIVE STOCK EXCHANGE,

CORNER OF FIFTH AND BRYANT STREETS, S. F.

Cattle, Sheep, Milch Cows, Hogs and Horses sold on commission or bought on farm for cash.

Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State. Thoroughbred Durham Cows wanted. Address,

DAWSON & BANCROFT, 449 5th St., S. F. Special rates to members of the Grange. m9

U. S. LIVE STOCK EXCHANGE,

S. E. Cor. Fifth & Bryant Sts.,

SAN FRANCISCO.



Cattle, Sheep, Milch Cows and Horses sold on commission or bought on farm for cash.

Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State. Wanted, Milch Cows, Cattle and Work Horses. Address,

DAWSON & BANCROFT, 449 5th St., S. F. ap18-tf

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,

17v7-3m

San Rafael, Marin Co., Cal.

FOR SALE.



25 full blooded Spanish Merino Bucks, one and two years old, from stock imported from Addison county, Vermont, in 1872. Call and see, or address,

B. F. WATKINS,
Santa Clara, Cal.

JERSEY CATTLE.

A few head of very choice Jersey Cows—Helpers and Bull Calves—for sale. Apply to

16v7-3m

R. G. SNEATH, Menlo Park,

Patent, First Premium Windmills & Horse Powers,

W. I. TUSTIN, Patentee.

Pioneer and Largest Manufacturer of Machinery (in this line) on the Pacific Coast.

FACTORY, Corner Market and Beale Streets.

SAN FRANCISCO.

Send for Circular and Price List.



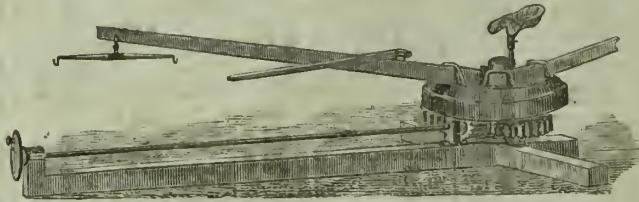
ECONOMY.



ECONOMY—For One or Two Horses.



EUREKA.



EAGLE—For One or Two Horses.

coast, and are in general use along their line, giving perfect satisfaction, which can be proved by reference, 9v7-3m

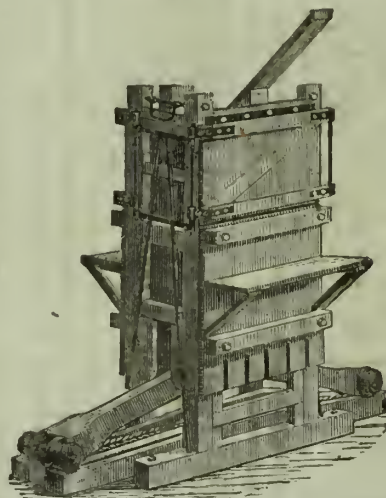
"THE EAGLE HAY PRESS."

THE KIMBALL MANUFACTURING COMPANY.

OWNERS OF THE PATENT AND SOLE MANUFACTURERS ON THE PACIFIC COAST,

COR. FOURTH AND BRYANT STS.,

SAN FRANCISCO, CAL.



Hall, Sacramento, April 18th, 1871, and stood the test of a bale of wool weighing 550 pounds. Reference,

Major Robert Beck. These presses are manufactured in San Francisco by the Kimball Car and Carriage Manufacturing Co., who have a stock constantly on hand. Prices \$250.00 for Hay Presses; \$350.00 for Wool Presses. Weight of Hay Press, 2,500 lbs.; Wool Press, 3,500 lbs. Can be shipped in pieces or set up. 13v7-2am-3m

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO OAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,
152 New Montgomery Street, SAN FRANCISCO. 2v7-6m



The attention of Wool Growers is continually invited to the
Thoroughbred Stock Bred and Kept upon the
MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 8 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the

THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY.

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

10v7-eow

SEVERANCE & PEET,
Importers and Breeders of Spanish Merino Sheep.

FRANK MILLER & SON'S
MOWING MACHINE OIL,
IN PATENT CANS, ALREADY FOR USE
IN THE FIELD.

NO FARMER should be without it, as the season for mowing and reaping comes on. For sale by Baker & Hamilton, M. C. Hawley & Co., E. S. Whitcomb and other agricultural implement dealers. m2-1m

New Patent Cheese Vat and Heater,
Manufactured by G. HARRIS & SON, Petaluma,
Sonoma County, Cal.
Warranted to give satisfaction. ap25-1m

San Francisco Employment Office,
NO. 608 CLAY STREET,
Crosett & Co., Proprietors.
(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP. Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. ap18-tf

LANDS & HOMES FOR SALE

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,

642 MARKET STREET,

N. E. Cor. Montgomery.

ap25-tf

FARM FOR SALE.

1435 Acres 3/4 mile from the town of Windsor; 1 mile from depot; 2 1/2 miles from the famous Russian river. The place is beautifully situated; land all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and outhouse; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2,500 cords of black oak timber; and wood brings \$5 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to JOSEPH DIMMICK, P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap18-tf

RANCH FOR SALE.

BY VIRTUE OF AN ORDER OF the Probate Court of the city and county of San Francisco, the undersigned will sell the Ranch of the Estate of H. Rush, deceased, in Solano county, consisting of about 4,000 acres of farming land, bordered by 1,200 acres of tule land, three-fourths of entire tract inclosed by Suisun Slough, having landing on same for vessels from San Francisco. Terms reasonable. For particulars inquire of H. F. CRANE, 729 Montgomery street, or D. BALLARD, 106 Davis street, San Francisco. SARAH E. RUSH, Administratrix. m9-1m

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,

ap18-tf 329 Montgomery street, San Francisco.

FOR SALE.

100 Acres of Good Land,
ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-tf

P. H. SUMNER.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,
On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. hpf

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID & ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot-Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

The STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kano's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Bleach, Harness Soap, Thomas' Cool Water, Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Colognes, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street,
16v7-3m SAN FRANCISCO, CAL.

TIPTON & BURTT'S

MEDICINAL

SHEEP PREPARATION,

Warranted FREE FROM ALL POISON. A sure and positive cure for SCAB, TICKS and LICE, and a sure promotion of the growth of the wool. It has been used in Tehama County for the past two years, with most gratifying results, and we have the pleasure of referring to the following gentlemen as to its merits, viz.: H. A. Dawson, Jas. Gooch & Bro., J. W. Montgomery, J. Eby, Curtis & Brown, H. Bosanka, Jos. Coue, J. W. Gate & Sons.

It is a liquid and put up ready for use in 2 1/2 gallon tins, four tins in a case.

WHITTIER, FULLER & CO., Sole Ag'ts,
21 Front street.....SAN FRANCISCO.
28 K street.....SACRAMENTO.
13v7-3m

AGRICULTURAL ARTICLES.



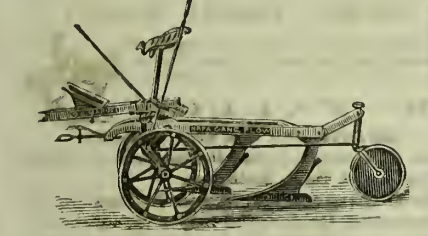
LINFORTH, KELLOGG & CO,
Importers of
HARDWARE
And
Agricultural Implements.
Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



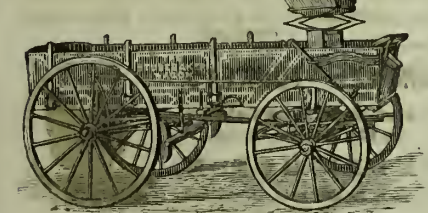
Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with
Dropper.
World Reapers, and Mowers with
Dropper and Hand Rakes—side delivery.
Clipper Mowers and Reapers, with Drop-
per.
Cayuga Chief Mowers and Reapers.
Sulky Rakes—Furst & Bradley's, and Bay
State.
Wood Revolving Hay Rakes—Tiffin and
Geneva.

PITT'S "PACIFIC" THRESHER,
30 and 36 Inch Cylinder, with or without Power.
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cul-
tivators, etc.

The Celebrated



The Best in the World.
Rumsey & Co.'s Force and Lift Pumps;
Hydraulic Rams; Church, School and Farm
Bells.

Also For Sale,
Corn Planters, Corn Cultivators,
Mortise Head Hay Rake, Scythes and
Snaths,
Soule, Ketsinger & Co.'s First-Class
Farming Tools,
Gold Medal Forks, Hoes and Rakes,
Batchellor's Forks,
Friedman Harrow, Scotch Harrows, Whiffle-
trees, Ox Yokes and Bows,
Road Scrapers,
Canal and Garden Barrows,
Hay Cutters—Burdick's
National, Belcher & Taylor's
Self-Sharpener and Hide Roller.

Also Agents for
CALIFORNIA HARROWS, on Wheels.
EAGLE HAY PRESS.

Also a Full Line of General Hardware and
Miners' Tools.
Send for Descriptive Circulars and Price
Lists.

Linforth, Kellogg & Co.,
3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Hoadley Engines, Russell End-Shake Thresh-
ers, Pitts' Powers, Treadwell's Single-Gear Head-
ers, Whitewater Wagons, etc., etc. Send for our il-
ustrated Price List, to TREADWELL & Co., San Francisco.

McLAREN, PILCHER & BELL,
MANUFACTURERS, DEALERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.
MANUFACTURERS OF
CURREN'S PATENT HARVEST SHARPENERS,



[PATENTED JANUARY 30TH, 1872.]
The only successful Grinding Machine in existence for
Harvesting Machines. No farmer who has a Reaping
and Mowing Machine can afford to be without it. It is
simple, cheap, quick, durable and portable GRINDING
INSTRUMENT, which is adjustable to any kind of
knives, so that it will sharpen the section immediately,
without removing the cutter or unhitching. For par-
ticulars call on or address,
McLAREN, PILCHER & BELL,
605 Clay street, San Francisco. 15v7-6w
Agents wanted.



Took the Premium over all at the great Plowing
Match in Stockton, in 1870.
This Plow is thoroughly made by practical men who
have been long in the business and know what is re-
quired in the construction of Gang Plows. It is quickly
adjusted. Sufficient play is given so that the tongue will
pass over cradle knolls without changing the working
position of the shares. It is so constructed that the
wheels themselves govern the action of the Plow cor-
rectly. It has various points of superiority, and can be
relied upon as the Best and Most Desirable Gang Plow
in the world. Send for circular to
14v2-3m
MATTESON & WILLIAMSON,
Stockton, Cal.

THE
CELEBRATED MITCHELL WAGON



WM. ZARTMAN & CO.,
CARRIAGE AND WAGON MAKERS,
COR. ENGLISH & HOWARD STS., PETALUMA.
Are prepared to fill all orders for Buggies, Family Car-
riages, Side and End-spring Ranch Wagons, etc. Ranch
Wagons, from \$100 to \$250; Spring Wagons, from \$150
to \$250. Having the advantage of a large brick drying
oom for seasoning lumber, they will warrant their
work to stand the test of California Climate.
SPECIAL RATES TO GRANGERS. 12v7-3m

O. CREGO. S. O. BOWLEY.

CREGO & BOWLEY,
Importers and Manufacturers
—OF—
CARRIAGES and WAGONS,
No. 9 Merchant's Exchange,
CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top
and open Rockaways, Jump-seat Buggies, Track and
Road Sulkeys, Skeleton Wagons, Basket Phaetons of
the very latest styles and finest workmanship.
We would call particular attention to our fine stock
of Light Road and Trotting Wagons, made to order by
the following celebrated makers:
Charles S. Coffrey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey,
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to
sell on the most reasonable terms.
Also, a large assortment of single and double Har-
ness, of the most celebrated makers:
C. Graham, New York; J. R. Hill, Concord; Pittkin
& Thomas, Philadelphia.
Also, a full assortment of Dress and Light Blankets,
Fur and Lap Robes, Whips, Halters, Surcingle, etc., at
wholesale and retail.

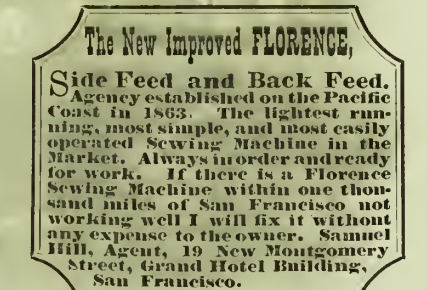
CREGO & BOWLEY,
No. 9 Merchants' Exchange, California street,
24v6-3m San Francisco.

H. C. SHAW,
STOCKTON, CAL.
Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros."
General Agent for the San Joaquin Valley for the
Vibrator Threshers, Studebaker Farm Wagons
and Improved Single Geared Headers.
The Baxter & Webster Single Gear Headers are built
only at my establishment. Address, H. C. SHAW,
14v7-3m Box 95, Stockton, Cal.

The Sewing Machine
—FOR THE—
GRANGERS.

NO COMBINATION! NO MONOPOLY!



Mr. I. G. Gardner, State Agent for the California
Granges, is authorized to make liberal terms to all
Grangers who purchase the FLORENCE. No combina-
tion against favoring the Grangers has ever been joined
by Florence Agents.

SAMUEL HILL, General Agent.
18v7-3m



PRICE, \$50. ap25-tf

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The New A1 Clipper Ship

FRIEDLANDER.....1,638 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,
320 California Street,
San Francisco.

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m 304 California Street.

NURSERY NOTICES.

O. W. CHILDS,
Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of
trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;
ORANGE TREES, SEEDLINGS;
LEMON TREES,
LIME TREES,
CITRON,
SHADDOCK,
POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for
beauty, and very prolific. The Chestnuts are delicate
in flavor and very large, and an almost endless variety
of rare, useful and ornamental trees.
Send for priced Catalogue. 24v6-6m

Ornamental and Evergreen Trees for Sale
at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of or-
namental Evergreen Trees, Fruit Trees of all kinds, also a
large lot of the Blue Gums, from six inches to 12 feet high,
at from \$4 to \$100 per hundred. A large lot of Cypresses,
Vines and Junipers of every kind. Green House Plants
and a large quantity of Roses. Maple and Laburnum
Trees for street planting. I would call the attention of
the trade to a large quantity of Australian and African
Timber Seeds, and especially Cedrus Deodare, or Dea-
vine Cedar Seeds.

L. M. NEWSOM,
East Oakland, 12th St., near Tubb's Hotel.
Send for Catalogue. ja10

PEPPER'S NURSERIES,
PETALUMA, CAL.

Having increased our facilities for growing Trees and
Plants, and permanently located our Greenhouses and
Tree Depot corner Washington and Liberty streets, we
are prepared to furnish Fruit and Shade Trees, Small
Fruits, Evergreen Trees and Shrubs, Flowering Shrubs,
Greenhouse and Bedding Plants, etc. Send for De-
scriptive Catalogue and list of prices.
Address, W. H. & G. B. PEPPER,
Petaluma, Sonoma Co., Cal.

PEACH AND PLUM TREES.
15,000 IN DORMANT BUD!

SEVEN OF THE BEST VARIETIES
Of Peaches and five of Plum. The Tinley Peach,
Georgia Freestone Seedling, the first offered in the States
its flavor being richer and superior to the finest of the old
varieties; it is the best for canning and shipping, and brings
double the price of any other Peach in market. Orders
promptly filled fresh from the Nursery.
BRYAN & DOMINGOS,
4v7-2m P. O. Box 157, Sacramento, Cal.

ALFALFA!
NEW CROP.

For Sale, choice lot of fine CALIFORNIA-GROWN
ALFALFA, in lots to suit, for cash, at market rates.
Our Seed, unlike that imported from Chile, is fine and
free from Mustard or other foreign seed. Vegetable,
Flower and Grass Seed, etc.

50,000 Ramie Plants; 100,000 Gum Trees.

Fine Plants, Trees, Bulbs, and all articles in the
line, fresh and good. Splendid Stock, at the old stand.

E. E. MOORE, Seedsman & Florist,
425 Washington St., - - SAN FRANCISCO.
SEND FOR CATALOGUE. 21v6-tf

THE ALDEN
Fruit Preserving Company
OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary
machinery for using the "ALDEN PROCESS," ac-
knowledge to be the best method known for
preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's
Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.
W. M. WHERRY, Vice President.
FRANK PYLE, Sec'y and Supt.
BANK OF CALIFORNIA, Treasurer.

11v7-6m
S. E. CUMMINGS,
1858. H. H. RALSTON,
1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission
House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washing-
ton, San Francisco.

Our business being exclusively Commission, we have
no interests that will conflict with those of the producer.
4v23-1y

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the
cheapest and best in the world.

GEO. W. SWAN & CO.,
Union Box Factory, No. 114 and 116 Spear street,
Agents for the Pacific Coast. 11v7-3m

PEA-FOWLS.

A FINE PAIR OF PEA-FOWLS, BETWEEN ONE AND
TWO YEARS OLD,

For Sale. Price, \$50.

Address, M. EYRE, Napa, Cal.
m2-4t

SHOULD BE KNOWN BY

GRANGERS,
FARMERS,
MINERS,
MILLMEN,
MECHANICS,
MANUFACTURERS,
FAMILIES,

AND ALL PERSONS ON THE PACIFIC COAST.

WHERE TO GET

The Best Labor at Shortest Notice.

Having taken new offices and enlarged my business in the most central location of San Francisco, (715 Montgomery street, corner Washington and Montgomery Avenue), I hope to receive the same liberal patronage as during the last six years of my Secretaryship of the Free State Labor Exchange, and later as its proprietor, (from April, 1868, to April, 1874). It is a known fact, and I feel convinced that on inquiry you will find among your neighbors many persons who have employed, through me, some skilled or unskilled labor, and who will endorse my services for sound judgment in the SELECTION OF HELP and EXPEDIENCY IN FILLING ORDERS.

MORE THAN ONE HUNDRED THOUSAND

Persons have been furnished by me with employment as

Blacksmiths,	General use,	Teamsters.
Book-keepers,	Grooms,	Woodchoppers.
Carpenters,	Laborers,	Feeders,
Cheesemakers,	Warehouse men,	Miners,
Engineers,	Sacksewers,	Painters,
Wagonmakers,	Buttermakers,	Sheepshearers,
Cooks,	Lumbermen,	Shepherds,
Farm laborers,	Machinists,	Tracklayers,
Gardeners,	Milkers,	Wheelwrights,

And in all other capacities—male or female. Consequently, when you want

GOOD RELIABLE HELP,

CALL ON OR ADDRESS LETTERS TO

A. ZEEHANDELAAR,

715 Montgomery St., San Francisco,

(Post-office Box 755).

A. ZEEHANDELAAR,

Formerly of the CALIFORNIA LABOR EXCHANGE,

EMPLOYMENT OFFICE.

Estate and General Business Agent,

715 MONTGOMERY STREET,

Corner Washington and Montgomery Avenue, S. F.

MALE AND FEMALE HELP

Of every description sent at the shortest notice to City and Country, Free of charge to employers.

Business Places, Houses, Lots and Farms Sold.
Partnerships negotiated. Farms rented on shares. General Commission and Collecting Business transacted.
Address your letters to P. O. Box 775. m9-16p

DOWN WITH MONOPOLY.

The Grangers' Favorite

AND

CHAMPION OF THE WORLD.



Wheeler & Wilson

IMPROVED

DRAW-FEED SEWING MACHINE!

IS THE ONLY LOCK-STITCH WITHOUT A SHUTTLE.

IS NOISELESS, SEWS FASTER, RUNS LIGHTER, AND HAS GREATER MECHANICAL SIMPLICITY THAN ANY OTHER MACHINE IN THE WORLD.

THE WINNER AT

LONDON, PARIS, VIENNA,

1862

1867

1873

DISTINGUISHED HONORS.

WORLD'S EXPOSITION,
VIENNA, NOV. 1, 1873.

"The Emperor of Austria has conferred the Imperial Order of Francis Joseph on the Hon. Nathaniel Wheeler, President of the celebrated Wheeler & Wilson Sewing Machine Company of New York."

The BEST is the CHEAPEST. Buy no Machine until you have seen the New "DRAW-FEED WHEELER & WILSON." It will last a lifetime. Every Purchaser made a perfect operator.

ALL MACHINES GUARANTEED.

SOLD ON EASY TERMS.

SPECIAL ATTENTION GIVEN TO ORDERS SENT TO

E. W. HARRAL, General Agent,

427 Montgomery Street,

SAN FRANCISCO.

20v7-1am-4m-11p

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable, Agricultural, and Flower Seeds.
Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,

RED CLOVER,
WHITE CLOVER
FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than Poor Ones!



OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

A few trils of Imported Dark Brahmas, of the celebrated Black Prince strain, for sale at \$4.00 per trio. Also, one trio imported Golden Polish, at \$30.

For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the world, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco.

8v7if

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock: one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure Whitefaced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California

ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-1f-16p2

BRONZE TURKEYS,

Largest and Finest Collection
on the Pacific Coast.

EMDEN GEES,

58 pounds to the pair, at maturity.

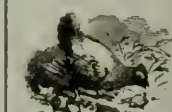
Eggs for Sale Now.
BRAHMAS, LEGHORNS, HOUDANS, HAMBURGERS,
COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.
Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address: M. EYRE,
Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.
17v7-2m-16p



EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz; Buff Cochins, \$4.00 per doz; White Faced Black Spanish, \$4 per doz; White Leghorn, \$5 per doz. Buff Cochins and Light Brahma Fowls for sale. Address G. A. DEAN, Pacific Straw Works, 12v7-3m-16p 335 Bush St., San Francisco.

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Gamas, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILLIPS, 608 Clay street, S. F., 11v7-1m



Volume VII.]

SAN FRANCISCO, SATURDAY, MAY 23, 1874.

[Number 21.]

Animal Food for Fowls.

In the spring, while the ground is moist, fowls that are allowed any range will procure for themselves a sufficient supply of animal food, in the form of various worms and insects; but as the dry season advances, the worms especially follow the moisture down, and soon get beyond the reach of the fowls. It then becomes necessary to furnish them with a substitute. Raw meat, however, and an excess, even of cooked meat, is apt to create a morbid appetite for this kind of food, which manifests itself in a disposition to pick at the heads and necks of their companions. To such an extent is this ravenous appetite carried, that they will pluck the feathers from the weaker members of the yard, for the small amount of animal matter adhering to that portion of the quill inserted in the flesh. This is but a mite; and merely provokes, instead of satisfying the depraved appetite, the consequences being disastrous to its victims.

The subjects, in their turn, soon become sufferers from the effects of animal food if an excess is allowed. The amount should be strictly limited, and not governed by the appetite of the fowls; for this seems never to be satisfied. If the meat is cooked it is more easily distributed among the fowls by removing the flesh from the bones. The latter, it is true, are very acceptable to the fowls, and, if bones simply stripped as cleanly as possible of the raw meat, are thrown among them, they will obtain a considerable amount of animal substance from the marrow and juices contained in them. But they become a serious annoyance if scattered about the premises, by attracting rats, dogs and other predatory animals. When the meat and bones are boiled the latter become more available as manure, or to be pulverized and fed to the fowls.

The water in which meat has been boiled for poultry feed, and that also in which meat for the table has been cooked, should be mixed with vegetable or other material to be fed to the fowls; it thus supplies their actual wants in regard to animal food, without really pandering to a depraved appetite.

How aggravating it is to lose a favorite dog, just as he is arriving at years of discretion! We remember well the sorrow with which we found all our endeavors unavailing to keep alive our first dog, a splendid Newfoundland, who rejoiced in the modest title of Louis Quatorze. The poor fellow was treated to enough sulphur and molasses, neatly concealed in pills of raw beef, to say nothing of other medications, to successfully doctor a whole regiment of dogs, one would imagine; and all in vain. Some one now writes to a New York paper: "I recently witnessed the application of a known medical fact in an unusual way, namely: the vaccination of a dog to prevent distemper. The pus was inserted in the ear, when the pup was only a few days old, and the effect was about the same as when the operation is performed upon a child." It is not easy to see how vaccination would remove danger of distemper; but if such a course of treatment be proved efficient, the discovery will be welcomed by all who love the most friendly and faithful of animals.

GRAPES ON YOUNG VINES.—A correspondent, over the signature of J. H., asks our advice in regard to allowing the fruit to mature on vines planted in January last. If our friend will turn to the *PRESS* of May 9, he will find our views on this question fully expressed in an article entitled, "First Fruits." We are glad, however, that our correspondent has made the inquiry, for it affords us an opportunity to reiterate the entreaty to pluck off the first fruit by all means. This advice is applicable to all fruits, but more especially to grapes; and we would say to J. H., pinch the clusters off your young vines. Precocity is as little to be desired in the vegetable as in the animal kingdom.

THE MACCIA RANCH.—Two miles below Sutterville, has been inundated and damaged to the extent of \$2,000.

THE RED BLUFF SENTINEL says: J. Worley, of Antelope valley, tells us that his prospects for a heavy crop were never so flattering as now.

Treating Textile Products.

Some time ago we made an inquiry for a machine capable of treating ramie fiber so as to quickly and thoroughly place it in a marketable condition. We now receive a letter from Mr. Chas. F. Dennet, of Brighton, England, in which he claims that he is able to answer the demand for a machine which will really do all that is desirable for the grower, the merchant and the spinner, speedily, economically and perfectly; producing the largest quantity of available fiber, without loss or injury, from the stems, thus bringing the crop from the hay and grass level up some sixty per cent. in value.

Mr. Dennet has given ten years' time and much money to promote the introduction, growth and use of the ihea or ramie plant—considered only a nettle, *l'ortie de la Chine* into America and European countries, and received for his valuable services in this direction the silver medal of France. He is certain, he says, that a new industry can be raised up in California, in the culture and manufacture of the ramie staple, which will add greatly to its present prosperity.

Mr. Dennet also sends us a description of his new machine for disintegrating, breaking, "scutching" or rendering supple ramie or rhea fiber, as well as flax, hemp, jute and all textile materials and vegetable matters generally, with or without rotting. We use the inventor's own words: Two grooved posts rubbing against each other, in a peculiar manner, cause the softening of the ramie, hemp, flax, or other material, at once removing the epidermis, wood, gum, gluten, etc., adhering to the matter.

The system of softening or rendering supple offers several great advantages over those hitherto adopted. First, in the lightness of the working of the machine. One horse-power is sufficient. Second, consists in that the material rendered soft or supple suffers no waste, no deterioration, no breaking, no pulling, tangling or mixing, so that the return in the combing is greater than that of any of the textile materials softened by the means hitherto known; not a fiber is wasted, injured or lost.

As to the stripping and breaking, it is effected in nearly the same way as the softening. Thus, suppose the raw hemp coming from the setting, the handful or quantity introduced to the machine passes first to the rollers, which break and bruise the straw; it then undergoes the friction operation by the grooved apparatus (worked by a come and go movement) and leaves by the second rollers almost entirely free from straw. Each machine comprises several arrangements of friction plates, and this number will vary, according to the nature of the textile material operated upon. In the center of each friction plate, when fixed or movable, and of the first or second kind, is made an opening to give passage to the textile material being treated. The very little wood still contained in the fibre is detached and a shake renders it perfectly clean. This applies equally to all textile materials. The time during which

the batch of rhea or ramie, hemp, etc., undergoes its friction or manipulation by the apparatus, may be modified by changing the pinions according as the nature of the material requires more or less softening. If it may happen that the workman in charge of this machine does not make very regular batches, the defect is obviated by springs with which the apparatus is provided, and the provision is made that the rollers may be equal upon each batch however thick it may be.

Such is the newly invented machine without going into more particular, scientific and mechanical detail, and by the aid of which can be treated, with or without rotting, by changing parts of the same machine, every kind of vegetable fiber intended for spinning, for which it can be rendered suitable.

The machine works speedily, does a good day's work with great economy in labor, affords a large return, and without causing loss of strength. It has been tried long enough by skilled and experienced men, and pronounced the thing *par excellence* for the ramie plant and the purposes for which it was designed; in short, says the inventor, it is the only machine that will take the raw material, turning it out in bulk per diem in a commercial condition, enhanced in value ready for the manufacturer, and any other process to follow.

By the aid of this new means of operating it has been demonstrated, it can be modified, transformed and appropriated for spinning the most varied raw textile materials; reducing, dividing and fining so as to draw therefrom the thin, delicate fibers intended for spinning for every denomination up to the finest.

FAIRS, PREMIUM LISTS, ETC.—A correspondent makes the very reasonable and timely request that the directors of agricultural fairs hasten the issue of their premium lists in order to give exhibitors proper time for preparation. We are also called upon to publish the dates on which the different fairs will be held; especially those of Sacramento, Sonoma, San Francisco and Santa Clara counties. Will the Directors of these societies please inform us in regard to these matters. We will in our next issue publish the communication of "So'ana" in full.

PREVENTION OF BORERS.—A correspondent sends us the following preventive against the ravages of the borer in apple, peach and other fruit trees: Mix one pound flour of sulphur and four pounds of hog's lard, in a suitable vessel; put on the trees any time in May or fore part of June, with a half worn paint-brush once each year, eight or ten inches up the tree to the ground. This will not destroy the grubs already in the tree but will prevent the borer from attacking them.

BEE KEEPERS AND THE TOADS.—Just as the champions of the toad have succeeded in having him acknowledged as the friend of horticulturists, the bee keeper comes forth and declares war on him as a destroyer of bees. Gardeners, stand by your friends.

OUR COLORADO EXCHANGES complain of a scarcity of farm hands and high wages.

Architectural Plants.

We are indebted to Mrs. Jeanne C. Carr of Oakland for the following notes descriptive of the illustration shown on this page.

Certain families of plants are eminently adapted to enhance architectural effects, for the adornment of terraces, for vases, and other ornamental features of our grounds. Conspicuous among these is the *Agave* or Century Plant, and next in dignity we may name the various species of *Fucca*, which range from Mexico northward on both sides of the Rocky Mountains. *Fucca gloriosa* and *F. filamentosa* are well known in Europe and the Atlantic States, and highly prized for the beauty of their waxen, lily-like blossoms. A still rarer species is now in bloom in the grounds of McClure's military academy at Oakland. It is similar in habit to the *Agave*, and about one-fourth the size of a well grown Century Plant. The leaves, of a rich glossy green, are very symmetrical and armed with strong black spines at their extremities; the immense blossom shaft rises from the center and at maturity is covered with countless flowers and graceful bracts; but its chief interest lies in the marvellous rapidity with which this floral fuller pushes upward and develops itself, when roots and leaves have completed their work. It is one of the plants whose growth can be literally seen and measured in its warm native home, and even here a delicate piece of apparatus could easily be made to record its expansion, hour by hour.

When the blossoming of the *Fuccas* is over, the plants should be left standing for a few months if it is desired to propagate them. They do not perfect their seeds in this climate, but the old roots often furnish buds from which suckers or stolons may be obtained for a new supply. The *Fuccas* deserve a place in every collection.

ABORTION IN COWS.—The report of the Department of Agriculture for April and May, in noting the health of stock throughout the country, says: Abortion was noted in Montgomery, New York, where 4 per cent. of the calves were lost. A few cases occurred also in Sussex, New Jersey, and Nemaha, Kansas, mostly among young cows. This disease is known to be quite prevalent in dairy districts, but its existence is kept as private as possible.

THE JEWETT BROTHERS, of Kern county, have clipped this spring about 50,000 pounds of wool. This is less than their clip last season, they having reduced their flocks. Last year they had over 100,000 pounds. To illustrate the difference in sheep, a neighbor of Jewett's clipped 2,000 sheep and got 8,000 pounds, while the Jewetts got 18,000 pounds from the same number. Blood will tell.

THE MARYSVILLE APPEAL, of Friday, says that John McIlmoil shipped yesterday by the down freight train a Durham cow which has been sold to a farmer in Oregon for \$500. She was raised and bred by G. N. Swezy, and is said to be one of the finest cows ever exhibited in this State. The cow goes to San Francisco by cars, and thence by steamer to Portland.

Wood has become very scarce around Grass Valley and Nevada, and has to be hauled from six to eight miles. A company has been formed for the purpose of building a flume into the timber region, so that a supply can be floated.

GEORGE McDONALD of Linda, Yuba county, who was so badly injured by a kick from his horse last week, is doing well, and his chances of recovery increasing daily. One of his eyes is totally destroyed, and the other is at present sightless.

A post-mortem examination on a valuable cow which died at the Hester place, San José, on Friday last, revealed the fact that the animal had been dieting on nails. Fourteen nails of assorted sizes were found in her second stomach.

THE SAN JOAQUIN RIVER is rising rapidly, and steamers now experience no difficulty in navigating as far up as Firebaugh's ferry.



Yucca or Spanish Bayonet.

CORRESPONDENCE.

Notes of Travel in San Luis Obispo County.

EDITORS PRESS:—Cambria is one of the little towns lying amid the foothills of the coast range near the Pacific, that is doing a great deal in the cause of humanity and general improvement and saying very little about it. Cambrians are too modest to tell the world what they are doing. This may be said, in fact, of this whole county. There are places even in this State, which, had they the natural advantages of this county or the steady, healthy growth that has characterized it, would have thundered it into the ears of mankind and made a great ado about it. Few people have ever heard of this town, and yet it is a very prosperous little village with perhaps five hundred families. It has a fine hotel, a half dozen stores engaged in general merchandising, three blacksmith shops, a flouring mill, two saw mills and a beautiful Masonic hall and schoolhouse. The town is located in the northern part of the county in a deep ravine on Santa Rosa creek, three miles from the coast, and about seven from San Simeon, where the landing is. It is surrounded with forests of pine and oak, and the scenery is picturesque and beautiful. The country is not thickly settled about Cambria. Some of the ranches are as good as any in the State. Ira Van Gordon's ranch, comprising a league of land, would be hard to beat anywhere. He has barley at this time on bottom and upland that stands five feet high, and heads as long as a man's hand. He is extensively engaged in stock raising, having some very excellent breeds of horses and cattle.

George Van Gordon, his son, owns the famous trotting horse, "John Chinaman." This horse is liable to worry the sporting community of California for some time to come, being young, healthy and improving all the time. He has always won wherever he has been entered, and there is no longer any stock in this county to run against him.

There are some beautiful farms near this place on Santa Rosa creek. The Denise ranch is among the best farms there. Mr. Baker also has a place that does the eyes good to rest upon. These are good improved farms well stocked and cared for. The land is rolling and rich. The upland seems to be as fertile in products as any.

On the top of the mountains about Cambria there is good grazing. The feed is the red-topped bur clover and silfiera. The stock does well on this. The bur clover-seed is excellent feed when all the grass has become dry, late in the summer, or in the fall.

Just now, the folks of Cambria belong to the mining class rather than agricultural. They are all interested in the new Cambria mines, located in Pine mountain region, close by.

The Cinnabar Mines.

These new mines are truly wonderful to contemplate. Little has been said about them. Work has been progressing on them for over two years now; and the developments are flattening, to say the least. There are several genuine lodes, and they seem to be mammoth in extent, and almost fabulous in richness. The Keystone and Gibson & Phillips have already been sold for \$30,000 and \$40,000, respectively. They are only claims of from 1,500 to 2,000 feet in extent upon these lodes, which can be traced for many thousand feet on the surface. Cinnabar chimneys rise for hundreds of feet in the air along these lodes. The mines are from 10 to 15 miles from Cambria. Of course, there is much excitement throughout the whole county about these fresh discoveries. Furnaces are going up on several of the claims, and it is likely that the northern part of this county will become extensive in mining interests soon.

There is abundant wood and water close by to aid in the working of the mines. The Josephine mine, 10 miles north of Cayucos landing, in the same range, is being worked very successfully. The company has a small furnace, and are reducing ore; they have shipped over 100 flasks already. The Mahoney mine, owned by a party from San José, is located 15 miles from Cayucos landing. It was discovered last summer by a Spanish boy. It was purchased by Mahoney & Co. for almost nothing. They have a furnace at the mine, and are getting rich out of it. This week they shipped ten flasks of quicksilver. The ore is very rich. Men are making good wages in the Oceanic—a claim at the head of Santa Rosa creek—by retorting the ore in gun-barrels. This is told to me for a fact, and, having seen the character of the rock, I believe it.

Old Creek and Cayucos.

These are points worthy of mention in this correspondence. Cayucos landing has recently come into note. It is located in the north-east bend of Estero bay. This is the deepest indentation of any place along the coast. It is the nearest point to Tulare lake of any on the coast. There are a few houses recently put up near the landing, and there is a prospect for a town this summer. The harbor is the best perhaps in the county sea-board if we except San Luis Obispo. It is formed by a reef laying southwest of the harbor running about east, southeast. It is approachable at any time for vessels drawing from twelve to fifteen feet of water. Mr. James Cass, who owns a controlling interest in the landing, informs me that he

will extend the wharf out just as fast as the business warrants him in so doing. The wharf is now 80 feet long. Two steamers put in here this week. Large quantities of butter, cheese and other produce are shipped from this point every week.

Mono.

This is a little town struggling for life and recognition, situated seven miles down the coast from Cayucos or Old creek, and twelve miles west of San Luis Obispo. It is situated on a beautiful little bay laying directly east of the celebrated Mono rock, and approachable from the sea-board by two small channels on either side of the rock, said to carry sufficient depth of water for small steamers. The town is not more than a year old. It has two stores, a hotel, several saloons, a school house, and perhaps fifty residences. It is surrounded by a good farming country. Mono seems to be unfortunate in one respect. They are in a great degree dependent on shipments, and thus far they have not been able to secure the permanent assistance of steam communication with their little town. The Grangers have a busy lodge in Mono, and are doing good work. Efforts are being made to secure the permanent services of some line of coasting steamers to make regular trips into Mono, which, if it can be effected, will greatly enhance the value of property there and increase its commercial prosperity.

Mono Rock

Is one of the most prominent land marks on the coast. It is a grand old granite rock that stands 530 feet in its boots in the sea, and contains about forty acres. It may be seen plainly twenty-five miles at sea. It belongs to the government, and Uncle Sam may yet put a lantern upon it to guide the mariner along this rock-bound coast. Mono rock stands as the great marker of the ages. The waves of the century have lashed against it, and yet it stands firm and inflexible.

Cambria, May 15th.

Crops, Weather, Etc., in Arizona.

EDITORS PRESS:—The weather has been variable here for the last ten days. We had two or three days hot enough for July, then some very windy weather for three or four days, and to-day it is blowing and storming and is quite cold too.

The grain crops are looking remarkably well this season, in this valley. The low prices of grain last year disheartened our farmers somewhat, and the great freshet that caused a great deal of trouble with our irrigating ditches, prevented them from sowing as large crops as last year. But, as though Nature was determined that about a certain quantity should be raised, anyhow, the grain fields sprung up, all over the valleys, with volunteer crops of barley and wheat, and to-day there is as good a prospect of a large crop as I have ever seen in the country. The volunteer crops look even better than those that were put in regularly. What is the cause of this? Have we been sowing our grain too deep? The custom is to irrigate the ground, then sow the grain upon it, and plow it in—finishing off with a harrow. But if there is any teaching in the volunteer crops, grain ought not to be put so deep in the ground. What do you think about it? Our farmers have not been noted at this place for deep plowing, but I am at present inclined to believe that we have been covering our seed too deep. The great trouble is in getting grain to come up that is covered lightly. I mean next year to try an experiment or two in that direction, and find out if I can what Nature's secret is.

Our district court has been in session, and just closed. We did not have a criminal case on the calendar. Don't that speak well for our community? Our county (Maricopa) contains about 1,800 inhabitants, and not a crime among them for six months past. Can any of your California counties beat that?

ALOOF.

Phoenix, Arizona, May 8, 1874.

A Favorable Locality for Beet Sugar.

EDITORS PRESS:—As you have, through the columns of your journal, solicited correspondence regarding the beet sugar interest, I embrace the opportunity to place before you the many advantages which I deem this place possesses in the way of supporting an industry of the kind referred to.

Point Arena lies in latitude 38° 55' north, and by water is about 96 miles from San Francisco. The country comprises, in extent, 30,000 acres of land, hill and valley. The point projects into the sea six miles from the coast line proper, and is in shape, triangular, with a base 15 miles long. Of this extent only about 3,000 acres are farmed, producing annually 60,000 bushels of small grain and 20,000 sacks of potatoes, besides 1,500 tons of hay. The soil is exceedingly fertile and peculiarly adapted to the raising of the sugar beet, as numerous experiments bear witness. The sugar beet here, with but indifferent cultivation, attains an enormous growth, and contains a large percentage of saccharine matter. The whole region is well watered, streams emptying into the sea at intervals of a mile or so. Chief among them is the Garcia river, which finds its way through a valley of rich alluvial soil, the accumulated deposits of successive freshets. There is no such thing as a failure of crops here; a plentiful yield is always insured by the dense fogs which prevail over this part of the

coast during the summer. The Garcia bottoms alone would amply suffice to furnish material for an extensive sugar factory.

Timber abounds in inexhaustible quantities. Among the many varieties may be mentioned redwood, fir, spruce, pine and oak.

There are in operation here several large saw mills and a paper mill, the latter having a daily capacity of 100 reams of wrapping paper. Point Arena landing place is the only one between Bodega and Humboldt bay, in which a vessel can lie to a wharf and load and discharge. On the extreme point is a fine lighthouse by which navigation along this part of the coast is rendered safe, in a great measure.

Taking into consideration our nearness to San Francisco, the salubrity of our climate, the productiveness of the soil, together with its immunity from failure of crops, the low rate of freights, the great variety of timber here found, and also that lumber can be obtained from our mills at nominal rates, and it certainly makes a showing in the way of facilities for the establishment of a beet sugar factory which I am not aware any other place on this coast possesses. This place is connected with San Francisco by telegraph.

L. G. MORSE.

Point Arena, May 13th, 1874.

SHEEP AND WOOL.

Scottish Sheep Farms and Farmers.

The size of some of the Highland sheep farms is to be reckoned by miles, not by acres, and the stock, as in Australia, by the thousand.

The largest sheep owner, perhaps, that the Highlands ever knew was Cameron of Corrieholme, now dead. He was once examined before a Committee of the House of Commons, and came to be questioned on the subject of his ownership of sheep. "You may have some 1,500 sheep, probably, sir?" quoth the interrogating M. P. "Aibhins," was Corrieholme's quiet reply, as he took a pinch of snuff; "Aibhins I have more nor that." "Two thousand, then?" "I believe I have that and a few more, forbye," calmly responded the Highlander, with another pinch. "Five thousand?" "Ou, aye, and a few more." "Twenty thousand?" cried the M. P., capping with a burst his previous bid. "Ou, aye, and some more forbye," was the unperturbable response of Corrieholme. "In heaven's name, how many sheep have you, man?" burst out the astonished catechist. "I'm no very sure to a thousand or two," replied Corrieholme in his dry laconic way, and with an extra big pinch; "but I'm owner of 40,000 sheep at the lowest reckoning."

Lochiel, known to the Sassenachs as Mr. Cameron, M. P., is perhaps the largest sheep owner in Scotland. He has at least 30,000 sheep on his vast tracts of moorland on the braes of Lochaber. In the Island of Skye, Captain Cameron, of Talisker, has a flock of some 12,000; and there are several other flocks, both in the islands and on the mainland, of more than equal magnitude. Sheep-farming is, at least in many instances, an hereditary avocation, and some families can trace a sheep-farming ancestry very far back. The oldest sheep-farming family in Scotland are the Mackinnons of Corrie, in Skye. They have been in Corrie for 400 years, and they were holding sheep-farms elsewhere even earlier.

The Macraes of Achnagart, in Kintail, have paid rent to Seaforth for two hundred years. For as long before as they had held Achnagart on the tenure of a bunch of heather exigible annually and their fighting services as good clansmen. Two hundred years ago, an annual rental of £5 was substituted for the heather "corve;" the clansmen's service continuing and being rendered up till the '45.

Now, clanship is but a name; a Seaforth Mackenzie is no longer chief in Kintail, and the Macrae who has succeeded his forbears in Achnagart finds the bunch of heather and the £5 alike superseded by the very far other than nominal annual rent of £1,000. The modern Achnagart, with his broad shoulders and burly frame, looks as capable as were any of his ancestry to render personal service to his chief if a demand were made upon him; and very probably would be quite prepared to accept a reduction of his money rental if an obligation to perform feudal clan-service were substituted. Achnagart, with his £1,000 a year rental, by no means tops the sheep-farming rentals of his country. Perhaps Robertson, of Achiltie, whose sheep-walks stretch up on to the snow-patched shoulders of Ben Wyvis, and far away west to Loch Broom, pays the highest sheep-farming rental in Ross-shire, when the factor has pocketed his half-yearly cheque for £800. —Gentleman's Magazine.

PRODUCTION OF WOOL IN FRANCE.—The production of wool, says the *United States Economist*, has been stationary in France since 1869. The low price which prevailed in that year checked the production in Australia, South Africa and the Cape, to some extent, and had a still more unfavorable effect on that of Europe and the United States. Thus, the number of sheep in the United Kingdom decreased from 35,607,312 in 1868, to 31,403,500 in 1871, although it has since recovered to 33,914,088 in 1873. In the United States a decrease of 10 per cent. in the number of sheep took place in 1869. Prussia has 2,750,000 sheep fewer than in 1867, so it may, in the absence of statistics relating to the rest of the continent, be assumed that the production of wool in Europe has diminished to an extent equal to the increase since 1869, of 10 per cent.

THE DAIRY.

Annual Receipts per Cow.

At the late meeting of the Northwestern Dairymen's Association several statements were made showing the receipts per cow by dairymen in different parts of the Northwest. From these and from reports received by the Secretary we take the following:

I. Bois & Son, Marengo, Ill., claim to have received more than \$100 per cow each year for three years past. They are now milking 134 cows; feed very high; have the cows calve in fall. The average price of butter last year was 37 cents. The sour milk is fed to hogs, from which a considerable portion of the profits is received; one-half the pork being credited to milk.

W. C. White, Kenosha, Wis., makes cheese during all the time his cows give milk. His receipts per cow have not fallen below \$70 per year, for a number of years.

E. H. Seward, Marengo, Ill., sells his milk to Boies' butter factory at an average of 1 cent a pound. He receives most of the sour milk back and feeds to calves and hogs; credits the milk with one-third of the pork made. He sells the calves at higher prices than usual. He feeds very high; has his cows calve in fall. In 1871, he received \$2,425 from 35 cows—average, \$69.30; in 1872, \$2,810 from 40 cows—average, \$70.25; in 1873, \$3,205 from 40 cows—average, \$80.12. In 1873, the average receipts for milk alone were about \$66.50 per cow.

Mr. Boies reports for O. S. Tanner, of Marengo, an average of \$82.14 per cow.

Caleb Rich, Marengo, with 14 cows, reports receipts in 11 months of \$1,352.40—average, \$96.60. Excluding calves and pork, he received \$1,205.40 net, for butter and cheese—average \$86.10.

John McLain, Woodstock, sending milk to Chicago, received, net, average of about \$86 per cow for 1873.

Benj. Cox, Elgin, Ill., reports \$2,032.20, receipts for milk, and \$145.96 for calves from average of 28 cows—total average per cow, \$77.75.

J. R. McLean, Elgin, Ill., selling milk to factory from 15 cows, the whole number, received average of \$61.91 for milk and calves.

Burchard & Muzzy, Yellowhead, Ill., report sales of 7,766½ pounds of butter for \$2,566.83—from 32 cows—average, \$80.21.

Hiram Smith, Sheboygan Falls, Wis., reports from dairy of 50 cows, receipts for cheese, butter, calves and pork, an average of \$58.09.

We give these reports as received. Some of them are remarkable. It should be said that, probably, in some cases the number of cows reported is less than the total number, the design of the reports being to give a number equal to the average number of milk during the season. It is also difficult to compare these results with each other. Some parties sold their milk direct; others made it into cheese or butter and count gross receipts. —Practical Farmer.

RAG-WEED INJURING CHEESE.—From one of our exchanges, and we are unable to tell which one an item has been clipped which says that a cheese manufacturer in Kentucky reports that in that State when grass is scant, in the driest part of the season, cows will crop rag-weed, which gives a bitter taste to the milk. The reply to this is that heating milk to one hundred and fifty degrees for turnip taint has been found entirely successful. The writer adds: When milk is so heated soon after milking the turnip taste is entirely driven off, and the butter made of first quality. If the milk on being received at the factory were heated to one hundred and fifty degrees, and then cooled rapidly to the proper point for cheese-making, the rag-weed flavor would be dissipated. It would be easy to test this, and if it succeeds, it would remove a difficulty now likely to prevent extensive dairying in Kentucky. Heat will expel most taints, and that in the future this will be used to get rid of floating curd and many other serious troubles in cheese-making is probable. —Ohio Farmer.

MILK VS. IMPORTS.—Statistics show that the value of the annual products of milk is nearly equal to the value of imports for the year ending June 30th, 1871. Milk consumed as food, at three cents a quart, is worth annually \$275,000,000; butter, \$195,000,000; cheese, \$29,000,000; condensed milk, whey and buttermilk used in raising pork, \$10,000,000; making a total of \$509,000,000. The imports of all kinds are worth \$520,000,000. So that the American cow's udder is squeezed every twelve months an equivalent to one-fifth of the National debt. All the greenbacks and the postal currency in the country could buy only four-fifths of it. But when we add to this the quantity of water made into milk for our towns and cities, the greenbacks would be literally nowhere! —Western Rural.

WHEN a boy is put to farm labor he is given an old hoe, a fork with a broken tine, a round-edged axe, a scythe that nobody else will use, and is expected to work more hours than a hired hand, to do all the chores, to build fires in the morning, to run on all errands, to turn the grindstone and to go to meeting in cowhide boots. With this experience he does not like farming; and lecturers, editors, members of Congress and petty lawyers mourn because so many young men go from the farm to the city.

HOME AND FARM.

Harvesting Root Crops.

The one thing that makes labor in the root field so unpalatable to Americans, is the constant stooping that it nearly always involves. I obviate this almost entirely in harvesting by using the hoe, ground sharp. With this in your hands, begin at the outside row, and as you follow it down, cut the top clean from each turnip with the blade striking right or left, as is most convenient. The impetus given to the top will carry it about half way to the adjoining row. Returning in this, you strike in the same direction, and so proceed. After a few minutes' practice, two or three tops may be cut with one blow, and almost anyone can "top" as fast as he ordinarily walks. After the field has been thus "topped," it will present this appearance: Two rows of turnips will alternate with each row of tops. In pulling the roots, strike the blade of the hoe back of the turnip, and with a quick jerk pull it toward the adjoining row, pulled or unpulled. The blade of the hoe cuts many of the lateral roots, thus rendering the task of pulling comparatively easy. After topping and pulling, a row of turnips will alternate with a row of tops; and in hauling, the wagon should be driven between these rows of turnips. If the turnips are left out in the field after pulling a few days, the rains and frosts common to the fall of the year, with the tumbling in and out of a wagon, will leave the turnips as clean as need be. I have myself topped and pulled by this method 400 and 500 bushels in 10 hours.—*N. Y. Tribune.*

LAND WASHING.—One of the greatest objections to our farming operations in this country is the tendency of our rich soil to wash off and rapidly deteriorate in fertility. Another misfortune is the indifference with which many farmers treat this important subject. It is plain to any observing mind that a field of rich, fertile soil will yield double the amount of one that has been thus neglected, and suffered other mal-practices. I have in my mind now the case of a so-called farmer who allowed an old roadway, a quarter of a mile in length, to wash so deep that a plough could hardly cross it, when ten minutes' work with a spade would have prevented it. And often we see large, impassible ditches form through valuable land, with no effort to stay the fearful waste. This, with fearful force, verifies the old saying, "a stitch in time saves nine." A few hints in regard to remedies are in order. First, the land can be ploughed so as to help the case by running the furrows crosswise of the rills. I prefer to have the water flow in straight rills at regular intervals, and to prevent these from washing deeper, back corn-stalks, large green weeds, fine straight brush, etc., in the bottom, and allow the grass and weeds to grow in these ditches. Thus the water has something to wear on, and with a little care much soil can thus be saved. But the best manner to preserve the fertility of the soils is, as any intelligent farmer knows, to seed down to grass, especially clovers, not forgetting the importance of the proper use of manure.—*Western Farmer.*

BERMUDA GRASS FOR STOPPING WASH.—A writer in the *Rural Sun* says: In answer to your correspondent who wants to know if setting (his clay hill) with Bermuda grass will be of service in stopping the washing, etc., I would say that without doubt it would. It forms a most perfect sod, the roots permeating the soil most completely, and the spears of grass stand so thickly that they hide from view every inch of the surface. A hill-side once set with this grass before washing into gullies, could never become so washed, however steep it might be. As a proof of its usefulness for this purpose, it is used further south for preserving railroad embankments and the levees on the Mississippi river.

Where the seed in sufficient quantity could be obtained, I am unable to say. I read an article lately on this grass, maintaining that it did not perfect its seed in this latitude. This, I am satisfied, is a mistake. But it is a shy bearer of seed. My opinion is that the surest and best way to get a stand of this grass would be to plant small portions of sod about ten feet apart each way, or closer if desired. This done and the weeds and bushes being kept down, the grass would soon occupy the ground, and form a sod to the exclusion of all other grasses. It throws out runners like the strawberry plant, which will grow several feet in one year. These runners have joints at about every inch or two, at which roots penetrate the earth and spears of grass grow up.

THE VALUE OF A TON OF MARL.—According to Prof. Cook's analysis, a ton of green sand marl of New Jersey contains the following chemicals, which, at Philadelphia wholesale prices, makes its valuation as below stated:

Lime.....	106 lbs. at.....	\$ 0.49
Potash.....	96 " " 10¢.....	10.08
Sulphuric acid.....	12 " " 2 ".....	0.24
Phosphoric acid.....	26 " " 40 ".....	10.40

\$21.12

This is, of course, assuming that the ton of marl is perfectly dry. As it is usually purchased by farmers it contains quite a large per cent. of water, which must be considered in the estimate of value. These valuable chemical fertilizers can be set free in the marl by composting it with swamp muck or with lime, thus rendering them available for the needs of vegetation.—*Practical Farmer.*

What Crops Leave in the Soil.

Amid the weariness of all that is written about what crops take from the soil, of how they rob of the ability to produce succeeding crops, it will be a relief to look at the other side of the question and consider what they leave in the soil, and how they add to its future producing power.

The following is a statement of the results of instructive experiments made in 1869 at the experimental agricultural station of Proskau, in Germany, by Drs. Weiske and Werner. They selected given areas in different places in each of several fields in which various crops had been grown. These they dug out to the depth of ten inches, carefully washing out the soil and weighing and analyzing the stubble and roots remaining. The following table shows the figures, calculated in English pounds, per English acre:

STUBBLE AND ROOTS REMAINING AFTER HARVEST.

	Total Dry Substance.	Organic Matter.	Ash.	Nitro- gen.	Pot- ash.	Phos- phoric Acid.
Lucern.....	9,702	8,498	1,204	137	37	40
Red Clover.....	8,953	7,026	1,327	193	82	75
Sainfoin.....	5,952	4,925	1,027	124	48	30
Peas.....	3,234	2,560	674	67	11	15
Buckwheat.....	2,293	1,736	467	48	9	11
Rye.....	5,283	3,030	1,653	66	32	26
Wheat.....	3,490	2,396	1,094	24	19	12
Oats.....	3,792	2,543	1,449	27	25	30
Barley.....	1,999	1,617	382	23	10	12

These figures relating to a single experiment are, of course, of only general value; at the same time they are in a general way very useful. They show, for instance, that the more delicate-rooted grain crops leave comparatively little residue in the soil—barley less than two-fifths as much as rye, and only about one-fifth as much as red clover, which, in return for its few quarts of seed, after having yielded an abundant crop, leaves for the enriching of the soil, about four and a half tons of root and stubble. Nor is the total amount of material left in the soil of more consequence than the quantity of particular elements. Red clover leaves 193 pounds of nitrogen, while wheat leaves only twenty-four pounds. The former leaves more than four times as much potash, and more than six times as much phosphoric acid as the latter.

These comparisons sufficiently explain the great and well known value of clover as a preparatory crop for wheat, and for all other crops which are not manured with nitrogen, potash and phosphates. In the fields in which this examination was made, the clover of an acre left nitrogen enough for 116 bushels of wheat, phosphoric acid enough for 114 bushels, and potash enough for 73 bushels. It should be remembered, too, that most of this material is left in the best possible condition for use—as a part of readily decaying roots well distributed through the soil, and penetrating it to a considerable depth. Indeed, particularly in the case of the clover, there would be a very considerable amount of root below the ten inches, to which only the investigation was carried.

Whether (as is unknown) the nitrogen of the clover comes wholly or partly from the soil or from the air, it is certainly taken from a condition in which it is of little use to most crops, and is converted to an available one; so that, practically, the clover is a creator of nitrogen in the soil, as it is an efficient purveyor of its latent supply of potash and phosphoric acid.

Root crops were not included in the examination, but it is well known that they leave in the soil only a few fibrous roots, which can add but little to its stock of fertility; and experience teaches that of all our crops roots, unless fed off upon the land, are the most exhausting.

A corresponding result would be found to obtain in the case of Indian corn. In fact, the value of any crop to the crop which follows it is found in practice to be very nearly what the above table would indicate, except in the case of oats, which injure the soil by mechanical action, the roots "clodding" the ground into lumps. The crop is more deleterious than barley, although leaving more residuum to the soil.—*American Agriculturist.*

SMALLER FARMS.—What we seem to require just now as much as anything, is better and sounder cultivation. The idea that large farms are necessary is not, we believe, demonstrable, and the effect of accepting it is likely to be mischievous in the extreme. Varied farming, patient and thorough tillage, closer attention bestowed on smaller areas, will soon prove that one hundred and sixty acres is enough to support a man and his family, not only well but in moderate competence. Of course those who are making haste to be rich will not relish this advice, but then it may be said with perfect truth that those who are making haste to be rich are not likely to prove the most useful class in building up the State. And what we want to-day is rather State-builders than mere money hunters.—*Sacramento Union.*

A FARMER living a few miles back of West Point, N. Y., had an old horse of whom he was getting tired, and being unwilling to kill him, concluded to take him across the river, ten miles back in the country, and leave him to whatever might happen. Three days after, he went to his stable and there stood his horse in the stall. He had walked down to the river, and the ferryman, knowing the horse, gave him a free passage, and so he found his way home. His master was so affected by the exhibition of the old horse's love of home that he promised to take care of him to the end of his life.

TOBACCO can be grown and cured in Wisconsin at a cost of five and a half cents a pound.

HORTICULTURE.

Sun-Dried Fruit a Failure.

Owing to the peculiarity of our climate, a climate in which fruit may be dried as rapidly and with as little expense as in any other country, the system of drying fruit in the sun is practically a failure. It may strike those who have thought but little on the subject, and who have had no experience, as a strange proposition; but, to the practical man, the man who has dried fruit in the sun, and kept the same any length of time before disposing of it, and to the merchant who has been dealing in sun-dried fruits, and had box after box returned to him, it is very plain and easily understood. In whatever country you dry fruit in the sun, exposed to insects, they will deposit more or less eggs upon it. If that country be a cold one, like the Atlantic States, for instance, the cold weather generally sets in so early that these eggs are not hatched out in the fall, and the fruit is consumed before the warm weather of the following spring; and the consumers are none the wiser for having consumed with the fruit millions of insect eggs. In this State, however, these eggs hatch out in the fall, and very generally destroy the fruit before it is required for consumption. Our dealers generally understand the danger of dealing in sun-dried fruit; and many of them have suffered by so doing; and we, in the line of our business, have also had a little experience, which we will relate. While Secretary of the State Agricultural Society, we made an exhibition of some of the products of our State, at the International Exposition at Paris. At the State Fair of 1866, Briggs Bros., the extensive orchardists of Marysville, exhibited a number of boxes of dried fruits of various kinds, put up in a good shape for commerce. The fruit itself was in splendid order, and attracted general attention at the fair, and we solicited and obtained the whole to send, among other articles, to Paris. After the fair, some two months elapsed before it was time to forward the goods to New York, and the boxes remained in a safe place, undisturbed. When ready to ship, we opened one of the boxes, and found the fruit had turned to a mass of worms. Not one box was found but was in the same condition.

The peculiarity of our climate, therefore, requires that our fruit be dried by artificial means, or that all the sun-dried fruit to keep or to ship, be put through some process by which the insects eggs may be killed. Unless subjected to some process that will effect this, it is neither safe to the individual, or good policy to ship it out of the State, or to sell it to those who desire to keep it for winter use.—*Sacramento Record.*

Thin Your Fruit.

EDITORS PRESS:—Now is the time to save the fruit crop. A frost which kills the fruit is a blessing when compared with the overloading of the trees this year. The fruit will be worthless, and the trees ruined, unless relieved of part of their burden.

If you have a few trees, you can soon pick off four out of five apples or peaches. Don't leave any two nearer than four inches apart. If you raise fruit to sell, you must thin, or make no money.

More boxes of good fruit will grow on a tree than small fruit. When you thin off early in the season, all the sap of the tree is thrown into what remains, and the tree feels and exhibits a new life. A tree which will produce four boxes of small apples, worth 25c. per box, well thinned, will produce five boxes, worth \$1 per box. A family will use two boxes of good apples in the same time they would use one of the small, bad ones.

Thin your apples, peaches, plums, apricots; and continue the work, if you wish to make money out of fruit. It costs money, but it pays \$20 for every dollar spent. This will be a ruinous year on orchard men, unless they thin off the fruit. W. W. BRIER.

LOOK OUT FOR THE WEEDS.—The early growth is mainly weeds, and the careful husbandman should watch for and check them. In and among roses, verbenas, geraniums, the Dutch scuffle hoe is the best implement that can be used. It cuts, if rightly made, with a double edge, back and forth, and as the operator walks backward it cleans the ground completely about an inch deep of all weeds, and leaves the surface soil loose and pliable, or rather assimilative to the absorption of heat from the mid-day sun and night moisture. In and among the rows of cuttings of gooseberries, currants, grapes, and also among the rows of peas, parsnips, carrots, beets, etc., that form the nursery and vegetable garden, the iron or steel rake, varying in its width to meet the rows of from eight to sixteen inches—is the implement to be drawn back and forth, the operator going backward and leaving the surface ground untrodden and subject to sun and rain.—*Ohio Farmer.*

DR. MASTERS, editor of the *London Gardeners' Chronicle*, replies to an inquirer that he knows of no means of killing at once all the wool-lice in a vineyard, but they can be materially thinned and finally got rid of entirely by enticing them into inverted flower-pots partly filled with hay, and then scalding them with boiling water.

Manure for Orchards.

An essay read by Washington Gilbert, of Bath, Me., before the State Pomological Society, is now printed in pamphlet. It is matter of history that Maine was once successful with what our author calls the "hardy, fragrant and salubrious apple;" success is still sure on new soils; and he maintains that want of culture is the cause of the general "decrepitude and decay." This condition is characterized as disgraceful as it is deplorable, since it can be remedied by means within easy reach. The trees are simply starved. Interesting instances of the effect of good cultivation are cited; farmers are advised to buy Western corn and feed it during winter to fattening steers; to grow mangel wurzels among the young trees, and thus secure another supply of material which may be advantageously transmuted into manure. Again, sheep, swine and poultry may become worthy occupants of the orchard. In conclusion, the profits of apple-trees under high cultivation are declared to be so great as to repay for all the intelligent care and labor which may be bestowed upon them. "If any farmer is ambitious to bequeath an estate of \$100,000, he has only to leave his heirs well-planted and well-kept apple orchards of 100 acres. If he is less ambitious let him plant and sustain 50 acres, or 20, or 10, or five, or at least one acre, if that is the measure of his capacity. If he can do no more, let him not fail to plant one tree and nourish and protect it. The petted tree will learn to lean on him as the child looks to the parent for protection and sympathy; and it will return to him a grateful and exceeding great reward. His children shall disport themselves in the shadow of its branches, and find health and solace in its fruit; and his children's children to the fourth generation, when perchance, no other monument remains to declare the story of his life."

Crops Etc.

The following is a synopsis of the leading information furnished by the *National Reporter*: The unusual backwardness of the season has delayed very much all kinds of spring work, and at the date of the last full report, prepared April 15th, there had been practically no seeding at all in the State of Minnesota, and but little plowing in Wisconsin. Of the above mentioned about forty per cent. of the estimated area had been sown in wheat, and but little more than one quarter in oats. The average area sown in wheat in the States of Illinois, Iowa, Missouri and Wisconsin, was 87 per cent. of the estimated probable total; 62 per cent. of the oats, and of potatoes 30 per cent.

The prospects of the fruit crop to date are of the most encouraging character, and the reported damages by frost, excepting in portions of Delaware and Maryland, is inconsiderable. The condition of the roads at the date of the report was, south of the forty-fifth parallel, uniformly bad, owing to the prevalence of wet weather; while north of that line the ground was generally frozen and the roads in fine condition.

Wheat in the Southern States is fine, though it has sustained some injury by the constant rains which have fallen recently.

DAHLIAS.—If desirable to increase dahlias by cuttings, do so at once; in a brisk heat they will root in a few days and be established by planting-out time. We consider the dwarf varieties the most desirable; the plants flower earlier and more abundantly, and the plants do not require stakes to prevent the windbreaking them; but, of course, when exhibition flowers are required, the size of plant and abundance of bloom is a secondary consideration, as the buds are usually trimmed to a small number, and there are not sufficient varieties among the dwarfs to make up a collection for competition.—*Horticulturist.*

GUANO VS. PHYLLOXERA.—It was announced at a recent meeting of the Académie des Sciences, that the methods adopted in the department of the Hérault for flooding the vineyards with water strongly infiltrated with guano, have proved perfectly successful in destroying the Phylloxera, and arresting all traces of disease produced by its presence. It is reported that by the use of these guano floodings the most severely attacked plants have been restored to a healthy condition in a very short period, and have exhibited their normal vigor and productivity. Various experiments are at present being tried in the department to ascertain the simplest and most efficacious method of employing the guano; and also to test the practicability of the schemes that have been proposed for destroying the insect by the abstraction of the oxygen from the surrounding medium; but this process, although it may be feasible in theory, is beset with almost insurmountable practical difficulties when it has to be applied to widely extended areas.

MANY persons fail with the apricot on account of the situation selected. If we give it a southern exposure, the blossoms will likely enough expand before the danger from late spring frost is past, and the consequence is a blasting of the prospective crop. A specimen in a neighbor's collection planted on the north side of the house, and where it can only enjoy a little sunshine late in the afternoon, has given good results. Place it in such exposures; attend to the "borer" at the root; wage a war of extermination against the curculio; and gather apricots almost as fine as do the Mormon horticulturists at Salt Lake City.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: L. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

Is the Grange Only for the West?

In some of the older agricultural districts of the East there are indications of a selfish contraction at the approach of the Grange movement. They are not quite sure about this thing. They say that by cheapening transportation, and enabling the wheat-growers of the West to place their products upon the market, they may, possibly, make wheat-growing unremunerative to themselves. This view has been put forth in some of the rural papers of the East, and there is evidently a small party even now engaged in creating barriers against this Western wave of social and financial reform.

Those who are thus endeavoring to confine the Order of the Patrons of Husbandry to the West, condescendingly admit that its social aims are broad and worthy of general adoption; but they assert that the material benefits to be derived from it are of a local character, and that they are not even disinterested in the matter, but are liable to be seriously damaged by the success of the Order. They claim that by entirely removing the obstructions which now partially close the Eastern markets against Western grain, they are forced into a competition with which they cannot successfully contend.

If the Patrons of Husbandry, by their persistent efforts, succeed in cheapening transportation, the parties referred to will, undoubtedly, be perfectly willing to adopt this cheaper method for sending their dairy, hops, fruit and other products to market; and will also accept the benefits derived by reducing freights on merchandise; but when this cheap system of transportation, with the assistance of other reforms inaugurated by the Patrons of Husbandry, brings into their neighborhoods and their markets farm products from land valued at from \$20 to \$50 per acre, to compete with their products from land worth, perhaps, \$200 per acre, why, they "don't know about that."

We cannot think that there is any considerable number of people, even the most slow-going communities, who are governed by this sentiment; still we know there are some of this gait in all communities. To them belong the credit of showing a bold front against the introduction of sewing machines. Improvements in agricultural implements have also been offensive to this class. We heard one of them on the Butterfield farm, N. Y., express his sentiments very emphatically a few seasons since, when a new hay-tedder, which was expected to do the work of 20 men, was brought into the field. "The devil take all them bloody machines," said he; "they ought to be smashed to pieces, every one of them; they take the bread right out of the mouths of poor men." He did not consider how that "bloody machine" would help to put more and better hay into the mouth of many a poor horse and cow and be a blessing to poor men; while it did not take a morsel of bread from his own, or any other man's mouth; for we all know farm labor was never so prosperous and so pleasant as it has been since the introduction of improved implements; and that the sewing-machine has been a benefit to those who wield the needle. There are, possibly, a few who would like to see the "bloody" clothes wringer "smashed;" and would prefer to have our hay-makers go back to the hand-rake.

It is not very likely, however, that any of these implements will be smashed; or that the Grange movement will be confined within certain limits by a few who believe that their interests would be damaged by cheapening food for man and beast. But the small circle who cling to this contracted view do not properly consider their own interests; and we should probably find, even in the communities where this cheapening of grain, etc., would be injurious if anywhere, that no attempt is made to grow their own grain; the farmers knowing full well that they can make more money on hops, butter and cheese, root-crops, etc. The farmers in such communities watch as closely for a decline of 25 cents on a barrel of flour as the working people of the cities. We have been in the center of the greatest dairy district of America, Herkimer county, N. Y., where the dairymen in certain regions would even fail to supply themselves with butter; the demand for cheese being particularly active. And we have known thrifty hop-growers in the flush seasons of hops in Wisconsin, go into the valleys 30 or 40 miles distant, and purchase oats to feed their own horses. Such statements may possibly shock the sensibilities of those who declare that farmers ought to raise all that they consume, and who believe that they really do it in prosperous communities; but theorists and social economists know but little of what ought to be, or is done, in the world.

We hope, therefore, that our brother Patrons of the West will not allow their faith in the fraternal co-operation of their Brothers of the East to be weakened by any such warped and contracted statements as that which we have alluded to—that the Grange is only for the West. They may rest assured that the farmers of the East are not only in hearty sympathy with them, but their interests are identical with ours.

From the Granges.

SARATOGA GRANGE, SANTA CLARA COUNTY, is just one of the pleasantest little Granges in the State. The town and country are romantic. The people are mostly small farmers, industrious and sociable. Last Wednesday we went up to the Harvest Feast. There were in attendance quite a number of visitors from the Santa Clara Grange. The table was spread with the bounties of nature, wrought up in the most elaborate forms of the culinary art, and seasoned to tempt the appetite of a confirmed dyspeptic. Then the company that gathered about it! Farmers and their wives, with brown and weary hands—hands that had earned it all; men and women who, by reason of their pursuit, have been excluded from society, and are not spoiled by its conventionalities; who, by their unconstrained and honest cordiality, make their guests feel most welcome. We enjoyed it—not the eating particularly, but the flow of genuine good feeling. These harvest feasts are a grand feature in the Order, which tell upon the general intelligence and morals of the farming community beyond any human calculation. Such monthly reunions of neighbors cannot but bind them in a closer sympathy, and elevate their thoughts and feelings.—Granger.

GRANGE CELEBRATION AT WATERFORD, MERCED CO.—The celebration of the public harvest feast and installation at Waterford, by the Grange at that place, on Saturday, May 9th, was well attended. The Grange met in secret session, and after conferring the fourth degree, the meeting was adjourned and opened to the public. A few of the officers who had not been installed at the regular or general installation of the Grange, were presented and duly installed by Worthy Master, R. R. Warder. An appropriate song by the choir was then rendered, after which J. D. Spencer was introduced, who delivered an address reviewing the history of agriculture, its relationship to different governments; the rise and progress of the Order of Patrons in America, also its hopes and aims of the future. A procession was then formed and marched to a grove of large, spreading oaks, on the banks of the Tuolumne river, where a table was spread on which was placed an abundance of edibles, prepared by the good house wives of the Grangers in the neighborhood. All appeared to enjoy themselves, and nothing happened to mar the happiness of the occasion in the least.—News, May 15.

LIBERTY GRANGE, SAN JOAQUIN CO.—Since my former communication Liberty Grange has been steadily adding to her numbers unexceptionable and desirable men and women. Our roll includes the names of ninety-one Patrons, two of which have taken their limit. The outlook is good for more coming in, as many have signified their intention of joining us, as soon as they can make it convenient. I am happy to state that we have proceeded somewhat beyond the mere work of organization, and have entered the field of active duty, by joining in the inception of co-operative measures which bid fair to be largely useful and profitable to all the Patrons of Husbandry of San Joaquin valley, and have now under consideration several important schemes for the good of the Order. The good work, therefore, seems to have really commenced, and we fondly hope and desire it may go on until every form of injustice be swept from our path.

Yours fraternally, JAMES J. EMSLIE.
Acampo, San Joaquin Co., May 12, 1874.

RIO VISTA GRANGE, SOLANO COUNTY.—A correspondent of the Granger writes from this Grange as follows: Our Grange is in a very healthy condition at present. Though we are in the days of our infancy, yet we have the vigor and strength of manhood. Our strength does not consist in numbers only, but in a willing determination to battle for the right. It has not been my good fortune as yet to visit any other Grange; but I am not dissatisfied, for I think we have one of the best Granges in the county, and I find it so pleasing every Saturday to lay aside every care and go to the Grange and meet with brother and sister, though of different natures, races and nationalities, yet bound together with ties of the same fraternal combination. And, in addition to all this, we have another feature of transcendent beauty, namely, music—sweet music—both vocal and instrumental; so we are led to say at the close of each session, "It is good to be here."

SANTA ROSA GRANGE.—Since my last writing to you the Santa Rosa Grange has conferred the degrees on a class of five brothers and sisters. Only four new applications for membership came in. What prevents so many good farmers from joining us? After all that has been said about the Order, it would seem that no one could have a good reason for keeping back. We had a nice time on the first of May, having been invited to the picnic given by the enterprising Bennett Valley Grange. The occasion was a complete success; about 2,000 persons were on the grounds. To-day, our members subscribed for fifty shares in the Grangers' Bank. Next week a County Council will be held at Santa Rosa. J. A. O'BRIEN.
Santa Rosa, May 19th.

DANVILLE GRANGE, CONTRA COSTA.—EDITORS PRESS:—Last Saturday we graduated a class of twenty-eight, increasing our membership to over one hundred. Our usual harvest feast was a decided success, and the goodies displayed were enough to have tempted the palate of the most fastidious. Yesterday we initiated a class of twelve, which will be increased next Saturday to twenty, owing to some having

failed to come to time. Our membership is so large that we have concluded to build us a hall, and a committee has been appointed to contract for the erection of one, 36x50 feet, and to be hard finished, and on its completion you are most respectfully invited to the dedication. Our crops are looking well, and with reasonable weather, may expect a good yield. ANON.

Santa Clara County Picnics.

EDITORS PRESS:—Sitting under rose trees which adorn what was once the Hollister mansion, I am tempted to scatter among your readers some of the enjoyments of the two delightful anniversaries in which we have just participated. It is the very summit of the season, in this and the Santa Clara valleys; the harvest ripening, the haying well begun, the hills just a little tawny on the southern side, but still rich with living verdure on the north. The farmers are jubilant over the promise of a harvest, now assured beyond a peradventure; and the Grangers, celebrating the anniversary of their organization, are more jubilant still, in the unexampled prosperity and usefulness which lies before them.

Santa Clara and San José Granges celebrated together on the 13th inst., at Cook's grove, a few neighboring Granges being present as invited guests. Only the members and their guests were admitted to the grounds. To see the crowd when the festivities were at their height was to wonder whether the population of the neighborhood had not turned out en masse. It was estimated that between four and five thousand were present. Judge Belden intended to hold the district court as usual, but failing to get the attention of the jury, and finding that they were Grangers, granted a holiday. There was a very plentiful sprinkling of buff and white sashes in the gaily dressed throng, for these are the banner Granges, San José and Santa Clara, numbering nearly five hundred.

There was good music, an address by the University farmer, and then a feast anything but symbolical. Ceres and Pomona have their nominal habitation in the vicinity of Santa Clara, and Flora first alighted there on her divine, beauty dispensing mission. Sister Watkins dispensed brown bread and milk to the hungry Oaklanders, who had gone breakfastless by the early train, to stay their appetites until the heavy work of the day was over, and afterwards gathered a rare company around a table groaning with the luxuries of the season. Mrs. S. M. Knox, Mrs. Gould and other citizens, our old friend the flower loving Dr. Saxe, Brothers Erkson, Henning and many we would gladly name, made us welcome. Everybody seemed as glad to be there as we were; it was worth fifty Fourth-of-July to see the happy children in the full enjoyment of the good gifts of the season—flowers and strawberries. We were among the earliest to leave, and we said: If this is the Grangers' infancy, what will be done when the tin, silver, gold and diamond anniversaries are due?

One never likes to lose the drive from Santa Clara to San José, along which the padres planted willows for shade and coolness. Brother Henning left with us, and kept us company until our return. Riding along the Alameda we noticed with pleasure the improvements in the agricultural grounds, and the increasing attention to floriculture exhibited around private residences. We took the afternoon train to Gilroy and Hollister, reaching the latter place too late to avail ourselves of the proffered hospitalities of our Granger friends. Bro. Fowler was waiting for us, which the initiated will understand means a good ending for our story.

Thursday morning opened with a voluntary of bird music, commencing about half past three o'clock. Linnets, song sparrows, blackbirds and swallows make a morning nap impossible at the Montgomery House, which lacks no other comfort; and after a full hour spent in persuading ourselves that it wasn't time to wake up, and we wouldn't, we threw open the blinds and surrendered. We shall always remember the Montgomery House, in its setting of Lamarque roses, as an immense aviary! By nine o'clock the Grangers began to arrive. So few houses are to be seen across the country they seem to have sprung out of the soil. They are coming in by every road, and at ten o'clock the hall is full. Brother Fowler has welcomed everybody, and Bro. Pomeroy is ranging the forces into line, and we are in marching order. The Hollister band precedes us; a plow on a field argent, with the inscription "Hollister Grange, No. 11," and the legend "We all work," supported by two of the sisters, is the banner we follow in our march through Hollister. This Grange numbers one hundred and fifty, but with delegates from sister Granges the number was swelled into a very respectable procession.

Returning to the hall we were joined by citizens to whom invitations had been given, and proceeded to a grove of live oaks a mile and a half distant. Excellent music, both vocal and instrumental, was provided. Dr. Carr's address was delivered, and followed by a humorous talk from Bro. Henning, which he concluded by reading the Grangers' ten commandments. Bro. Henning said that the San José Grangers were receiving a great deal of disinterested advice with reference to their projected bank and co-operative store. One man had urged that a great deal of brains was required for successful banking. Bro. H. replied that the Grangers felt something inside of their heads, and if it was not brains they didn't know what it was. They had concluded to try

banking, and as it was at their own expense nobody could complain. They were going to hire a room, put an iron safe into it, pick out a good looking, portly Granger for a President, keep him well dressed and cleanly shaved, and see what would come of it. Another citizen warned them against mercantile operations. He had lived in San José twenty years, and out of 300 stores of various kinds which had been started not more than half a dozen had been successful. Bro. Henning suggested that mercantile business must need an infusion of agricultural good sense, for it would be impossible to find an equal number of farmers in and around San José who had failed in their business.

After more singing, some six hundred people sat down to the Grangers' feast, the details thereof would fill a volume. As an old sanitary commissioner, we make the suggestion that for harvest feasts and Grange festivals, there be a judicious division of labor, and that these be greatly simplified. This was the most elaborate and well arranged picnic we ever attended, but we have no doubt would have been just as acceptable with half the preparation. The hall in the evening concluded the jubilee of the Hollister Grange. If there is only one live Grange in California fifty years hence, we are certain it will be No. 11. Bro. Fowler guarantees this in his own person. His eye was not dim nor his natural force abated when we saw him doing the light fantastic at near midnight, yet he had to start at sun-up next morning to organize a Grange in Castroville.

When we consider that this is the busy period of haying, these festivals show how strong a hold the Granges have taken in the rural communities. We shall not soon forget them, or the many kind attentions which made our visit to Hollister so enjoyable. JEANNE C. CARR.

Hollister, May 15, 1874.

Rio Vista.

EDITORS PRESS:—In all our travels we have found no more pleasing place than this; not only in the healthfulness of its location, but in the genial goodness of its citizens. While spending a few days, we were honored with an invitation to a Granger Feast, at the school house, a few miles out from Rio Vista. These whole souled lords of the soil spread a feast of good things a prince might envy, and the half was not unpacked. Over one hundred were present, young and old; and with social converse, and interchange of ideas concerning their avocations, a very pleasant and profitable time was spent.

The Master is just the man for the place, Mr. Alsip; the Secretary, Mr. Gardner, and Treasurer, Dr. J. W. Connolly, are among the best, most enterprising and valued citizens. The membership numbers fifty, and constant additions are being made.

Farmers are busy preparing for a bountiful harvest, especially among the "Hills;" even now the click of the mower can be heard, as the grass bows to its merry music.

Among the enterprising farmers may be mentioned Mr. L. Frink, L. Tryon, J. W. Cameron, F. F. Smith, W. Brown, Mr. Upham, Mr. A. C. Church, Mr. Hoyt, D. McCormick, D. Stewart, Dr. Connolly and A. C. Church each has a fine Durham cow, an unusual possession among the Hills, but none the less advantageous. More anon. C. W. O.

SALINAS CITY is a flourishing village of, perhaps, 1,200 souls. It is situated in the midst of the richest portion of Salinas valley. It rejoices at the prospect of the Salinas and Monterey Narrow-gauge Railroad. Captain N. L. Allen, Worthy Steward of the State Grange, is the superintendent of this enterprise. He informs us that the capital stock is all taken—that work is being pushed rapidly forward; and that it will be completed in time to move the coming crop. Salinas City will be the terminus for some time to come. The idea is, that farmers in the upper portion of the valley can afford to haul their grain to Salinas City, ship it to Monterey by the narrow-gauge, and thence by schooner to San Francisco, rather than ship direct by the Southern Pacific Railroad.—Granger.

THE LOUISIANA SUFFERERS.—Fifty dollars have been received from the Livermore Grange as their contribution to swell the Grange fund from California in aid of the sufferers by the Louisiana flood. Other Granges which contemplate aiding in this work of charity, should send their contributions to Bro. Baxter, Sec'y. of the State Grange, at as early a day as possible, as the funds in hand should be forwarded soon.

AN "OPEN GRANGE."—A Grange in Muscatine county, Iowa, holds what is called open Grange, in which no business is transacted, and invites everybody to attend. Questions of interest to agriculturists and others are to be discussed.

THE STOCKHOLDERS OF THE GRANGERS' BANK held a meeting on Thursday afternoon for the purpose of adopting the by-laws of the corporation, as required by law. We go to press too early to give the result of the meeting.

HARVEST FEAST.—Vallejo Grange will have a harvest feast to-day. We acknowledge the reception of a special invitation to be present, and regret that the duties here will not admit of our being there.

LAID OVER.—We have communications from several Granges which are unavoidably laid over until next week.

May-Day Address.

The following excellent and appropriate address was delivered by F. J. Woodward, Lecturer of Castoria Grange, before Castoria, Rustic, Atlanta and Wildwood Granges of San Joaquin county, on the occasion of their union picnic on the first of May. Though somewhat lengthy for our columns, we give it entire. It will be found of quite as much interest to the general reader as to the Patrons of Husbandry.

PATRONS, LADIES AND GENTLEMEN:—There is a harmony between a joyous overflow of the heart and the growing, flowering season of the year. Hope and joy seem to spring up spontaneously in the youth of the year, as well as in that of human life. Nature, both animate and inanimate, with that sympathy which unites all her domain in one harmonious whole, is inspired with an impulse of regeneration.

She is now dressing the garbled limbs of the aged oak around us in the apparel of youth, and I doubt not that she is also causing the hearts of those here in the maturity of life and experience, to bourgeon with something like the fresh joys of their early days. In harmony with the season, we are all young to-day.

I believe it has ever been the custom of mankind to celebrate the springtime, and rejoice in it as a palladium of nature. How bare, lifeless, and arid were the fields a few months ago; how fresh and green, and full of vegetable life are they now! They seem to give an instinctive hope to man that after life has departed he may live again. The birds and beasts rejoice, and why should not the heart of man be glad? In the poetic language of Scripture, "the winter is past and gone and the voice of the turtle is heard in the land."

Hard and careless indeed, must be the heart that does not sympathize with these aspects of nature. The more we sympathize with her, the more we list to her teachings with intelligent comprehension, the more closely we harmonize with her, the better in every way it is with us. She is a loving and tender mother to all her obedient children. If we are wayward and disregard her wise admonitions, we suffer the penalties of her broken laws. But when we return, penitent and obedient, she never fails to give us peace and repose upon her broad bosom. The poet loves her and studies her outward aspects, and takes all his genius to adequately portray the beauty and perfection of her works. Whether in the lustrous eye and glowing tints of beauty, or in the delicately tinted flowers, the songs and beauty of birds, or in the charms of the season in all their varied aspects, she inspires the deepest raptures of his soul. And the artist, after all his loving labors to portray her, confesses his utter inability adequately to represent her subtle perfections. We, as farmers and husbandmen, as their wives and daughters, should, of all others, not be backward in our love and appreciation. Intimate as we are with her, perhaps we are not aware how deep a hold she has upon our hearts.

The greatest souls among men have most deeply revered her power. After a life spent in the servitude of ambition and in worldly strife; after what the world calls success has crowned their labors, they have wearily gone back to the green fields of their youth and laid their heads upon her maternal breast to die in peace. Shakespeare, after all those works which the world declares immortal, and claims as a priceless heritage, gladly returned to the rural scenes of his youth, peacefully to end his day among them. He represents his most reckless and humorous character, Sir John Falstaff, in his last moments as "babbling of green fields." All history is full of illustrations of this instinct of human nature. Our own great men, when they have felt the shadows of the evening of life closing around them, have turned from the crowded cities and the busy haunts of men to their country homes to retire to their long repose.

We assemble here to-day under the auspices of the Patrons of Husbandry; but I hardly think it meet that I should enter into any abstruse or recondite investigation of the principles upon which our Order rests. It is rather, as I take it, an occasion for pleasant and exclusive thoughts, of light and careless gaiety—a season for the springtime of life and its fitting pleasures—a time in which childhood and youth are absorbed in present enjoyment, and in which, to maturer years and age, retrospections of similar seasons in long-past years bring their pleasing memories, tinged with that soberness, akin to sadness, in which past pleasures are enshrined, and which mingle with the enjoyments of the present.

I would gladly say something in sympathy, in harmony, with all this. Here are the happy children, meet-est emblems of the early flowers of spring. Little can any one say to add to their enjoyment. Their happiness, like all other true pleasures, bubbles up spontaneously from nature's exhaustless fountain. They are pleased, they know not why, and, happily, they care not to inquire. They absorb the charms of the season at every pore, and, being fresh from nature's hand, they bask in her charms as in their native element.

Happy is the man or woman who longest retains this primitive capacity. But, although so careless and apparently unobserving, the scenes of this day make their unconscious impression upon the tablets of their memories, which will remain indelible through life. Long after I shall have returned to kindred dust will the impression which I now make, my figure, my voice, my gesture, retain in its hold upon their memories. There is something impressive in this thought. Favored is the one who is enshrined in this thought. Favored is the one who is enshrined in the pleasant thoughts and affections of childhood. Its earliest impressions the longest life can never efface. Whatever else is learned and forgotten, they remain bright to the last. Then, how deeply should we feel the importance, and our obligations, even, to give them a happy childhood. The poet says: "A thing of beauty is a joy forever." And a season of pure enjoyment and innocent happiness gives retrospective pleasure forever after. It brightens all the subsequent years with its reflected rays. Who does not joy in a happy memory? And how remorseless and unhappy retrospections can embitter our sweetest joys!

How recollection follows the scenes of our childhood! How the heart swells at the thought of it, if it has been a happy one, in after years, when far away amid other scenes! Ever-bounteous, generous nature has enriched the human heart with an almost boundless capacity for devotion to objects which attract it, or which are represented as worthy of reverence. And prominent among the objects around which the tendrils of the heart instinctively twine are kindred, home and friends and the land wherein those kindred dwell, those friends abide, and where that home is situated, around which cluster those dear, mellow, sacred memories of the sunny morning of life. The time will come to some of these children, born and reared here, when they have wandered far from these scenes, that yonder dusky line of mountains, with their waving outline against the blue sky, will be a cherished memory, full of happy associations. And when they return, after long years of absence, the sight of old Diablo and his kindred peaks will be greeted with loving tears. This sentiment expands into love of country, into fealty to nationality; in fine, into that feeling which, in all ages of human history, has been esteemed one of the noblest emotions of the soul—into patriotism. And I believe these feelings are strongest in those reared in the country, in sight of and among striking objects in nature, in valleys, plains or mountains. It is recorded of some Highland Scotch regiments, stationed in India, that the bands were prohibited from playing the favorite air of their mountain homes, because they caused melancholy and homesickness. Thus do our childhood's associations twine their tendrils around our heartstrings and "take hold of the issues of life." Children! may you now lay in a store of happy memories.

When you romp and play and shout and feel that it is good to be alive, like the young animals that sport about you in the springtime, it gives assurance of health of body and mind, and promise of a pleasant and useful life.

And here are the youth, the young men and the young women. As to these fair young maidens here in the first flush of their womanhood, hope, myrtle wreathed, ever attends upon your foot-steps. The most chivalrous sentiments of men are ever enlisted in your behalf. To all manly souls you are the choicest of nature's handiwork, and they cordially echo the sentiments of the poet Burns:

"Her pretence han' she tried on' man, and then she made the lasses O!"

We know that to all poets you are the most abundant source of inspiration, and we also know that every young man instinctively feels that if there is anything worthy, or noble, or excellent in him, the thought and influence of some fair and pure young woman are more potent than all other incentives to bring out those qualities in their fullest luxuriance. Among our old English ancestors, May-day was celebrated with enthusiasm by the Anglo-Saxon maidens. As Tennyson speaks for them:

"We danced around the May-pole beneath the hazel tops."

Till Charles' wain came out among the tall white chimney-tops."

So they prolonged their merry-making till the great northern constellation shone high in the heavens after the setting of the sun. They chose their May Queen, whose reign over the hearts of joyous maidens and loyal youths extended over the happy day. Who does not feel that such a scene of rustic and rural mirth is peculiarly appropriate and happy in its effects? Who does not perceive the harmony and fitness of a fair young maiden crowned with the flowers of spring, with the hope and promise, joy and beauty of the season? In the ancient day of Grecian imaginative, poetic mythology, when every force and aspect of nature was embodied in some concrete personification, what was more natural or appropriate than that a lovely young woman, endowed with immortal youth, should preside over the destinies of flowers? In all nature there is nothing so pure, so delicate, so fragrant, so richly dyed and harmoniously blended with all the hues that compose the pure sunbeam, as the flowers of earth. That we should associate in idea, and compare the young woman with them, is the highest evidence of our appreciation and affection. It is the highest compliment it is in our power to offer them. With all the appreciation so freely given you, which we frankly acknowledge in this your appropriate season, let us remind you of your responsibilities. Give your influence to all that is noble, virtuous, temperate and excellent. No one suffers so much as woman from the effect on society of the vices opposite to these qualities. Adorn the mind and the heart as well as the body. I offer no proposition to that aspirer for the beautiful from which emanates the adornments of dress. But however the fashions of dress may change, virtue, purity and honest love are never out of date. An intelligent mind is a charm that never fades. A cultivated intellect is the strongest defense against the ravages of time. It is a fate that attaches to the esteem and appreciation in which you are held, whether that fate be right or wrong, that a mistake upon your part is more fatal in its effects than upon any others. A virtuous, well-educated and joyous girlhood is an assurance of a noblewomanhood, and a storehouse of pleasant memories throughout life. But perhaps I am hardly called upon to assume the office of your mentor; but I give you my best wishes for a happy day that will ever be associated with pleasant memories. May all the constellations shed their most benign influence upon your destinies.

As to the young men here, I imagine that all the eloquence of man would be as naught in comparison with the glances of certain bright eyes in thrilling their hearts with rapture. Ah, well, who would not envy them what you might please to call their foolish, happy time? Who would not rather share in their present blissful folly than in all the wisdom of their more worldly years? In due time and in proper season, and we would assume that the present is both, the softer feeling and tender sentiments are the truest wisdom. The world would indeed be a cheerless scene were it not adorned and garlanded by the flowers of the heart. The sentiment of the impressive heart of the poet, Burns, are expressed in these lines:

"Oh heart! feel rapture, bliss beyond compare!
I've paced much of this weary, mortal round,
And age experience bids me this declare—
If Heaven a draught of heavenly pleasure spare
One ord'ral in this melancholy vale,
'Tis when a youthful, modest, loving pair
In others' arms breathe out the tender tale,
Beneath the milk-white thorn that scents the evening-gale."

And I doubt not that my young friends here will cordially acquiesce in the poet's opinion.

Young men! enjoy your days of romance; may the smiles of beauty stimulate you to noble, virtuous, and consequently useful lives. To associate with the pure and the beautiful has ever an ennobling effect upon your nature. I suppose it is hardly necessary for me to say, cultivate such association; but I will say, show yourself the soul of truth and manly honor, scorn above all things to betray sacred confidence and trust. Above all is he to be despised who would betray a loving heart.

Of the many obligations the young men are under to society, I have not the time, nor is this a fitting occasion to speak. But this much I may say—if you have upright and manly principles, with industry, temperance and perseverance, united with intelligence, a noble and useful career is open before you in our young and progressive commonwealth. How a noble, thoughtful, enterprising young man is esteemed and appreciated in a community; and how many thoughtlessly throw away such priceless advantages! In all my life I have never known a worthy young man fail to be appreciated. And I say, if you fail in the great material objects of life, it will be your own fault. The primary conditions of success in life never vary. The qualities I have enumerated will secure you all that will give you true satisfaction. Honor your occupation, never lower its standard before soft-handed imbecility, or the sneers of the brainless fops and spend-thrifts.

To us who are traveling along the dusty plain of the meridian of life, I trust this occasion is not without its joyful aspect. Though time fails not to put his broad seal upon us, the heart, like the season, docks itself anew with the flowers of youth. I trust we sympathize with its frankness, its sincerity and faith.

Though I doubt not we have acquired something of the wariness of experience, still I hope we have not lost our faith in humanity; that we still believe that progress is something more than a term of delusion. Something of the hope and faith and enthusiasm of youth is necessary for any material improvement in the condition of mankind, or for correcting the acknowledged evils of society. Youth believes all things possible and even achievable, and it is right. It only miscalculates its strength and the mighty forces in opposition. But it accomplishes vastly more for that very reason. Could it fully comprehend all the lions that lie crouched in its path, it might be paralyzed, and attempt but little and accomplish less. As we reach the meridian of life we may retain our fixedness of purpose, but we will scarcely preserve our confidence and zeal. But the warfare against human evils will be waged by succeeding hosts and the bulwarks will be carried at last. Yes, blind, stumbling, wavering as we are, fighting against intangible forces, often being led against masked batteries and striking wild, there is a mighty essence of justice and harmony involved that takes hold of God's eternal throne. Says the Scripture, "The stars in their courses fought against Sisera." And so the enemies of the reformation of the evils and abuses of society will find that the forces of the Universe are steadily moving against them, and if they at-

tempt to arrest their progress, its slow, fateful, irresistible movement will grind them to very dust.

The ancients said "the mills of the Gods grind slow, but they grind exceedingly small." All this is in accordance with nature's processes. Its method of creating a world fit for the habitation of sentient beings, is by slow processes in long ages, by the action of the elements on primeval rocks, the slow grinding iceberg, chemical forces and the attrition of matter for eons and incomprehensible spaces of time. Verily, with Him, "one day is as a thousand years, and a thousand years as a day." We are, even now, in the very childhood of the human race. Herodotus, the father of history, carries us back with but partial accuracy for scarcely three thousand years. Beyond that all is vague and mostly tradition, or mythological fables. How small, how minute a space in the history of a world!

And this little globe has even now comparatively large spaces unexplored and unknown to civilized man. If the world is in its childhood, not yet arrived to its May-day in its existence, who can comprehend the condition of human beings when it shall have arrived at its meridian, a hundred centuries hence, with all the reflected light of human experience pouring in an unbroken stream upon them? In that, to us almost unimaginable space of time, the condition of mankind will probably not be perfect; but we trust that long ere that, and in a lapse of time that we can easily conceive, the great primal principles of social justice and harmony, the regulation of all industrial pursuits of life, the true principles of political economy and correct government will have been achieved. But I fear I am wandering from my subject and my design. We will not speculate upon these subjects to-day, but enjoy ourselves as befits the time, well remembering that after relaxation come labor and duties. Hard and slavish toil is not beneficial, and we know it is not desirable. But reasonable labor of mind and body for worthy objects and desirable results are indispensable to man's highest benefit and enjoyment. If we had May-days and festivals every day we should soon lose our appreciation and enjoyment of them.

Though May-day festivities are more appropriate to the springtime of life, yet it is said that men and women are but children of larger growth. We all have our playthings and our toys. We can innocently and wisely enjoy them. I trust that we have even not lost all our relish for youthful sports. However this may be, we have abundant reason for that joyousness which springs from hope as we look abroad upon the green fields and see the promise of an abundant harvest. Almost the whole broad bosom of this great valley, where a few years ago the elk and the antelope pastured, and the scarcely less wild cattle roamed, and the grizzly bear was a frequent visitor, is covered with green fields of wheat; where the grain, more precious than gold and diamonds, is concentrating in itself the wealth of the earth, the air and the sunbeams. In a few months the white-winged ships, catching every breeze as it were under the whole heavens, will be waiting these treasures over the great deep to every quarter of the globe, to the hungry inhabitants of the continents of the old world, and to the dwellers on the far islands of the sea. As you gather in this peaceful tribute of the nations, more glorious than that of Caesar, when he taxed the whole earth; it will bring with it blessings to all, from the gray haired grand sire to the lisping babe. And when the principles of our Order are carried out, when the producer and consumer all over the earth are brought into the closest and most harmonious relations, when labor receives its just position and reward everywhere, then will peace have her more glorious victories than war, and render hateful and useless the dread arbitrament of arms.

And now, Patrons and friends, may we greet many returns of this joyous season, and though old age may crown us with his frosty honors, may our hearts, unscathed by the cares and sorrows incident to mortal life, ever beat responsive to the hopes and aspirations of youth, and rejoice in the bloom and promise of spring.

In Memoriam.

At a called meeting of Denver-ton Grange, the following preamble and resolutions were adopted:

WHEREAS—It has pleased Almighty God to remove from our midst, from this to that nobler Grange above, our much beloved brother and esteemed Patron, John Baptist Bosse:

Resolved—That we, as members of Denver-ton Grange, No. 123, P. of H., tender to the bereaved family of our beloved brother our heartfelt sympathy in this, the hour of their deep affliction.

Resolved—That in the death of brother Bosse, Denver-ton Grange has lost an esteemed member, a true Patron and a firm friend.

Resolved—That as a token of our respect, our charter be draped in mourning, and all members of Denver-ton Grange wear the usual badge of mourning for the period of thirty days.

Resolved—That a copy of these resolutions be sent to the family of the deceased, and a copy to the PACIFIC RURAL PRESS for publication.

G. C. ARNOLD, Sec'y.

Denver-ton, Solano county, May 17, 1874.

EDITORS PRESS:—The following resolutions were unanimously adopted at the last meeting of Riverside Grange, No. 128:

WHEREAS, It has pleased our Heavenly Father to take home our esteemed friend and Secretary, W. W. Kimball, therefore,

Resolved, That in our late Brother we have lost one of our most efficient members; and we, his co-workers of Riverside Grange, publicly desire to express our appreciation of his merits, and our grief for the sudden loss we have sustained.

Resolved, That this body extend its deepest sympathy to the family and friends of our late Secretary in this their hour of affliction and bereavement.

Resolved, That a copy of these resolutions be forwarded to the parents of our deceased Brother, a copy to the PACIFIC RURAL PRESS, and a copy be placed upon the records of this Grange.

Committee on Resolutions: G. W. GARRELON,
G. H. CLIFT,
J. G. NORTH.

Respectfully yours,

GEO. W. GARRELON, Sec'y of Grange.
Riverside, San Bernardino Co., Cal., May 12, 1874.

Obituary.

By request of the Master of Lockford Grange, Lockford, San Joaquin county, we publish the following:

A Brother Patron Gone.

DIED—Near Lockford, San Joaquin county, May 10, 1874, Bro. George Christman, a native of New York, and worthy member of Lockford Grange.

Death, with silent footstep, has approached the ranks of our honorable Patrons of Husbandry, and laid his icy grasp on one of its most esteemed members. Mr. Christman was one of the pioneer settlers of this region of California, having come here as early as 1854.

Here he has resided for almost twenty years past, built for himself and family a home, and better than this, gained a reputation and character which warm friends and neighbors were not slow to appreciate. He was, in short, an excellent man, a good citizen, a kind neighbor, a loving husband and father. Sorrowing wife and children remain to mourn their irreparable loss. He has gone to his rest and reward. Stricken

down in his full developed strength and manhood, he lives now in the full realization of the mysteries beyond. Patrons and friends alike regret his decease and ever will his memory be fresh and green.

With the simple and touching ceremonies of their Order, they laid him away in the silent grave. From the seed so planted will spring a new and nobler growth. Above his grave they'll plant the memorial tree, and o'er his ashes scatter flowers.

Peace to thee, departed one,
Peace to thy forsaken home.

A. J. HANSON.

Lockford, California.

New Granges.

MORNING STAR GRANGE, Castroville, Monterey county, was organized by Deputy J. D. Fowler, of Hollister, on the 15th instant, with 22 charter members. C. E. Williams, Master, F. Blakie, Secretary.

LINCOLN GRANGE, LINCOLN, PLACER COUNTY, was organized on the 15th instant, by Deputy W. E. Manlove, of Sacramento, with 24 charter members. M. Waldron, Master, J. S. Mariner, Secretary.

Farmers' Union of Santa Clara Co.

EDITORS PRESS:—Having noticed in your valuable paper of the 18th of April, an offer to a correspondent at San José, the articles of incorporation of a co-operative store; I feel an interest, as a Patron and subscriber of the Press, in them, because our Grange, (Unity Grange, No. 45), is about to embark in the same enterprise, and they would be very valuable to us as a guide. I could not expect you to send them to every one of your subscribers, but would suggest, that they be printed in the Press for general information to the Patrons of Husbandry.

I am greatly pleased with the regular arrival of the RURAL PRESS and must confess that, for useful information and the news of the workings of the Patrons it stands without a peer.

The Patrons of Colorado have got down to the regular work, and, it is hoped, will reap the full benefit of their labor. We, as Patrons, now call to our mind, and estimate the full value of Dr. Franklin's proverb: "If you want your business well done do it yourself," and I trust that Patrons everywhere will follow it, because we all have learned to our sorrow, that somebody else has attended to our business heretofore. Let heart and hand be in our glorious cause and success will surely attend us. Fraternally yours, PHILIP ZOELLER.

Master Unity Grange, No. 45, Pueblo, Col.

[The articles of incorporation referred to are forwarded by mail, as they are too long for our columns. We gave in our last a general notice of the incorporation of the "Farmers' Union of San José." For the benefit of our correspondent and other inquirers, we append the following synopsis of the articles.—EDS. PRESS.]

1. That the name of the corporation shall be the "Farmers' Union."

2. That the purpose and object for which this corporation is formed is the establishment and conducting of stores and warehouses; the buying and selling of goods, machinery and agricultural implements and products; the borrowing and loaning of money, and the conducting of a general commercial and mercantile business.

3. That the place where the principal business of said corporation is to be transacted is the city of San José, in the county of Santa Clara, State of California.

4. That the term of existence of said corporation shall be fifty years.

5. That the number of Directors who shall manage the affairs of said corporation is nine, and the following are the names and places of residence of the Directors who are appointed for the first year, to-wit: Wm. Erkson, San José; L. F. Chipman, San José; D. Campbell, Milpitas; J. P. Dudley, San José; C. T. Settle, San José; Thos. E. Snell, San José; Horacio Little, San José; E. A. Braly, Santa Clara; James Singleton, San José.

6. That the amount of capital stock of said corporation is one hundred thousand dollars (\$100,000), subdivided into one thousand shares of one hundred dollar each.

Santa Clara County Council.

EDITORS PRESS:—The Council convened at San José on Monday. The principal business of the day was to organize plans for carrying into effect the main project of the late State Convention. Already substantial progress has been made in this direction. Brother Baxter, Secretary of the State Grange, was at the Council, and gave us one of his off-hand addresses, assuring us that everything was moving forward in a very satisfactory manner, the details of which have no place here, but which were very gratifying to us.

The people are beginning to learn the bigness and importance of the present banking system—this organization of capital—the most of it the product of their own labor. To obtain the full benefit of this banking system, local Grange banks must be established. The Central Grange Bank is to inaugurate a new era of prosperity for the masses of the people—at least, this is the hope of its friends; and the local banks will be the natural channels through which the business of the people will flow, to and from their own central bank, yielding its legitimate returns to all concerned, instead of swelling the percentages of those who have no interest in common with them, and who very often use this very money as a means of oppression against them. In every view of the question, all the producing classes will be gainers. For, besides furnishing accommodations to those who must have money to harvest and market their crops, the breaking-up of the old speculative business of cornering the grain by "cornering the money," these old banks must disgorge, and send their vaulted money into circulation, for manufacturing and other legitimate enterprises, at legitimate, instead of ungodly speculative rates of interest.

I. A. WILCOX, Sec'y.
Santa Clara, May 12, 1874.



My Choice.

Yes, I know there are stains on my carpet—
The traces of small muddy boots;
And I see your fair tapestry glowing
All spotless with blossoms and fruit!

And I know my walls are disfigured
With prints of small fingers and hands;
And I see that your own household whiteness
All fresh in its purity stands.

Yes, I know my "black walnut" is battered
And dented by many small heels,
While your own polished stairway, all perfect,
Its smooth, shining surface reveals.

And I know that my parlor is littered
With many odd treasures and toys,
While your own is in daintiest order,
Unharmful by the presence of boys!

And I know that my room is invaded
Quite boldly all hours of the day,
While you sit in your own unmoled,
And dream the soft quiet away!

Yes, I know I have jackets that wear out,
And buttons that will never stay,
While you can embroider at leisure,
And learn pretty arts of crochet.

And I know there are lessons in spelling,
Which I must be patient to hear,
While you can sit down to your novel,
Or turn the last magazine near.

Yes, I know there are four little beadsteads
Where I must stand watchful each night,
While you may go out in your carriage,
And flash in your dresses so bright!

Now, I think, I'm a neat little woman—
I like my house orderly, too;
And I'm fond of all dainty belongings—
But I wouldn't change places with you.

No, keep your fair home with its order,
Its freedom from trouble and noise,
And keep your own fanciful leisure,
But give me my four splendid boys!

Turning the Tables.

"Women are so incomprehensible!" said Major Arkwright, composedly smoothing down his moustache. "I declare to you, George, the longer I live the less I am able to understand their freaks and fancies."

"Ah," said Mr. Alonby, taking his cigar out of his mouth. "You think, then, that upon the whole their natures are more enigmatical than those of men."

"My dear fellow, there cannot possibly be a doubt on the subject," the Major answered, breaking into a hearty, mellow laugh that did credit both to the breadth and capacity of his lungs.

He was a tall, splendidly made man, with jet black whiskers, hazel eyes, and teeth as white as a freshly cut slice of coconut. George Alonby was the average height and size of mankind, yet beside the Major he looked small and slight. There are yet left in this degenerate world some sons of Anak, in spite of hot-house culture, clubs and champagne suppers.

"Only think," went on the Major—"but here we are. I'll let Marcia tell the story for herself."

And Major Arkwright opened the door with his latch-key, and admitted his friend into a bright little house, full of canary birds and winter-blooming geraniums, hanging baskets of ivy and japonica. Through a marble-paved vestibule they entered an octagon-shaped room, hung with fluted draperies of gold-colored silk, a pretty wood tinted carpet on the floor, and chaire, sofas and fauteuils stand around exactly as if they were made to be used, and not for mere show.

Marcia Arkwright, the Major's beautiful sister, sat at a little table copying in water colors a bunch of white carnations, tied up with feathery fern leaves and one or two blades of grass. She, too, was dark, with jet-fringed brown eyes, straight, serious features, and a fresh, bright color on her cheeks, only a shade lighter than the "twin cherries" of her bow-shaped lips. Yes, Miss Arkwright was very handsome, and so Mr. Alonby had long thought, in the secret depths of his masculine soul.

"I've brought Mr. Alonby in, Marcia," said the Major, his eyes winking mischievously, "for you to tell him why you don't go to the oratorio, to-night."

Marcia looked up, smiling, yet a little confused.

"Do you want to know the real reason, Mr. Alonby?" she asked.

"Certainly, Miss Marcia, if it is agreeable to you to tell me."

"Well, then, to speak the honest truth about it, it is because the milliner has not sent home my new suit."

"Nonsense!"

"Not nonsense at all," gravely dissented Miss Arkwright. "I assure you, Mr. Alonby, I am too genuine a woman to wish to appear in public in a costume which, to say the least, is decidedly passe'."

"And you would actually lose the delicious music of Handel, married to the more delicious voice of Sebastiani, just because your dress isn't according to the latest modes!" burst out the

Major. "For goodness sake, why don't you put on a shawl?"

"Could I wear a shawl over my head, Meg Merrilies fashion, you unreasonable Harold?"

"Oh, the bonnet is behind the age, too!"

"Yes, sir, the bonnet is behind the age, too."

"Marcia, I had a better opinion of you," said her brother.

Miss Arkwright glanced timidly at Alonby. He smiled.

"Indeed, indeed," pleaded Marcia. "I would rather stay at home all my days than to go abroad a dowdy."

"And who do you suppose will know the difference?"

Marcia shrugged her shoulders with pitying gracefulness.

"Every woman, Harold, and probably a good many gentlemen."

"Well," quoth Major Arkwright, pulling at his whiskers vigorously, "I'm thankful I wasn't born a woman."

"Why?" innocently demanded Marcia, with a mischievous curl of her lips.

"Men are above such petty considerations. Men don't stop to consider whether their coats or caps are out according to this season's style or last. Men don't—"

"Now, Harold, do be a little reasonable," interrupted his sister. "I suspect you lords of creation are quite as particular in your way, as we women are about our gear."

"Nonsense!"

"Brief—but not particularly polite," laughed Marcia. "To-morrow evening I'll go with you, Harold, to her Mr.—lecture."

Mr. Arkwright elevated his eyebrows.

"I'd be willing to wager a new silk dress, Marcia, that if that snit don't come home from Madame What's-her-name's, you would even deny yourself the intellectual treat of hearing Mr.—lecture."

"I'm not so certain about that," retorted Marcia, gravely. "Sebastiani I might sacrifice to the Moloch of fashion, but not Mr.—'s eloquence. However, let us hope that the sacrifice will not be required," she added with a laugh. "And oh, Harold, by the way, Uncle Eliab is coming to town to-morrow to see about renewing the mortgage on the old farm. I got a letter from him to-day."

"Horrid old bore!" was the nephew's undutiful comment.—"Of course, we shall have to ask him up to dinner; but I don't see that there's any help for it, Marcia. Come, Alonby, we shall be late."

And the friends departed.

The next day, as Uncle Eliab was about taking leave, Marcia coaxed him to let her have his overcoat.

"But what on earth do you want with it, Marby?" questioned Uncle Eliab.

"Never mind, uncle dear; only leave it here until you come into town next. You shall wear Harold's handsomest broadcloth, just from Delisle, in its stead."

"And I shall look like an old turkey, in a peacock's feathers!" said Uncle Eliab shrewdly.

"But you always had a great hand for mysteries and contrivances, Marcia, though what you can do with my old coat that Betsy Miller made out of Huldah's cloak, ten years ago last Michaelmas, I declare to gracious I don't know.—They don't make no such buttons as these now-a-days, though. P'raps now," shrewdly added Uncle Eliab, "you are going to a masquerade party, or some o' them things I've read of, or else Harold is!"

"Now, Uncle, don't ask questions, but leave the coat, there's a darling!"

She put up her rosy lips as she spoke to bribe the old man with a kiss, and Uncle Eliab surrendered at discretion.

"Well, well, child, have your own way," he said—and Marcia had it.

"Now," thought Marcia, with sparkling eyes, when once the front door had banged behind Uncle Eliab's departing form, "I will settle up old scores with Master Harold."

As the hour of eight approached, Major Arkwright burst into the room like a good looking whirlwind.

"Are you ready, Marcia? Alonby is waiting in the hall, and we must hurry, if we expect to get anything in the likeness of a good seat."

"Ready? of course I'm ready," Miss Arkwright answered demurely. "I have been sitting with my things on for the last quarter of an hour."

"I ought to have been on hand a little sooner," acknowledged Major Arkwright, "but I had all those mortgage papers to look over and settle, and time slipped away before I knew it. However—where's my overcoat?"

"On the hall rack, isn't it?" Marcia responded, with a curious light shining in her eyes.

"There's one here," muttered Harold, in a subdued tone, "but it's a butternut-colored thing, sprinkled all over with little brass buttons the size of a Spanish dollar. I say, Marcia, I do believe Uncle Eliab has worn off my coat and left this relic of Noah's Ark here in its place."

And he held it out at his arms' length.

"I dare say," said Marcia, preserving her gravity by an almost superhuman effort; "but it seems to be very warm and substantial, and you and Uncle Eliab are very nearly of the same height and size. Put it on and come along; we shall certainly be late."

"Put it on!" echoed the Major, almost in a shout. "Put this thing on me?"

"Well, why not? It's a little old style, to be sure—"

"A little! Just look at that collar—and those lappels—and the brass buttons!"

"Harold!" said Marcia gravely, mimicking to the best of her ability her brother's tone and

voice of the evening before, "do you actually mean to tell me that you would lose an evening of Mr.—'s oratory just because your coat is a little out of date?"

"Wouldn't I, though? Do you think I mean to make a guy of myself?"

"Well," observed Marcia dryly, "I'm thankful I wasn't born a man! But you told me last night that men did not stop to consider whether their coats or caps were according to this season's fashion or not."

"I won't wear such a thing as that, if I never go out again!" burst forth the Major, irefully flinging the respectable butternut-colored coat upon the floor, "May confusion seize Uncle Eliab and his wardrobe. Alonby you take Marcia to the lecture. I'll be hanged before I'll go looking like a revolutionary soldier."

"But my dear fellow," quoth Mr. Alonby, mischievously, "after all that you have said to your sister about pinning one's faith to reigning fashions—"

Major Arkwright stayed to hear no more, but bolted into his own room, with a muttered sound which might have been a blessing, or might have been something else.

And Marcia smiled a roguish smile. She felt that she and Harold were quits.

As for the Major, he never alluded to the "slavery of fashion" again. Whether he suspected Marcia of being in the plot or not, he never said, but at all events he was silenced. Uncle Eliab's butternut-colored coat had done the business for him.

Ensign Jackman's Dog.

Ensign Jackman was an old Vermont farmer. He had a good dog, that for some reason bore half of his owner's name, being plain Jack; and it would be no reflection on the old man's sense if we should say the creature knew half as much as he did. Jackman once owed his life to Jack; and it came about by his taking him with him to his wood-lot, which was a good way distant from his house. Almost every day during the winter the farmer and his dog went off together, always returning safely with great loads of wood, until one afternoon, as they were jogging homeward, the sled canted on a stone, and the uppermost log on the load rolled off on the ensign's side, taking him unaware, knocked him down, and held him there wedged in between the runner and a huge boulder which almost overhung the path.

As he fell he instinctively shouted, "Whoa!" to the oxen, and they stopped at once, then and there. If they had started at all, the sliding load would have been precipitated upon his head; but trained and most obedient of creatures, like all good oxen, they minded what was said to them, and halted with the toppling logs ready to roll off at the first movement. But though they might stand there all the afternoon, as probably they would, when night drew near they would go home. Besides, there was no hope in them.

While this had been happening, Jack had been off careering about the woods, hunting up hares and starting up partridges, and having a most delightful time; but now when the ensign whistled for him, he came bounding back to the sled, saw what had happened, and that he could not get at his master, and started for home with the speed of a race-horse.

Mother Jackman saw him coming down the road, and he seemed to her to be flying. His lameness did not hinder him then. He cleared the ground like a deer running for his life. She knew that something was the matter, and rushed to the door, but instead of etopping there he shot past, and kept straight on, by several houses and shops, to the shoemaker's. Meanwhile she caught up a shawl, and set out for the woods.

Jack had evidently gone through with some process of reasoning which brought him to the conclusion that it was a case in which a woman could not help, not even his own mistress. And so he sped by everybody else to the one man who had befriended him.

He burst out into the presence of the shoemaker, pulled at his shirt-sleeve, and ran to the door, whining. The man put on his coat and followed. At the grocery-store, next door, he stopped long enough to tell of the dog's conduct; then borrowed a horse and sleigh which stood waiting while the owner was making purchases, and drove on after Jack.

Men came out along the road until there was quite a party on the way, some in sleighs and some on foot. When the old lady was overtaken, she was picked up and conveyed along.

Jack led the way. There stood the patient oxen in their tracks; they had not advanced so much as one of their feet in all that time. And there lay the ensign, quite insensible now, just where he had fallen.

"That's a very stupid brute of yours, John," said a Scotch minister to one of his parishioners, a peat-dealer, who drove his merchandise from door to door in a small cart drawn by a donkey. "I never see you hunt the creature in braying." "Eh, sir," said the peat dealer, "ye ken the heart warms when friends meet."

A MAN brags that all the furniture and flooring of his house is made of live oak, but his wife, who does the hard work of the house, says it's nothing but scrub oak.

A MAN who mixes a great deal in society, is said to have laughed so much in his sleeve that it is quite worn out.

WHAT grows bigger the more you contract it? Debt.

ROADS TO RUIN.—It is the easiest thing in the world to find one of these roads, for they run in all directions over the social planet. They present, as the advertisements have it, a "wide field for choice." They comprise highways and byways, round-about roads and cuts across, smooth paths and rough paths, ascents and descents; and as they intersect each other at points innumerable, travelers to the common terminus can turn out of the road they have started on into a new one at their pleasure.

The outfit for the journey, be it long or short, is not of much consequence, since destitution and despair await all who persist in pursuing it. Some set out with pockets full of gold; others with their pockets empty, hoping to fill them by the way. To some the fiend, speculation, plays the cicerone, marshalling them to seeming Dorados in the distance, that melt in the moonshine, as they travel on. The will-o'-the-wisp, with his pasteboard signals, beguiles others to the brinks of the precipice, whence they tumble headlong into irremediable shame. The goblin, gin, heads a caravan of self-destructionists, whose name is legion. All "besetting sins" pull one way, and betray their victim into one or the other of the many roads to ruin. The only trustworthy safeguard against their enticements is resistance at the outset. When morbid appetite or inclination pull ruinward, brace the moral system against them; put manhood against temptation; ask help from heaven. Christian firmness is more than a match for Satan and all his agents. Misfortune may overtake any man; but misfortune is not ruin. In that terrible word, in its true interpretation, is involved a loss of character, of self-respect, of moral courage, of all that renders life valuable. Beware of the first step leading to such a consummation.

TRUE ECONOMY OF LIFE.—The true economy of human life looks at ends rather than incidents, and adjusts expenditures to a moral scale of values. The real wastes of life are not those men prate about most volubly and condemn in censorious tones. De Quincy pictures a woman sailing over the water, but awaking out of sleep to find her necklace untied and one end hanging in the stream, while pearl after pearl drops from the string beyond her reach; while she clutches at one just falling another drops beyond recovery. Our days drop one after another from our too careless holding, like pearls from a string, as we sail the sea of life. Prudence requires a wise husbanding of time to see that none of these golden coins struck in the mint of God's own eternity are spent for nothing. The waste of time is a more serious loss than the extravagances against which there is such loud acclaim. Here are thousands who do nothing but lounge and carouse from morning till midnight—the drones in the human hive, who consume and waste the honey honest workers wear themselves out in making, and insult the day by their dissipation and debauch. Here are ten thousand idle, frivolous creatures, who do nothing but consume and waste what honest hands accumulate, and entice others to lives as useless and worthless as their own. Were every man and woman honest toilers, all would have an abundance of everything and half of every day for recreation and culture. The expenditure of a few dollars for articles of taste and *virtu* is a small matter in comparison with the waste of months and years by thousands who have had every advantage society could offer, and exact every privilege it affords as a right.—*Herald of Health*.

WANT IN LIFE.—There is nothing more fortunate for moderate genius than to be born poor. The "silver spoon" class are a very comfortable people, no doubt, but the great trouble with them is their education is mainly of this order, and if they don't become very great they are extremely likely to become the very opposite. Poverty has helped men to solve the greatest problems of life. Half its brave deeds have been a necessity, and the most of its noble sayings have been born of a determined opposition. It does a man good to put him at his wit's ends. Emergencies make men. Any man can be a general or pilot in a calm; but storms show the metal. Reputation is made more by boldness and will than by ability and patience. Life is too short to wait for the tide whose ebb leads on to fortune. We must make the most of present opportunities, but we shall hardly do it, unless present opportunities are in the main present necessities. The man who works out these to the fullest extent is the most successful man.

THERE is an old tale, of which, though idle in itself, the use may be good. A certain man, who would never go to church, when he heard the bell, would say to his wife, "Go thou to church, and pray for thee and me." One night he dreamed that both he and his wife were dead, and that they knocked together at heaven's gate for entrance. St. Peter (by legend) is the porter, and suffered the wife to enter in, but kept the husband out, answering him, "She has gone in both for herself and thee. As thy wife went to church for thee, so she must go to heaven for thee."

MARK TWAIN'S BEAN SOUP.—"Take a lot of water, wash it well, and broil it until it is brown on both sides; then carefully pour one bean into it and let it simmer. When the bean begins to get restless, sweeten it with salt, then put it up into air tight cans, hitch each can to a brick and chuck them overhead and the soup is done."

THINGS MIXED.—Some years ago, when the writer was a reporter upon an Eastern paper, it devolved upon him to write for the same edition an account of the presentation of a gold-headed cane to the Rev. Dr. Mudge, the clergyman of the place, and a description of a patent hog-killing and sausage machine, which had been put in operation at the factory. Now, what made the Rev. Dr. Mudge mad was this: The inconsiderate buccaneer who made up the forms of the paper got the two locals mixed up in a frightful manner, and when they went to press something like this was the appalling result:

Several of the Rev. Dr. Mudge's friends called upon him yesterday, and after a brief conversation the unsuspicious hog was seized by the hind legs and slid along a beam until he reached the hot water tank. His friends explained the object of their visit and presented him with a very handsome gold-headed butcher, who grabbed him by the tail, swung him around, slit his throat from ear to ear, and in less than a minute the carcass was in the water. Thereupon he came forward and said that there were times when the feelings overpowered one, and for that reason he would not attempt to do more than thank those around him for the manner in which such a huge animal was cut into fragments was simply astonishing. The doctor concluded his remarks when the machine seized him, and in less time than it takes to write it the hog was cut into fragments and worked up into delicious sausage. The occasion will long be remembered by the doctor's friends as one of the most delightful of their lives. The best pieces can be procured for fifteen cents a pound, and we are sure that those who have sat so long under his ministry will rejoice that he has been treated so handsomely.—*Brooklyn Times*.

INSPIRED by the report of Rochefort's escape from New Caledonia, M. Jules Claretie contributes to the *Independence Belge* some of those ever-attractive tales of similar events which seem to excite the sympathy even of the most law-abiding persons. The best of these dates from the time of the Reformation, when a certain Lutheran named Caelius Curion, falling into the power of the Inquisition, underwent the usual process of suasion carried on by its familiars. An immense log of wood being fastened to each of his feet, escape seemed hopeless. One day, however, he induced his jailer to remove the log from one of his feet, which was swollen. He then, when alone, took off his shirt, stuffed it into the stocking he removed from the freed limb, put a shoe on the dummy, and covered the real leg with the folds of his cloak. He next begged the jailer to change the log to the other foot. This the man did, thinking it could not signify which of the prisoner's legs was hampered, and having carefully fastened the heavy piece of timber to the stuffed stocking, left Caelius Curion, as he thought, safely manacled. As soon as night fell, the Lutheran resumed his shirt and stocking, climbed out of his dungeon window, jumped over the moat, and fled to a place of safety, where he soon began to fulminate as before against the priests, monks and Inquisitors, who all attributed his escape to magic.

THE YOUNG WIFE.—The marriage of middle age is companionship, the second marriage of maturity, perhaps the reparation of a mistake, perhaps the palid transcript of a hurried joy; but the marriage of the loving young is by the direct blessing of God, and the complete ideal of a lovely human life. Let those who have found that pearl hold it fast and keep it safe. Within the doors where love dwells no evil thing should enter, and the loving bride who would be the happy wife must speedily guard against her own impatience and despair when the lover is emerging into the husband, the flatterer into the friend.

YOUNG LADIES SHOULD DRESS WELL.—Lavater, in his standard work on "Physiognomy," says: "Young women who neglect their toilette, indicate in this very particular a disregard of order, a deficiency of taste and the qualities which inspire love. The girl of eighteen who does not desire to please in so obvious a manner as dress, will be a sloven and probably a shrew at twenty-five."

A LADY who had pretensions to the most refined feelings, went to her butcher to remonstrate with him on his cruel practices. "How can you be so barbarous as to put little innocent lambs to death?" "Why, madam," said the butcher, "you surely wouldn't eat them alive, would you?"

FREDERICK the Great wrote to one of his generals; "I send you with 60,000 men against the enemy." On numbering the troops, it was found that there were but 50,000. The officer expressed his surprise at such a mistake on the part of his sovereign. Frederick's reply was, "I counted you for 10,000 men."

DURING the time that the late Sir Robert Peel was Premier, Lady Jane Peel was in the habit of pasting on a screen all the articles which appeared in the newspapers opposed to him. "There is nothing very singular in that," remarked Peel; "it is but the duty of every good wife to screen her husband's faults."

SENECA says that the great sources of anxiety in life are three: the fear of want, the fear of disease, and the fear of oppression by the powerful. He says that the last of these three is the greatest. Seneca is about correct.

YOUNG FOLKS' COLUMN.

Lulu's Complaint.

It's a poor little sorrowful baby,
For Bidget is 'way down stairs,
My titten has statched my finder,
And Dolly won't say her p'ayers.

I hain't seen my bootiful mamma,
Since ever so lon' ago,
An' I ain't her tunnin'est baby,
No longer, for Bidget set no.

My ma's dot anoder new baby;
Dod dived it—He did—yes'erday;
An' it kides, it kides, oh so defful!
I wis' He would take it away.

I don't want no "sweet" little sister!
I want my good mamma, I do;
I want her to tisse me, an' tisse me,
An' tell me her p'ecious Lulu.

I dess my bid papa will be b'in me,
A little dood titten some day,
Here's nurse wid my mamma's new baby;
I wis'se would take it away.

Oh, oh what tunnin' yed finders!
It sees me yite out o' its eyes!
I dess he will keep it, and dive it
Some tanny whenever it kides.

I dess I will dive it my Dolly,
To play wid mos' every day;
And I dess, I dess—Say, Bidget,
As' Dod not to take it away.

A Little Word.

A little word! a little word!
And joy in two young hearts dropped dead.
Alas, that it was ever heard,
Alas, that it was ever said!
A little word! The sun went down,
Then fell the ruin and the rain:
Love's happy fields were bare and brown,
And life was never bright again.

CHILDREN, in their efforts to use the English language to express ideas, make very amusing mistakes. A little fellow five or six years old, who had been wearing undershirts much too small for him, was one day, after having been washed, put into a garment as much too large for him as the others had been too small. Our six-year-old shrugged his shoulders, shook himself, walked around and finally burst out with: "Ma! I do feel awful lonesome in this shirt."

LET the winds and waves of adversity blow and dash around you, if they will; but keep in the path of rectitude, and you will be firm as a rock. Plant yourself upon principle, and bid defiance to misfortune. If gossip, with her poisoned tongue, meddles with your good name, heed her not. Carry yourself erect; let your course be straightforward, and, by the serenity of your countenance and the purity of your life, give the lie to all who would underrate and belittle you.

THE line of conduct chosen during the five years from 15 to 20 will, in almost every instance, determine the character for life. As the youth is then careful or careless, prudent or imprudent, industrious or indolent, truthful or dissimulating, intelligent or ignorant, temperate or dissolute, so will he be in after years, and it needs no prophet to cast his horoscope or calculate his chances in life.

The Comic Grammar says:

Remember though box,
In the plural makes boxes,
The plural of ox
Should be "oxen," not "oxes."

To which some one adds:

And remember though fleece
In the plural is fleeces,
That the plural of goose,
Isn't "gooses" nor "geeses."

A CHICAGO parson, who is also a school teacher, handed a problem to a class in mathematics, the other day. The first boy took it, looked at it awhile, and said: "I pass." Second boy stared at it and drawled out: "I can't make it." "Very well, boys," said the parson, "we'll proceed to cut for a new deal," and with this remark the leather strap danced like lightning over the shoulders of those depraved mathematicians.

A SCHOOLMASTER put the question to the scholars, "What is nothing?" A pause ensued until an urchin, whose proclivities for turning a penny were well known among the school-fellows, got up and replied, "It's when a man asks you to hold his horse and just says thank ye." The answer has since earned considerable notoriety for the youngster.

LITTLE John (alluding to the governess, who is giving a music lesson), "Isn't Miss Dackson a bad tounter for a governess, ma?" "What for, my dear?" "Cause she keeps tounting one, two, three, four, and t'ant get any further—but she teeps trying. May I tell her the next is five? Do listen, ma."

As two children were playing together, little Jane got angry and pouted. "Look out, Jane, or I'll take a seat up there on your lips." "Then," replied Jane, quite cured of her pouts, "I'll laugh, and you'll fall off."

JOSH BILLINGS gives the following advice to young men:—"Don't be discouraged if your mustash don't grow. It sometimes happens where a mustash duz the best, nothing else duz so well."

GOOD HEALTH.

"Spring Biliousness."

There are few of our rural readers who will not readily comprehend the meaning of the above caption. Of course, the term "biliousness," like charity, is made to hide a multitude of sins; but in this article we simply mean by it that condition of general lassitude so universally observed with the coming of spring. And very often something more than lassitude is experienced; for malarial fever in its various types, together with an occasional case of typhoid, make their appearance wherever climatic or physical conditions afford them the slightest foothold. To obtain a fair insight into any symptom or set of symptoms which constitute a disease, it is necessary to understand something of their causes, and so we will look for a moment into those causes which would seem to favor or induce these "spring fevers." One of the first, no doubt, is the marked difference in diet and physical regime of life during the winter months. We undoubtedly eat too much strong animal food, and too little vegetables, take too little exercise to correspond with a strictly healthy condition; in short, we pamper ourselves, as it were, during the winter, and spring confronts us with its hard labor, only to find us like a race horse under similar conditions, good for a short dash, but with no bottom to hold out. Hence it is that "spring bitters," "salts and sulphur," etc., are brought into such common use at this season. If we are to continue in our old manner of life, then the theory of their use is good; and, among the best of these, is undoubtedly the common "blue mass," which arouses the lagging secretions of the system, setting the tearing down workmen busy at work, and if then followed by a good tonic such as cinchona (Peruvian) bark, calayaisa, etc., to help the building up forces of the body to do their work, will no doubt do much towards warding off these spring attacks. But, it seems to us, the true theory is prevention, by eating more vegetables, taking greater care that the normal secretions are not interfered with by colds, and giving ourselves plenty of exercise and recreation during the tedious, chilly winter months.

Poisons and their Antidotes.

MR. G. C. Rockwell communicates the following to the *Scientific American*: Fatal results of poisoning are most frequently occasioned by delay in applying, or by ignorance of, the antidote. The following is a list of the antidotes of the common poisons, and I suggest that chemists, dyers, druggists and others who are brought daily in contact with poisonous substances, post this list in some conspicuous place in their laboratories.

For alkaloids, such as morphine, quinine, etc.: Emetics and the stomach pump must be relied upon rather than chemical agents. Astringent liquors may be administered, such as tannic acid, which precipitates many of the alkaloids from their aqueous solution, absorption of the poison being thus retarded.

For antimony (tartar emetic, etc.): Any form of tannic acid may be administered (infusion of tea, nutgalls, cinchona and oak bark, or astringent solutions or tinctures), an insoluble tannate of antimony being formed. The stomach pump must be also applied as speedily as possible.

For arsenic (Paris green, etc.): Recently precipitated moist ferric hydrate, best administered in the form of a mixture of a solution of perchloride of iron with carbonate of soda. Emetics should be also given, and the stomach pump applied.

For copper (verdigris, etc.): For an antidote, administer iron filings, also white of an egg (albumen), which forms with copper a compound insoluble in water. Apply the stomach pump.

For hydrocyanic acid (cyanide of potassium, etc.): A mixture of green sulphate of iron, solution of perchloride of iron, and either magnesia or carbonate of soda, is the recognized antidote in cases of poisoning with prussic acid. Inhalation of ammonia is also advised.

For lead: Administer a solution of Epsom salts or alum, and induce vomiting.

For mercury (corrosive sublimate, etc.): Swallow the whites of several eggs. Albumen gives a white precipitate with salts of mercury, which is insoluble in the juices of the stomach.

For oxalic acid: In cases of poisoning with oxalic acid or salts of sorrel, chalk and water may be administered as a chemical antidote, with the view of producing the insoluble oxalate of lime. Emetics should also be applied.

For tin: In cases of poisoning by tin salts (dye's tin liquor), solution of carbonate of ammonia should be given. White of egg is also said to form an insoluble precipitate with compounds of tin. Vomiting should also be speedily induced.

For zinc: Large doses of zinc, fortunately, act as powerful emetics. If vomiting has not occurred, or has taken place apparently to an insufficient extent, a solution of carbonate of soda (common washing soda), immediately followed by white of eggs and demulcents, may be administered.

THE poisons contained in tobacco smoke find a ready exit from the system; when inhaled during a period of fasting their injurious effect on the heart is apprehended.—*Lancet*.

AN ODD USE FOR HAMMERS.—"I remember," says a correspondent of the *Medical and Surgical Journal*, "that when I was very young, they used to raise blisters with boiled hammers. Old Dr. Twitchell of Keene (peace to his ashes) once wanted to blister some one in a farm house, far from home. He had nothing with him to do it with. He asked the wife to find him a hammer. The article was brought out, put in a tea kettle over the fire, and after the water steamed and bubbled well, he lifted it out and gently touched it to his patient, in half a dozen spots, over the seat of pain, with very positive effect. Boiled hammers were for many years used in that neighborhood for pleurisy; and every old lady knew nothing was equal to a hammer; and there was a long dispute whether it should be a claw hammer or not. I think the yeas finally conquered."

THE GROWTH OF CICATRICES.—Mr. W. Adams, in a paper read before the Medical Society of London, shows that scars made in childhood grow with the general growth of the body. He exhibited casts taken at different periods of life, in some of which a growth of an inch had taken place in six or seven years. After deep wounds, or when a portion of the skin has been destroyed, the cicatrix appears to remain through life. The only ones that disappear are those resulting from superficial cuts, which do not penetrate fairly through the deeper layers of the skin.

The Gatling Gun.

Last fall one of the most wonderful trials to which any implement has been subjected, took place. According to reports made at the time, the Navy Department, in order to determine the quality of the solid head metallic cartridges, and to test the working powers and durability of the Gatling gun of .50-inch caliber, ordered that one hundred thousand cartridges of .50 caliber (containing United States service charge) be fired in the gun at Fort Madison, near Annapolis, Md. The trials commenced on October 23d, and lasted parts of two days. On the first day (the 23d) over 30,000 rounds were fired; and on the 24th, 64,000 cartridges were fired, without stopping to clean barrels; and after this unprecedented test, the gun (without the barrels being cleaned) was fired for accuracy at a target 12 x 12 feet, placed 300 yards from the gun; and out of 30 shots fired, 29 of the balls hit the central part of the target, striking point on and giving good penetration. It may be safely said that this number of discharges was never before made from any arm in the world.

Singular as it may appear, the fouling of the barrels did not increase after 4,000 or 5,000 rounds had been fired. The trials were made under the supervision of Lieutenant Commander J. D. Marvin, United States Navy, commandant of Fort Madison. Many distinguished navy and army officers were present at the trials. During a part of the trials, the gun was fired at the rate of 400 shots per minute. A drum which supplied the cartridges to the gun, and which contained 400 cartridges, was frequently exhausted in from 50 to 55 seconds.

Of the cartridges used, none of the heads burst, none of the shells failed to extract, and there was only one misfire in about five thousand cartridges discharged. The cartridges are headed by a new process, which prevents injury to the fiber of the metal from compression.

MACHINE FOR REDUCING STONE.—A new grinding machine of ingenious construction, and which acts with great power and efficiency, has been invented in England, its design being to reduce hard substances, such as rocks of granite, silica and other materials, to a finely pulverized state. The size at the mouth is twelve by five inches, and any stone of that size is quickly reduced by its action. The moving jaw is swung from below on a stout cross-pin, to the two sides, and is made so that it has the greatest motion at the top, and the least motion at the bottom. The toggles are worked from an upward connecting rod, actuated by a steel eccentric shaft, running in an anti-frictional metal bearings near the sole plate. The usual wedge motion and spring rod for bringing back the jaw are supplied, and the whole mounted on a foundation plate. An improved mixing apparatus is attached, by means of which the stuff is immediately and thoroughly blended, as it is delivered from the spout.

NEW STEAM AUXILIARY.—A new invention by Mr. J. Berger Spence, of London, consists in passing steam at ordinary atmospheric pressure into a solution of caustic soda, which is thereby raised to its own boiling point. It is proposed to use the heat thus developed to generate steam, the waste steam from an engine boiler being employed in the first instance to heat the caustic soda. Mr. Spence showed that the effect was absolutely produced by raising a solution of caustic soda to a heat considerably over 212° by means of a jet of steam, but he stated that he had not yet worked out practical details as to the employment of the idea, though he exhibited a sketch of an arrangement of boilers which he considered might render it available.

CEMENT FOR AQUARIA.—An adhesive cement for aquaria may be made, according to Klein, by mixing equal parts of flowers of sulphur, pulverized sal ammoniac and iron filings, with good linseed oil varnish, and then adding enough of pure white lead to form a firm, easily worked mass.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. E. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 333 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our Scientific Press, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

Subscriptions payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5. in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

Advertising Rates.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 6.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, May 23, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Animal Food for Fowls; Treating Textile Products; Architectural Plants, 321. The Cullings of Society; Cotton Planters of Merced; Artificial Fertilizers, 328. What a Man is Worth; Indians Burning their Dead; Extraordinary Rains in the Gulf States; Impositions on American Wheat Shippers, 329. Patents and Inventions, 332.

ILLUSTRATIONS.—Yucca, or Spanish Bayonet, 321. Indians Burning their Dead, 329.

CORRESPONDENCE.—Notes of Travel in San Luis Obispo County; Crops, Weather, Etc., in Arizona; A Favorable Locality for Beet Sugar, 322.

SHEEP AND WOOL.—Scottish Sheep Farms and Farmers; Production of Wool in France, 322.

THE DAIRY.—Annual Receipts per Cow; Rag-Wood Injuring Cheese; Milk vs. Imports, 322.

HOME AND FARM.—Harvesting Root Crops; Land Washing; Bermuda Grass for Stopping Wash; The Value of a Ton of Mar; What Crops Leave in the Soil; Smaller Farms, 323.

HORTICULTURE.—Sun-Dried Fruit a Failure; Thin Your Fruit; Look Out for the Weeds; Manure for Orchards; Crops, Etc.; Dahlias; Guano vs. Phylloxera, 323.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 324-5.

HOME CIRCLE.—My Choice (Poetry); Turning the Tables; Ensign Jackson's Dog; Roads to Ruin; True Economy of Life; Want in Life; Mark Twain's Bean Soup, 326. Things Mixed; The Young Wife; Young Ladies Should Dress Well, 327.

YOUNG FOLKS' COLUMN.—Lulu's Complaint (Poetry); A Little Word (Poetry), 327.

GOOD HEALTH.—"Spring Billiousness;" Poisons and their Antidotes; An Odd use for Hammers; The Growth of Cicatrices, 327.

POULTRY YARD.—Geese; Bumble-Foot; Feeding Young Chicks, 330.

THE HORSE.—Vices and Diseases of the Horse; How Old do Horses Breed? 330.

AGRICULTURAL NOTES from various countries in California, 332.

MISCELLANEOUS.—Farmers' Union of Santa Clara County; Santa Clara County Council, 325. The Gatling Gun; Machine for Reducing Stone; New Steam Auxiliary; Cement for Aquaria, 327. Black Varnish for Zinc; How to Varnish; To Clean Paint; Glycine for Preserving Fruit; Incombustible Finish for Woven Fabrics; To Inventors; To Mend China; To Remove the Iron Taste from New Kettles; The Most Profitable Crops; Statistics of Paper-making; The Value of Special Manures, 330. The Astronomical Event of the Century; Gain in Weight by Combustion, 331. Jewell & Co.'s Redwood Water Pipe, 332.

RESTORATION AND RENOVATION OF SOILS.—In concluding an interesting paper on this subject before the Wisconsin State Agricultural Convention, Secretary Field gave the following summary of his advice to farmers: 1st. Make all the manure you can, and apply all you make in a condition best suited for food for plants and where most needed. 2d. Cultivate thoroughly, stirring the earth to a great depth; plow, harrow, roll, cultivate, subject the soil to repeated changes, so that, aided by the action of frosts and rains, it may be so reduced and refined as to be compelled to yield its supply of food in such abundance that the annual crops may feed and fatten upon it, like the stalled ox. 3d. Renovate with clover. From observation and experience I am convinced that by an occasional seeding to clover, say once in five to eight years, as circumstances seem to require, with a rotation of crops, using all the manure made, with thorough culture, the most of the land of Wisconsin would be in a healthy and highly productive condition generations hence. 4th. If your lands are still being reduced in fertility, apply the best commercial manures you can obtain. Buy in limited quantities, and experiment fully, and, if found successful, purchase again the same brand.

SEVERAL of the ranchers in Amador county are experimenting with cotton on a small scale this year, in order to test the question as to whether it will grow and thrive in the foothills.

In Los Angeles a company has been formed to propagate orange trees on a large scale. The company intends to sprout not less than half a million of orange trees this spring.

The Cullings of Society.

What Shall Be Done With Them?

The old practice pursued by farmers in assorting the rising generation in the country was as follows: Among the males the first in intellectual ability was almost invariably carefully laid aside for the legal profession. The next was considered as a family offering to the ministry. The third was supposed to have sufficient ability for becoming a successful merchant. Then the balance were carefully looked over, to find a little mechanical ingenuity, which was devoted, when found, to some useful trade; while the unmarketable refuse, like that of other farm products, were kept for the home supply.

The most promising of the female portion of the family absorbed nearly all the educational advantages within its reach, and was fitted for teaching school; being expected as a matter of course, to marry a clergyman after a few seasons of usefulness in her profession. What personal attractiveness there might be among the daughters, was hurried off to the city, where the demand for this product always exceeds the supply. After these selections were made, the rest were retained to become farmers' wives.

The folly and injustice of this principle has become so apparent, and the incompetency of the judges who presumed to make such a division, has been so thoroughly proved, that there is no danger whatever of the practice ever being revived. It is now universally acknowledged that there is not only ample room in the agricultural world for talent to display itself to advantage, but that it demands at present, and, in fact, always has demanded the same ability that is requisite to success in any other occupation. Not only are men possessed of wealth, talent and cultivated tastes, turning to farm life in steadily increasing numbers, (not with a desire to escape even mental labor, but seeking employment as well as recreation, for brains, as well as hands), but farmers themselves are generally aware that industry and economy are but the foundation of their favorite edifice, and that its completion will require the skillful labor of generations yet to come. They have seen that Art is the same efficient handmaid of Nature in agricultural pursuits that she is represented to be in other fields of labor. Parents have learned that if the accomplishments of social life are not admitted and favored in their homes in the country, their sons and daughters will leave those homes, and go in search of them elsewhere; and it has become a well established fact, that those city men who prefer to go into the country in search of wives, can find there intellectual cultivation and polished manners, as well as healthy constitutions and moral purity.

Yet, notwithstanding this thorough change has been effected in the views and habits of country people, there is an extremely unreasonable notion prevailing in other quarters that the refuse of society in the cities should be sent into the country. This idea is an especial favorite with social economists and reformers generally; and is pressed into the service of all schemes for the improvement of society. All who are too stupid to succeed, or too vicious to be tolerated in the city, are advised "to go into the country." When the city votaries of folly and dissipation have rendered due sacrifice to their deities, they are expected to end their worse than useless lives in the country; and moral as well as physical disease is admonished that nothing but a change from city to country life will do for it; and if they are not cured, they are not endured, at least by their former companions in the city.

These propositions, which, viewed in their natural repulsiveness, would arouse a feeling of resentment on the part of country people, have been so sugared over with compliments to "country influences," that they have been rather relished than otherwise by farmers, and have been supposed by them to be available as arguments to convince the rising generation in the country that they should be content to be deprived of all the advantages that city life holds out to them. But they now see that in disposing of the surplus population of the cities, the dregs and cullings are appropriated to the country, and they feel like refusing to accept any more of these unordered invoices of damaged goods.

There is never a surplus of the right kind of population either in city or country; and that which obstructs the course of social advancement in the farming locality is as much an encumbrance as in the latter. Besides, the country is by no means the moral paradise that it has been represented to be. There is no need of importations of idleness, dissipation and incompetency from the large cities. If the cities find their products increasing on their hands, let them close the manufactories of the same at once, and not crowd them upon those who already have more of them than they know what to do with.

Those who are an expensive burden to society in the city, are told that they "should cease to be consumers, and become producers;" and it seems to be expected that each member of this numerous class needs nothing but "the will" to be transformed at once from an idle, discontented being, indispensed or incompetent to properly fill the station for which he was reared, to a skillful farm laborer. The country is undoubtedly in want of laborers; but not of this grade. A mistaken notion has always prevailed in society that numbers are all that is wanted in the labor fields in the country; when

discipline of both mind and muscle are as desirable here as in the trades; and the progress in farm skill with the continued change and improvement in farm implements increases the demand for judgment and skill on the part of workmen. The employer of farm help finds, in making his selections, that in this, as in other markets, "the best is the cheapest." As a consequence of the general practice of this rule, we find in farm labor a wide range in the rates of wages; becoming still wider as the higher grades of workmen improve in skill, and the numbers increase of those who take to farming as a last resort, or are sent into the country to be got out of sight, or to be kept out of mischief.

But the power that "finds some mischief still for idle hands to do," is by no means at a loss in furnishing employment in the country for those under his charge; and much of the discontent so prevalent among the young people of the country may be traced to this source. The sentimental confessions or exaggerated accounts of the achievements of these veterans in vice, create a morbid curiosity in the minds of their credulous listeners in the field, by the winter fire at home, or at the country inn, and arouses an ambition to perform deeds of a similar character. It will be found that a very large proportion of those who improve in condition while sojourning in the country, turn again to their former idols in the city, manifesting renewed zeal; and offering, with other sacrifices, a fearful list of proselytes, having established a bond of union and sympathy between themselves and their new acquaintances in the country.

The older farming districts are particularly unfortunate in this matter of distributing the cullings of society, especially in regard to foreign emigration. Those who are really in earnest in their agricultural undertakings, and whose means of experience make them desirable neighbors or co-laborers, prefer to go where they can become proprietors of land; the privations and labors of a new country having no terrors for them; while those who take to farming because they are not fitted for anything else, remain as close as possible to cities and villages.

But the question, What shall be done with the cullings of society? still remains unanswered. We have, however, endeavored to point out one thing that should not be done with them—that is, sending them into the country. Considered as a matter of profit and loss, either socially or financially, the country cannot afford to take them. The supply will not diminish as long as they can be disposed of; and simply closing the markets here against articles of this description will do much toward checking their production.

The Cotton Planters of Merced County.

Mr. H. F. Buckley, of the firm of Buckley & Brothers, Merced Co., called on us to-day, and favored us with some interesting items in connection with their cotton growing. He informs us that their first crop was grown in 1871. It was planted April 27, and yielded over 470 pounds per acre. Please note this yield in comparison with the returns from the Southern States. Texas is credited with raising 220 pounds per acre; Mississippi with 200 pounds; other Southern States ranging still less.

This is the fourth season of their cotton growing, and their present planting covers 100 acres. In 1872-3 they planted a little later in spring and became convinced that early planting is correct. This season they planted on the 3d of May, being as early as the condition of the ground would permit. The Buckley Brothers have a Hoadley engine for power for ginning and pressing. They have a 60-saw gin with which they can gin 2,500 lbs. per day—the only one run by steam power in the State.

It Pays.

That cotton is a paying crop in California they are already assured, but they have various improvements in view which will probably render it still more profitable. But even at present they can successfully compete with the South.

Simple and Easy.

They represent the process of growing this crop as being as simple and as easy as that of corn; the two crops being similar in their requirements of soil, cultivation, etc. They plant in rows 4 feet apart, generally in drills, but the present season are trying some with "choking" or cross planting. Two men, with two horses and drillers, will plant 7 or 8 acres per day. They expect to harvest some time in September.

Another Consideration.

The Buckley Brothers have, during the winter just past, fed from 60 to 80 tons of cotton seed to their sheep.

To this enterprising firm also belongs the credit of shipping the first consignment of

Cotswold Sheep to China.

On the *Vasco de Gama*, which left this port on Friday of last week. They are consigned to a prominent firm of Hongkong, and will no doubt be a valuable addition to the choice stock of the country of their adoption.

SOME Chinese farmers have drained a tract of tule land, near Antioch, and are making the umbrageous cabbage and the wide-spreading squash-vine to burgeon and blossom.

FARMERS write for your paper.

Artificial Fertilizers.

Every year some new fertilizer is offered to the public, and quite as periodically the regular excitement about its comparative usefulness ensues. We in California can hardly appreciate the interest with which experiments on the merits of these new fertilizers are watched. We have not yet arrived at that stage in agriculture where heavy and systematic manuring becomes a necessity. Our soil is for the most part too new to show the evil effects of continuous cropping, a course which may be described as simple subtraction; and though in many places the wonderful yields of former days are year by year steadily falling off, but little has been done to prevent the depletion which, with the continuation of the existing system of farming, is sure to follow.

If we are to ascribe to the Chinese the greatest economy in the use of land, we must also credit the English farmers with the most generous use of fertilizers. These are not only serviceable in increasing the returns from a given piece of ground, but a prime necessity in the older agricultural regions of Europe and the Eastern States. Hence it is that the elaborate and scientific experiments with sewerage, animal products and the refuse from various classes of manufactories become a matter of such public importance.

Last fall a farmer near Boston, desirous of testing the value of several compounds, left nothing untried to secure fair conditions for the experiment, and carefully noted the result. The matter is thus reported by the gentleman who conducted the experiments.

Last autumn we harvested a magnificent field of corn, upon which some trials were made with different fertilizing substances, the results of which we give for what they are worth. On a portion of the field the English superphosphate was used; on another, the "animal dust," or dry blood compound, manufactured by North, Moriam & Co., of Boston; on another, a mixture of equal parts of the English phosphate and animal dust; on still another, the mixture of bone flour and ashes, suggested to farmers several years ago. The results were as follows: Each 100 hills fertilized with English superphosphate gave of ears of corn, five bushels; 100 hills with "animal dust," six and one-half bushels; 100 hills with "animal dust" and phosphate, five and one-fourth bushels; 100 hills with bone flour and wood ashes, five and one-half bushels. From these results, it appears the "animal dust" gave the most corn, the bone and ashes stand next, the superphosphate last. Equal parts of the "dust" and superphosphate did better than the phosphate alone. A measured quantity of equal amount (about a handful) was put in each hill. The cost of the superphosphate and the "animal dust" was nearly equal (\$35 per ton).

If the results were to be regarded as certainly indicating the comparative value of the different substances, it is clear, the "animal dust," or dried blood, is much the most efficient and the cheapest corn fertilizer. Although the greatest care was used in conducting the experiments, it is possible that the extraordinary drought which prevailed in June and July might have been a disturbing element in the result. The whole field was upon a rising ground, the driest part of the farm; still there was a slope towards moister land, and the rows with the "animal dust" fertilizer were the lowest, the superphosphate came next, the bone and ashes was highest of all. The commercial article called "animal dust" contains a large percentage of nitrogen, and is made at Brighton, from the blood and entrails of slaughtered animals. It has proved in all the trials made with it this season, upon grass and the cereal crops, a most efficient fertilizing material. If the quality is maintained, and the manufacture carefully looked after, it will prove a very valuable addition to our fertilizing substances rich in the nitrogenous element.

The product of corn from either of the experimental plots is certainly no mean one. Reckoning 4,000 hills to the acre, the "animal dust" gave 260 bushels of ears, the superphosphate 200, the bone and ashes 220. With a loss of 20 per cent. from shrinkage in drying, the highest yield would be about 100 and the lowest 80 bushels of shelled corn to the acre. The whole field will average 85 bushels. This is certainly extraordinary, considering the extreme drought and the dry nature of the land. No other cereal, or root or grass crop, would have given half the usual return. The yield was, for New England, a very large one, and when compared with the usual returns to the acre secured by the farmers of that section, shows the real worth of thorough culture.

DAY VIEW DISTRICT PICNIC.—We are informed by Mrs. Parsons that nearly \$400 was netted at the above named picnic at the Willows, in Oakland township. It is to be appropriated towards building a public school house. The picnic grounds adjoin an old Indian mound, some 40 feet in height, 150 feet in diameter on top, and 300 feet in diameter at the base. This delightful and interesting place will be free during the season for parties and picnics. The entire proceeds of refreshment stands going to the school building fund.

A RESIDENT of Boise City is the proprietor of a peach tree whose blossoms have the exact appearance of damask roses.

What a Man is Worth.

Some very interesting facts and figures are given in the New York *World*, in regard to the actual coin value a man is worth to community, and the loss it sustains if, from any cause, he should "go to the bad." It says: The value of an able-bodied, clear-headed, healthy boy, fifteen years old, who has been to school the average length of time—six years—it is not easy to compute. He is educated in the simpler branches of knowledge. He may have also learned the rudiments of a trade, and become already, in a small way, what society has a right to expect he will become in a very few years in a large way, a producer. The mere private cost of his production is by no means small. He has had his share besides in the protection and safety of government and the accumulated comfort of the past, all of which has been lavished on him in the legitimate hope that he would in his time shoulder a part of the taxes, and aid in accumulating comfort and capital for the future. As a child, supposing that his life has been passed in the family of a mechanic, his expenses for fifteen years cannot fall much below this estimate:

THE COST TO THE FAMILY.

Board ten years at \$2, and five years at \$3 a week	\$1,820
Share of rent at \$14 a month in a family of five persons	504
Clothing \$20 for ten years, \$30 for five years	350
School books	30
Miscellaneous, sickness, etc., in all	275
Total	\$2,979

All this on the supposition that the family home has included three rooms only, that the family has had not more than five persons in it, all told, and that food and clothing have been of the plainest description, with enough of both to produce a healthy and vigorous growth; but with nothing to vary the monotony of fare limited to the necessities of life. He has cost as a member of a family, and that a family inexpensive and economical, about \$3,000; as a citizen he has cost a much smaller sum, but still one that is fairly appreciable.

THE COST TO THE STATE.

Schooling, six years	\$ 63
Taxes—State, fifteen years	165
Taxes—County, fifteen years	123
Taxes for national expenses, fifteen years	195
Total	\$546

As a person up to the age of fifteen has done nothing to earn the cost of the protection which a civil government gives in all its different branches, it is evident that, so far as he is concerned, the aliquot share expended on him is so much paid out to rear and educate; a direct investment which the community makes in him with the hope of a return. This investment amounts to at least \$546. It is direct, and easily computed.

There is another just as certain, but which cannot be so readily reckoned. The total valuation of the country is placed at \$30,068,518,507 in real and personal estate, and all this accumulated wealth of the parts works together to make life easier for the young man, who, till he is 15 years old, is adding nothing to it. He stands, too, the representative of another expense as tangible, but even less easy to give definitely. About half the population die before they reach the 15th year from birth. That is, to bring 500 persons to this point requires the birth and support for a longer or shorter time of 1,000; and the cost to the community of each at the age just mentioned is enhanced by the expense of those who fail to reach it. There are a hundred thousand other influences which cannot be reckoned in dollars and cents, but they exist none the less, and should be taken into account and kept in mind as part of the loss which the community at large suffers when one man fails to make any return for the talent confided to his care. The gross, perceptible, enumerable parts of his cost price are, to his family, in money, \$2,979; to his country and community, \$546; his share of the income from \$30,000, 000,000 of property, and the partially developed life wasted and cut off that his might reach maturity. In all, the direct outlay is \$5,000—an understatement in two directions.

At 15 years a man may begin to be a producer; or, as the most common, most dangerous means by which he becomes nonproductive, he may also begin to be a drunkard. Neither are likely before this age, though either contingency may occur years earlier, as well as after. Society has spent some thousands of dollars directly on him, and devoted some millions of capital in providing him with an education and throwing around him influences which make his life a profitable investment.

But society has also taken some pains and trouble to render null and void its own efforts. It licenses numerous places at which the means of forming the habit of drunkenness can be found, and society pays four times as much to support them as it does to protect and educate the boy whom it has raised at such trouble and expense. He enters his eighteenth year a drunkard. As least, the State loses by his intoxication the direct investment of \$5,000. At 18, the man's labor is worth at least \$728 a year, or \$14 a week. All this is lost, and it amounts to the interest on nearly twice the sum spent for his education. The average life of a man addicted to the use of ardent spirits is about 17 years, and the sum lost in this way is \$12,376.

It is even greater than this. At 20 a person in health has an even chance of living 44 years; a dram-drinker's chances are cut down to about

one-third of this period; the difference being a loss of \$19,656, making the total deficit stand thus:

Original investment	\$5,000
Loss of labor during life (17 years)	12,376
Loss of 27 years of labor by drink	19,656
Total	\$37,032

The article also gives statistics which prove that the drunkard commits a very large proportion of the crimes of the community, and thus greatly enhances his expenses by the amounts expended in conviction, punishment, etc. Altogether it is a showing that should make the thoughtful pause before condemning too rashly the efforts of the reformers in this direction.

Indians Burying their Dead.

While the subject of cremation is attracting so much attention, some of our readers may be interested in knowing how some of the California Indians dispose of their dead. It is somewhat singular that although in some districts in the State some Indians burn, and others bury their dead, they all prepare them for final disposition in the same manner. A blanket is spread on the ground and the corpse laid upon it; a brother or some other relative, after folding the limbs upon the chest with the knees towards the chin, proceeds to bend the body and limbs together as tightly as possible. It is then wrapped in the blanket and placed upon the earth with the face upwards and exposed. The mourners continue their wild lamentations



INDIANS BURNING THEIR DEAD.

for a given time and then the men build a funeral pyre or prepare a grave.

If the corpse is to be burned, when the fuel is about two feet high all the sounds of grief cease, and amid a death-like stillness the men place the body on the pyre. Wood is then piled upon it until all but the face is covered. The oldest and nearest relative then sets the wood on fire. As soon as the smoke begins to ascend the discordant howling of the women becomes almost appalling; while the men in some instances stand in sullen silence, and in others join their notes of woe to those of the women. Then, as our illustration shows, all the relatives who are nearest to the consuming dead, with long sticks in their hands, commence a frantic dance around the burning body, occasionally turning it over and stirring up the fire, that the corpse may be consumed more speedily.

A writer states that the motive which impels them to this, is that they believe there is an evil spirit who is continually contriving to give them trouble, and who will keep them from the "happy hunting grounds" if he can. They think the heart is the immortal part, and that he seeks to make it a prisoner; so they endeavor by noises and motions to attract the attention of this spirit while the body is burning, as it is at that season that the heart leaps out, and if the evil spirit's attention is distracted by their manœuvres, the heart makes its escape and is eternally safe. This is the reason for the hideous noises and waving of cloths practiced during the process of burning.

After the body is nearly consumed, the blackened remains are taken from the fire and rolled in a cloth and blanket, to cool it a little, when his wives separate the remaining and unconsumed portions of the body, and around each piece wind a long string of beads. Every particle is then placed in a basket that has been beautifully beaded and worked for such an occasion, with any other valuables that have been reserved. This being done, and the fire rebuilt, the basket and its contents are placed upon it; and while this is being consumed, cloths, blankets, dresses, beads, arrows, knives, pocket-handkerchiefs, and everything else that has been touched by the dead body, are added to the flames. When these are burned, every unconsumed log is carefully scraped, all the ashes swept together, and the whole, with the exception of a small portion reserved for mourning, is placed in another basket, and then buried.

The reserved ashes, after being mixed with pitch obtained from pine trees, are spread over the faces of the female relatives as a badge of

mourning, and which, although very hideous to our sight, are sacred to theirs, and allowed to remain until they wear off.

Extraordinary Rains in the Gulf States.

EDITORS PRESS:—Some 10 days ago I sent you a communication about the growth of our Order in the Southern States and elsewhere; but I fear it has been detained by the unusually heavy rains this month, and the consequent interruption of railroad travel and mails. Here we have been completely isolated for ten days or more, on account of injuries to the only railroad we have to depend on for postal facilities and travel. This will be sent by hand to a distant post-office, that it may reach you by another route.

These heavy storms and their consequences have delayed my return to California longer than I expected. Let me give you the amount of rain this year for Central Alabama, that your readers may compare them with our California rains, and see how fortunate Californians are not to be so annoyed by rain as our friends are here. We will acknowledge, however, that we could not object to dividing with them, so as to have more rain in our spring months.

The average rain-fall along this parallel—33° 30'—is a little more than 50 inches annually. This season the winter months have

been comparatively dry. Rain since the first of January has been as follows:

January	4.55 inches.
February	6.02 inches.
March	8.79 inches.
April to the 24th	14.26 inches.
Total	33.62 inches.

A good showing for four months—thirty-three inches, or more than two-thirds of the usual rain-fall for the whole year. In the two months I have been here we have had more than twenty-five inches. There have been but few bright days. So you can well understand that this region has by no means been lately sustaining its reputation as the sunny South. California, certainly, has better claims to be called the sunny West.

As is usual when moisture is abundant in the atmosphere, the winter and spring have been mild. I have been struck during this trip with one point of similarity between California and this part of the Gulf States. Early in February I left flowers blooming in California, and its plains covered with verdure; I found the same here. At the two ends of a journey of 3,000 miles there were all the evidences of spring, while all the route between, from the Sierras to southern Missouri, was covered with snow. Another point of resemblance is that in this region the average annual temperature is between 63° and 64° Fahrenheit, which is about the same as the average temperature of the San Joaquin valley, in the vicinity of Millerton, Borden, and Fresno City; in other words, along the upper San Joaquin in Fresno county. Nearer Stockton, and in general throughout San Joaquin and Sacramento valleys, the average temperature is somewhat higher, or about 61°.

I hope soon again to breathe the invigorating atmosphere of California. Californians can not be long away from home without feeling the need of its exhilarating and health-giving air. We cannot value it too highly. It cannot be surpassed.

J. W. A. W.
Green Springs, Alabama, April 27.

A. C. LAWRENCE, of Santa Clara county, says that curled leaf in peach trees can be effectually cured by sowing ground gypsum on the trees early in the morning, while the dew is on. He has tried this with complete success.

ONE hundred and thirty-five bales of wool, averaging 300 pounds to the bale, or, in round numbers, 40,000 pounds of wool, have been shipped from the Tejon ranch, the product of this spring's clip.

Impositions on American Wheat Shippers.

Cargoes of American wheat, more especially those shipped in bulk from New York, have, according to good authority, been subjected to gross abuses on their discharge at London. It will be seen by the account which we give below from the New York *Shipping List*, that grain shipped in bulk has suffered most from these abuses; and if this system is to continue, the case presents another point for consideration in the question whether wheat is to be shipped in sacks or in bulk. The journal alluded to above gives the facts in the case, and comments as follows:

"Our attention has been called to a communication published in *Beerbohm's Corn Trade List*, of London, in reference to an abuse at that port, in which our grain shippers have a direct interest. The writer complains that there is not only a serious delay in the deliveries of grain shipped from New York by steamers, but that there is a loss to the shippers of parcels to London of something like twice as much as that on shipments to other ports. The average deficiency at all other ports is from $\frac{1}{2}$ to 1 per cent., while at London it amounts to 1 $\frac{1}{2}$ to 2 per cent., and in some cases much more; as the grain is put into ship at New York by the same elevators, it is evident that the extra loss in London arises from faults in weighing and delivery at London. A further cause of complaint, which affects both shippers and receivers, is the great injury sustained by a large portion of the wheat being deteriorated by being mixed with dirt, etc., and returned as sweepings. The writer states that he has known as much as 140 qrs. in a cargo of 5,000 qrs. so deteriorated. Under the best circumstances, the reduction in value of such sweepings he states to be 10s. @ 2s. 3 gr., while sometimes, owing to the carelessness of the dock companies leaving wheat uncovered on the quay, it is much greater. These sweepings it is the practice of the dock companies to divide among the various receivers, the illegality of which is self-evident. The dock companies have certainly no right to apportion to one party any wheat which probably belongs to another; and by this allotment of the sweepings the honest shipper, who invoices only what he has put on board, is at a decided disadvantage, as he has, in a manner, to guarantee the weight of all shipments in the vessel. The writer calls upon the members of the London Exchange to adopt measures for obviating these difficulties, and, if need be, to open a subscription to obtain means to try the legal rights of the case with one of the dock companies, and bespeaks the co-operation of New York shippers."

The First Corner in Grain.

The writer overheard the following conversation on the local train from Oakland to San Francisco:

Smith.—What a grand power the Granges are becoming!

Brown.—Yes, if they will only avoid rings and monopolies now; but it can't be done.

Smith.—How can a ring be formed in a Grange where all have a voice, and all vote?

Brown.—You'll see, rings always have been and always will be until the millennium comes. The first that we have any account of, was when Jo. went down into Egypt and got up a corner in corn. If Pharaoh had had another dream or two, Jo. would have owned everything. As it was, he and Pharaoh got all the land and corn. The Grangers and farmers of the valley of the Nile have never recovered from the effect of that ring upon their finances. Depend upon it, the same thing will occur in the valley of the Sacramento.

The story of Joseph as told is beautiful and touching, but it was a "corner in grain" such as some of the leading Grangers are now dreaming about.

As a favorable omen of San Diego's future commercial greatness, the local papers point with pride to the statement that \$20,000 worth of potatoes will be exported this season.

MARIN county farmers have formed an association for the manufacture of wagons and agricultural implements. Capital stock, \$30,000, divided into shares of \$50 each.

ONLY a part of the farmers in Little Calaveras valley, Santa Clara county, have agreed upon conditional terms of sale with the San Francisco Water Company.

THE pasturage in the northern counties is now excellent, and the sheep, which suffered much during the rigorous winter, are beginning to wax fat and kick.

THE sycamore trees along the creeks near Chico are all apparently dying, and people thereabout are at a loss to account for the singular occurrence.

CHAS. M. DALY, our former agent and correspondent, is now connected with the *Colusa Independent*, as its editor.

THE weather at Grass Valley is quite hot nowadays, and the thermometer frequently scores 80° in the shade.

THE wool clip of Los Angeles county is estimated at \$2,500,000 pounds, valued at \$425,000.

THE Morro and Cayucos ranch, in San Luis Obispo county, is about to be divided up.

CHARLES PECK, of Merced, last week shipped 40,000 pounds of lint cotton to San Francisco.

THE hay crops of Santa Clara county are suffering from want of rain.

BIGGS, of Marysville, made his first shipment of cherries on the 15th inst.

THE cultivation of bananas is being tried in Los Angeles county.

KERN county complains of too much water.

MISCELLANEOUS.

Black Varnish for Zinc.

Professor Böttger prepares a black coating for zinc by dissolving 2 parts nitrate of copper and 3 parts crystallized chloride of copper in 64 parts of water, and adding 8 parts of nitric acid of specific gravity. This, however, is quite expensive; and in some places, the copper salts are difficult to obtain. On this account Puscher prepares black paint or varnish with the following simple ingredients: Equal parts of chloride of potash and blue vitriol are dissolved in 36 times as much warm water, and the solution left to cool. If the sulphate of copper used contains iron, it is precipitated as a hydrated oxide and can be removed by decantation or filtration. The zinc castings are then immersed for a few seconds in the solution until quite black, rinsed off with water, and dried. Even before it is dry, the black coating adheres to the object so that it may be wiped dry with a cloth. A more economical method, since a much smaller quantity of the salt solution is required, is to apply it repeatedly with a sponge. If copper colored spots appear during the operation, the solution is applied to them a second time, and after a while they turn black. As soon as the object becomes equally black all over, it is washed with water and dried. On rubbing, the coating acquires a glittering appearance like indigo, which disappears on applying a few drops of linseed oil varnish or "wax milk," and the zinc then has a deep black color and gloss. The wax milk just mentioned is prepared by boiling 1 part of yellow soap and 3 parts Japanese wax in 21 parts of water, until the soap dissolves. When cold, it has the consistency of olive, and will keep in closed vessels as long as desired. It can be used for polishing carved wood work and for waxing ballroom floors, as it is cheaper than the solution of wax in turpentine, and does not stick or smell so disagreeable as the latter. A permanent black ink for zinc labels is prepared by dissolving equal parts of chloride of potash and sulphate of copper in 18 parts of water, and adding some gum arabic solution. The black polish above described is recommended as permanent and capable of resisting quite a high temperature.

How to Varnish.

Varnish should always be applied in a warm room, as warm as a person can work in comfortably. At a lower temperature there is always moisture in the air, an invisible dew, which gives the varnish a milky and cloudy appearance. This will happen even on a fine summer's day, and the only preventive is to employ artificial heat to produce a temperature of at least 75° F. At this temperature the moisture is not precipitated until the alcohol of the varnish has sufficiently evaporated to leave a thin and smooth film of shellac. The gloss and durability are entirely dependent upon this. The article to be varnished should be brought into the workshop a few hours before the work begins, so that it may get warm. The surface is smoothed, washed and rubbed dry with chamois leather, or a piece of silk, and every trace of dust, moisture and dirt removed with a clean, soft brush, but no oil or grease must be used. The varnish is now lifted lightly with a flat brush not immersed too deeply in it, and a thin coating applied. It is well to begin in the center or at the highest part, and approach the edges with long, straight, rapid and even strokes, and a gentle pressure. Care must be taken at the corners and edges. The film of varnish should be about as thick as a sheet of paper. When finished it should be exposed to the sun's rays or artificial heat, and carefully protected against draft and dust. Cold air or a draft over the article gives the varnish a dull look. When this happens the only remedy is to apply a second coating, and hold it near the fire so as to dissolve the previous coat, but not so near as to blister it.—*Jour. of Ap. Chem.*

TO CLEAN PAINT.—There is a very simple method to clean paint that has become dirty, and if our housewives should adopt it, it would save them a great deal of trouble. Provide a plate with some of the best whiting to be had, and have some clean warm water and a piece of flannel, which dip into the water and squeeze nearly dry; then take as much whiting as will adhere to it, apply it to the painted surface, when a little rubbing will instantly remove any dirt or grease. After which wash the part well with clean water, rubbing it dry with a soft chamois. Paint thus cleaned looks as well as when first laid on, without any injury to the most delicate colors. It is far better than using soap, and does not require more than half the time and labor.—*Coachmakers' Journal.*

GLYCERIN FOR PRESERVING FRUIT.—We learn through a German journal that in order to preserve fresh fruits it is only necessary to heat them, if not perfectly ripe, in water almost to boiling, drain nearly dry, and cover with warm concentrated glycerin. If the fruit is perfectly ripe, heating in water is unnecessary. It is also advised to pour off the glycerin after standing for some time and add fresh concentrated glycerin. The glycerin poured off may be concentrated on a water bath and used a second time. Ordinary glycerin is often impure, but only that which is perfectly pure and colorless, with a clean, sweet taste and a specific gravity of 1.25, should be employed.

INCOMBUSTIBLE FINISH FOR WOVEN FABRICS.

—The *Manufacturers' Review* translates from Hager the following directions for preparing a starch paste, impregnation with which renders a fabric incombustible: 10 parts of calcined and pulverized bones are treated with 50 parts of hot water, to which six parts concentrated sulphuric acid are gradually added. The mixture is well stirred, and left to stand two days in a warm spot, being stirred from time to time; 100 parts of distilled water are then added, and the liquid filtered. Five parts sulphate of magnesia (Epsom salts) are dissolved in 15 parts of distilled water, the solution added to the first, and caustic ammonia added till the liquid smells of it. The precipitate is thrown on a linen filter, pressed, dried in a moderately warm place, and rubbed to a very fine powder. Of this powder, two parts are mixed with exactly one part of tungstate of soda, and six parts wheat starch, and a little indigo blue added to impart a bluish tint to the powder. In order to use this powder, it is stirred up with about twice its weight of cold water, and enough hot water is then added to produce a gelatinous liquid, in which the fabrics that are to be rendered incombustible are steeped.

TO INVENTORS.—An authority lays down the following maxims for the guidance of inventors:

1. Know definitely what you want to accomplish, stick to it, and let other matters go, for the time.
2. Post yourself thoroughly as to the laws governing the action of each part of your machine.
3. Always bear in mind that whatever is gained in time is lost in power, and vice versa.
4. Think over every machine, of a nature similar to yours, which you have seen; and when your idea is clear in your head, compare it with those of inventors who have preceded you in the same line.
5. Be sure that the cost of your device will not prevent its use.
6. Avoid all complicated arrangements; make every machine of as few parts as possible.
7. Imagination, judgment and memory are the faculties to employ. Imagination will bring forth new forms and actions, judgment will compare them with other devices and determine their relative value, and memory will store up the results for future use.

SAWDUST is sometimes prepared for moulding and for stopping cracks or holes to disguise flaws or other defects in woodwork. In order to prepare the material, the sawdust is put in an earthen vessel, boiling water poured on it, stirred up, and left to soak for about a week, and again stirring from time to time; then it is boiled until it has attained the consistency of a paste, after which it is put in a coarse cloth and the excess of moisture well squeezed out. This material is then kept ready for use; when wanted a sufficient quantity of thin glue-water is added so as to obtain a paste, which may be pressed into moulds, or rubbed into cracks or holes to disguise flaws or other defects in woodwork. When the sawdust of the same wood is used, the work carefully done, well dried and cleaned, the imperfections repaired in this way can scarcely be detected; while the ornaments made differ only in one respect from those made by carving—in not showing the grain of the wood.—*Builder.*

TO RENDER GLASS OPAQUE OR FROSTED, according to *Dugler's Journal*, a sheet of ordinary glass, whether patent plate or crown does not matter, is cleaned; and if only portions of it are to be frosted, those are left bare, while the others are protected by mechanical means in any simple manner. Some fluor spar is rubbed to a fine powder and mixed with concentrated sulphuric acid, so as to make a thin paste, and this is then rubbed, by means of a piece of lead, upon those parts of the glass required to be rendered opaque. A fine frosted outline or design may thus be produced upon a sheet of smooth transparent glass. To finish the operation, the glass is gently heated in an iron vessel covered with a funnel passing up the chimney, to get rid of the noxious fumes that are given off; on cooling, the plate is washed with a dilute solution of soda or potash, to remove any acid yet remaining, and is then rinsed in water.

To case-harden 1-32 of an inch, so that a file will not cut it, take prussiate of potash three pounds, carbonate of ammonia one pound; pulverize and spread over the surface to be hardened, with a metal or wooden spoon, in the same manner as in the old method of potash hardening; put the article so treated into a spring furnace oven or on a blacksmith's fire, and keep at a cherry red heat for fifteen minutes; then plunge it into a cold bath composed of two barrels of rain water, ten pounds of sal ammoniac, ten pounds of alum and five pounds of borax.—*Car Builder.*

TO MEND CHINA.—We have tried a dozen different recipes and cements for mending broken china, and have come to the conclusion that the best way is to buy new. A china preservative dish that has been mended is a ticklish thing to handle, especially if full of sweetmeats, and when one has on her "company clothes."—*N. Y. Tribune.*

TO REMOVE THE IRON TASTE FROM NEW KETTLES.—Boil a handful of hay in them, and repeat the process if necessary. Hay water is a great sweetener of tin, wooden and iron ware. In Irish dairies everything used for milk is scalded with hay water.

POULTRY YARD.

GESE.—Where the farm homestead is adapted for geese, where there is proper restraint upon the swine, there is nothing pays better for keeping on a farm than a gander and three geese. Some have as many as four or five geese with one gander, and the feathers from the young ones, when killed, are valuable, without cruelly picking live ones. When there is a comfortable coop, with choice of nests, and there is nothing to disturb them, geese will generally raise ten goslings each on an average; but if brought to a fresh place in the spring, or gander or geese are changed, they seldom do well the first season. They are very long-lived, and will last any farmer's time on a farm. Some people are ignorant of the habits of domesticated geese, and suppose they will only breed in pairs; others think the picking alive to be very economical, whereas the poor, miserable wretches never do much but supply a few feathers, while those who have fine, heavy breeds, and manage them so as to sell the young ones fat at the right season, make a handsome income without stripping them while living.—*Cor. Rural New-Yorker.*

BUMBLE-FOOT.—Bumble-foot or sore foot appears most commonly in Dorkings and Asiatics, and is a swelling on the bottom of the foot which may harden or proceed to suppuration. The cause is unknown, but it has been suggested that it may be connected with the abnormal development of the Dorking foot, and the great weight of the Asiatic, which renders them liable to bruises upon the soles of their feet, in jumping from perches and nests. The other breeds of fowls have a less troublesome swelling sometimes which is but an ordinary abscess. If it were possible to take the bird off its feet, this would be the best treatment, but we may approach to this by putting it upon a soft bed, and preventing it from roosting. Apply lunar caustic or tincture of iodine to the surface, and the growth may disappear. Sometimes it may be cut out. If suppuration takes place, open the tumor with a cut, taking care to lay the whole of it open. The same treatment is to be adopted with abscesses on the feet of other breeds.—*Poultry World.*

FEEDING YOUNG CHICKS.—For 12 hours after the chicks come from the shell, they require no food. The hen, however, should be fed liberally. The chickens during this time will have absorbed into the circulation a large proportion of the remains of the yolk. Then they should be fed hard mash, mixed with the hard boiled yolk of eggs, for a day or two. After that, they may have meal mixed with water, oat or wheat grits, or any other suitable food. A varied diet, however, is essential, and animal food also is essential; and where they are allowed their liberty, this they will easily find. Feeding, however, should not be intermitted, and it is important that it be early in the morning, soon after daylight, if for no other reason than to keep them from straying into the wet grass. If you expect to raise good fowls, whether for breeding or market, they must never suffer for want of food, from the time they are hatched.

THE MOST PROFITABLE CROPS.—In answer to a circular enquiry on this subject, sent out by the Department of Agriculture, the following facts were ascertained: In Maine, hay is first, dairy second; New Hampshire, hay, stock; Vermont, dairy; Massachusetts, hay, market gardening; Rhode Island, gardening, dairy; New York, dairy—localities gardening; New Jersey, manufacturing, mining—wheat first in one-sixth of the counties; Delaware, tobacco; Maryland, tobacco and fruit; Virginia, 16 counties report tobacco, 9 mixed husbandry, 6 corn, 5 stock, and 5 market gardening; North Carolina, corn; Florida, sugar; South Carolina, Georgia, Alabama, Mississippi, Texas, cotton; Tennessee, hay and corn; West Virginia, corn and stock; Kentucky, tobacco and corn; Ohio, diversity—sheep, corn, hay, wheat, dairy, fruit, etc.; Indiana, same—corn is first, however; Minnesota, wheat; Wisconsin, wheat and dairy; Iowa and Missouri, stock, corn, wheat; Kansas and Nebraska, wheat, stock, and corn; California, wheat, sheep, fruit; Oregon, wheat, stock.

STATISTICS OF PAPER-MAKING.—Signor Eugenio Morpurgo has lately published at Venice a short monograph upon paper-making, in which he furnishes some curious statistics relative to this important industry. It appears that the United States, with their enormous amount of periodicals and other literary productions, consume more paper than England and France united. They have 3,000 machines, producing annually 200,000 tons of paper, which in a population of 28 millions averages 17 lbs. of paper a head, while a Russian consumes only 1 lb.; a Spaniard, 1½ lb.; an Austrian or Italian, 3½ lbs.; a Frenchman, 7 lbs.; a German, 8 lbs.; and an Englishman, 11½ lbs. There are in the world 3,960 paper manufactures, employing 90,000 men and 180,000 women, besides 100,000 occupied in the rag trade. Of the 1,800 millions of lbs. of paper produced, one-half is used in printing, a sixth in writing, and the remaining third in packing.

A MINNESOTA writer in the *Farmers' Union* suggests that persons who are bothered to get suitable poles would find it a good plan to plant a sunflower seed in each hill of beans, as the stalk will grow in advance of the vine and make for it an excellent support.

THE HORSE.

Vices and Diseases of the Horse.

"Keep cool, and do not whip, kick or scold a balky horse," says an exchange. Good preaching, this, but hard practicing. Poor human nature is not always equal to it. Let the preacher of this good doctrine—and it's all good—just get in some place that he feels he must get out of immediately, and then let his pet horse, without any apparent provocation, refuse to budge an inch, with a "start me if you can" in his eye as he turns his head to view the situation, and see it the Old Adam in turn don't come up lively. We worked a high spirited horse several years, one of the best we ever drew a line over, always kind and true, excepting when we commenced drawing in hay or grain, when he would invariably balk when we had the first load ready to start for the barn, and no amount of coaxing or whipping would induce him to start. The only way was to wait till he had got a good ready, which would generally take one or two hours. After that he was good for the season.

Horsemen have recommended many different ways of management for such horses, but none of them recommend whipping. The main thing is to divert his attention from the whim which seems for the time to take possession of him, by something new or out of the ordinary course. Some say feed him on the spot; another says, fill his mouth with dirt and he will jog along at once; another says, tie a small cord or runnstrap around his fore leg just under the fetlock, and pull his foot from under him.

We once saw a team of French ponies, real Osnucks, stalled at the foot of a hill with a load of lumber, one of them obstinately refusing to stir. She had been coaxed and whipped by the driver and others who had gathered around, until the job was given up all as a hard one. Happening along at the time, we had a sudden impulse to try our hand. Without saying a word, we sprang upon her back and commenced boxing her ears right and left. This was something not found in her programme, and for which she was not prepared. She gave one snort and went for the top of the hill in a double quick. Perfect self-control, firmness and ingenuity will manage any balky horse.

Cribbing is one of the most disagreeable vices, or diseases that a horse can have. Wet the edge of the manger with a strong decoction of cayenne pepper, and the crib biter will let go suddenly, and not repeat the operation many times. Horses that are in the habit of biting the neck-yoke can be cured in the same manner. Give them something that will bite back.

Nearly all animals become sick from improper eating. In nine cases of ten the digestion is wrong. Charcoal is a most efficacious and rapid corrective. It will cure a majority of cases, if properly administered.—*Ex.*

HOW OLD DO MARES BREED?—Mr. M. C. Stone states, in the *Vermont Farmer*, that he had a mare that died in foal at 26 years. The dam of the famous Lexington foaled at 23 years, and a hasty examination of the American Stud Book elicits the following interesting facts: Blue Bonnet, by Hedgeford, produced a foal at 24; Haunsh Harris, by imp. Buzzard, at 25; Caroline, by Woodpecker, at 26; Clara Howard, by imp. Barefoot, at 27, and Kstydid, by imp. Expedition, at 28.

EDITORS PRESS:—Being a subscriber to the *RURAL PRESS*, I feel confident that you will be kind enough to oblige me by giving the rule, if there is any, for measuring live stock (cattle). I have engaged in an argument, and have given my opinion that you are able to furnish such information. Yours very truly,

PABLO LAVERGE.

Unionville, May 9th, 1874.

[We are not at present able to furnish our correspondent with the rules of measurement alluded to, but the inquiry will probably bring forth the requisite information from some quarter. It is, of course, "a good argument" in which he is engaged, and will therefore "keep."—*EDS. PRESS.*]

THE VALUE OF SPECIAL MANURES.—Science applied to knowledge of the components of plants, and again applied to soils and substances of inanimate life, has, during the past fifty years, developed and explained, by means of our cheap printing papers, so much of the components of material heretofore apparently of little value, such as bones, refuse lime, potash, copperas, guano, salt, etc., when applied to the growth of crops, that intelligent farmers and gardeners do not now expend over one-half the labor of half a century since in the application of returnable manures.

A FEW years ago not a single cargo of wheat was exported from Oregon. The *Commercial Reporter* estimates the exports of wheat and flour from the Columbia River, from July 1st, 1873, to July 1st, 1874, at 90,000 tons, and other produce at 10,000 tons.

THE Vermont State Agricultural Society has voted that a herd of cattle shall consist of one bull not less than one year old, two cows, two two-year old heifers, two yearling heifers, and two calves of either sex.

The Astronomical Event of the Century.

Suppose a line drawn from the center of the earth to its surface at the equator; suppose another line starting from the extremity of this latter and continued till it terminates in the center of the sun, what is the mathematical expression which accurately describes the angle thus formed? Is it 8.92 sec., or is it .03 sec. more or less? That may appear a very abstruse and purely speculative question to some readers, yet all the science of navigation, and indeed, all the results of applied astronomy, have sprung from the approximate solution of this very problem. The slight amount of uncertainty, which still attaches to the answer, affects the accuracy of the lunar and planetary tables of every nautical almanac, and to a certain degree unsettles all questions of distance in regard to heavenly bodies, and of longitude in regard to places on the earth. The solar parallax is the scientific name of the angle whose character we have roughly indicated, and the slight uncertainty as to its true value renders it impossible to say within 300,000 miles just how far we are from the sun. When the total distance is equal to about 91,480,000 miles, to approach the certainty would seem to be near enough for all practical purposes. But forty times the earth's diameter is too extensive a departure from mathematical truth, even in regard to distances so enormous. Astronomers have, accordingly, set their minds on reducing this amount of uncertainty to a minimum of, say .01 sec., i. e., the absolute fixing of our distance from the sun, with a margin of 50,000 miles still open to doubt. Careful observations of the approaching transit of Venus are the means relied upon to accomplish this scientific feat.

Between the hours of 9 o'clock of our time on the evening of December 8 and 2 o'clock on the morning of December 9, of the present year, trained observers from nearly every civilized nation in the world will, from carefully selected points, be carefully scanning the passage of the planet Venus across the luminous disc of the sun. There has been no such phenomenon visible from the earth since 1769, and there will not be another, affording equal facilities for accurate observations, till the year 2004. Another transit will indeed take place eight years hence, but the sun's altitude above the horizon on that occasion will be too slight to present favorable conditions for observation. As the period of this year's transit occurs during the Northern winter, the base of observation must be established for the most part south of the equator. Points of observation must be marked off in pairs, because the entire problem depends on ascertaining with perfect exactitude the time at which various stages of the transit are observed at widely separated stations on the earth's surface. In fact, this method of fixing the angle of the solar parallax is simply a working out, on a colossal scale, of the familiar geometrical process of constructing two sides of a triangle in order to determine the third. The largest attainable base of the presumed triangle would of course be the earth's diameter—180 degrees. But suppose two observers situated this distance apart, and to the one the sun at the time of the transit would just be rising, while to the other it would be on the point of setting. For purposes of observation, however, the sun must not be lower, in either case, than 10° above the horizon. The easterly observer must be so placed that the egress of Venus from the sun's disc shall conclude not too near sunset, and the corresponding observer at the west must be able to watch the ingress of the planet a little after sunrise. Of course this cannot be accomplished without a contraction of base considerably within the limit of 180°.

The length of this supposed base of the triangle, whose apex is the sun, requires in the first place to be determined with mathematical accuracy. In other words, it is necessary to carefully establish, by lunar observation, what is called the absolute longitude of each station, and so to secure a perfect correspondence of astronomical time—say within a second—as a basis of observation between corresponding stations. This of itself requires some months of preparation, assisted by instruments of the utmost delicacy, and for the preliminary purpose several corps of observers are on the eve of departure from England to certain desolate regions of the Antarctic ocean selected as the one extremity of the terrestrial base for the required triangle. Of course the conditions of the problem are rather more complicated than can be briefly and popularly indicated. The relative velocities of the earth and Venus must be taken into account; their relative distance from the sun enters into the calculation, so do questions of atmospheric refraction, and other delicate points which can hardly be briefly indicated without the use of scientific nomenclature. But this much can be readily remembered: Venus, moving faster than the earth, crosses the sun's face from east to west. The most easterly of two observers, therefore, is the first to see the black orb of Venus completely within the outer rim of the sun's disc; in scientific phrase, he is situated at the point of "greatest acceleration." The companion observer at the westerly end of the line sees the same phenomenon some twenty minutes later, and is said to be at the point of "greatest retardation." Let the exact moment, say of two such critical points of the transit as the ingress and egress of the planet on the sun's disc be noted at each station, and the absolute time interval between the observations of two stations be compared with the distance and qualified by the other conditions to which we have referred, and the

much-sought-for angle will be nearer determination than it is to-day.

England, France, Germany, Russia and the United States are busily equipping astronomical expeditions to assist in solving what has been justly called "one of the sublimest problems of the universe." Telescopes, equatorially mounted, and driven by clock-work, so as to remain steadily fixed on the sun after being once pointed to it; photo-heliographs of the most delicate construction to present microscopically accurate transcripts of every phase of the transit; altazimuth and transit instruments, which are marvels both of massiveness and adjustment—such are among the articles required for the proper outfit of each expedition. —N. Y. Times.

GAIN IN WEIGHT BY COMBUSTION.—At a recent lecture before the Franklin Institute, Mr. Theodore D. Rand showed a simple and satisfactory experiment to demonstrate the increase in weight of burning bodies, caused by their absorption of oxygen. About an ounce of fine turnings of zinc, produced in the spinning of that metal, were loosely wrapped with iron wire and suspended from the arm of a balance. The pan on the other arm having been weighed to counterbalance the zinc, the latter was ignited with a match. At first the combustion was rapid, and much oxide escaped in fumes, causing the zinc end of the balance to rise. Soon, however, the combustion became a mere glow, the absorption of oxygen taking place without fumes. In a minute the beam began to descend and very soon decidedly outweighed the counterbalance. The only precaution necessary is to have the zinc moderately but not too compact. If too loose, it burns too rapidly; if too compact, it will not burn.

DEWEY & CO.,

American & Foreign Patent Agents,

OFFICE, 338 MONTGOMERY STREET, S. F.

The best, speediest, and surest method for you to obtain patents, file caveats, or transact any other important business with the Patent Office at Washington, or with foreign countries, is through the agency of DEWEY & CO., PUBLISHERS OF THE MINING AND SCIENTIFIC PRESS, SAN FRANCISCO, an able, responsible, and long-established firm, and the principal agents on this side of the continent. They refer to the thousands of inventors who have patronized them, and to all prominent business men of the Pacific Coast, who are more or less familiar with their reputation as straightforward journalists and patent solicitors and counsellors. We not only more readily apprehend the points and secure much more fully and quickly the patents for our home inventors, but with the influence of our carefully read and extensively circulated journals, we are enabled to illustrate the intrinsic merits of good patents, and secure a due reward to the inventor, besides serving the public who are more ready to give a fair trial, and adopt a good thing, upon the recommendation of honest and intelligent publishers.

To Obtain a Patent,

A well-constructed model is generally first needed, if the invention can well be thus illustrated. It must not exceed 12 inches in length or height. When practicable, a smaller model is even more desirable. Paint or engrave the name of the article, and the name of the inventor, and his address upon it. Send the model (by express or other reliable conveyance), plainly addressed, to "DEWEY & CO., MINING AND SCIENTIFIC PRESS OFFICE, SAN FRANCISCO." At the same time, send a full description, embodying all the ideas and claims of the inventor respecting the improvement describing the various parts and their operations.

Also send \$15 currency, amount of first fee of the Government. The case will be placed on our regular file, the drawings executed, and the documents made up, and soon sent to the inventor for signing.

As soon as signed and returned to us with the fees then due us, it will be sent straightway to the Patent Office at Washington.

When the invention consists of a new article of manufacture, a medicine, or a new composition, samples of the separated ingredients, sufficient to make the experiment (unless they are of a common and well-known character), and also of the manufactured article itself, must be furnished, with full description of the entire preparation.

For Processes, frequently no model or drawings are necessary. In such case, the applicant has only to send us an exact description, and what is desirable to claim.

For designs no models are necessary. Duplicate drawings are required, and the specifications and other papers should be made up with care and accuracy. In some instances for design patents two photographs, with the negative, answer well instead of drawings.

For further information, send a stamp for our illustrated circular, containing a digest of PATENT LAWS, 112 illustrated mechanical movements, and HINTS AND INSTRUCTIONS regarding the RIGHTS AND PRIVILEGES of inventors and patentees, which will be furnished post paid. Also a copy of NEW PATENT LAW of 1870.

Address DEWEY & CO.,

PUBLISHERS, PATENT AGENTS AND ENGRAVERS.,

No. 338 Montgomery street, S. F.

The Pacific Rural Press,

NOW IN ITS FOURTH YEAR.

Is a Large, Handsome, Illustrated, Home Journal. Every Farmer, Gardner, Country Gentleman and Rural Homestead Owner should take it. Every Miner, Mechanic, Manufacturer and Professional man and woman who contemplates rural life should read it. It is worth its price for home reading. Send it abroad and extend a knowledge of our wonderful growing country. Subscription, \$4 a year. Sample copy free. Four copies (postpaid) 25 cts.

DEWEY & CO., Publishers.

No. 338 Montgomery St., S. F.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

Grangers' Bank of California.

NOTICE:

The Stockholders of the

GRANGERS' BANK

Of California, are hereby notified that a meeting has been called to be held in Corinthian Hall, No. 31 Post street, San Francisco, on Thursday, May 21, A. D. 1874, at two o'clock, P. M., for the purpose of adopting the By-Laws of the Corporation, as required by law.

SPECIAL ATTENTION

Is called to the importance of the Stock being represented either in person or proxy, as it is necessary that a majority of all stock subscribed be represented in adopting the By-Laws of the Bank. By order, ALFRED F. WALCOTT, Pres't.



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD,

246-tf President Business College, San Francisco.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to ELWOOD COOPER.

226-tf President Board of Directors.

FEED-CUTTER ROLLERS

Covered and made new in the best manner at usual rates, at H. ROYER'S Belt Factory, 437 Brannan St.

187-3m

San Francisco Employment Office,

NO. 606 CLAY STREET,

Crosett & Co., Proprietors.

(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.

Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. apl8-tf

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

Saul & Co., 579 Market Street, San

Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Obermann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants,

For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

Shipping---Vessels Up.

FARMERS' LINE.

FOR LONDON DIRECT.

THE MAGNIFICENT A I CLIPPER SHIP,

MONETA,

621 Tons,

W. SINCLAIR.....Master.

FOR LIVERPOOL DIRECT.

The magnificent A I Clipper Ship,

SEA WITCH,

1288 Tons,

BAKER.....Master.

These fine vessels have nearly full cargoes engaged and will have very quick dispatch. Freight taken in lots to suit shippers.

Will be followed by the splendid A I Iron Ship

GLENGARRY,

1769 Tons,

Due here in May; or by other first-class vessels.

Liberal advances made on shipments of produce consigned to our Liverpool house, Messrs. Robert Rodgers & Co.

RODGERS, MEYER & CO.

1897-3m

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The New A I Clipper Ship

FRIEDLANDER.....1,638 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street, San Francisco.

POISON! POISON! WAKELEE'S PATENT Granulated Squirrel Exterminator.

A NEW AND MOST DESTRUCTIVE POISON FOR THE WORST PEST OF CALIFORNIA.

For years the farmers of the Pacific Coast have been spending money in experimenting to find a safe, cheap and efficient way of ridding their grain-fields of their worst enemy, THE SQUIRRELS, which destroy Millions of Dollars' worth of grain every year; and unless a strong and combined effort is made to kill them off, they will become more numerous every year.

Wakelee's Granulated Squirrel Exterminator is just the thing the farmers of California have been looking for. It is sure DEATH. One or two grains of it will kill a Squirrel so quick that if it is five feet from his hole it dies before it gets there. The Poison is put up day and in granular form, and easily handled; in one pound tins, at \$1 per pound. It goes a great way, as 10 to 15 grains of it are sufficient to place at each hole. Also successfully used for killing Gophers and Rats. It has been thoroughly tested in different parts of the country, and gave universal satisfaction. It is kept and sold by druggists and dealers generally through the country. The following are some of my testimonials, viz.:

SANTA CLARA, April 20th, 1874.

H. P. WAKELEE, Esq.—Your Squirrel Exterminator was sent according to your directions, on my *Quito Farm* with excellent success, and in my estimation is just the thing the farmers want to kill their Squirrels.

J. R. ARGUELLO.

SAN LEANDRO, Cal., April 3d, 1874.

H. P. WAKELEE, Esq.—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,

J. M. ESTUDILLO.

DOUGHERTY STATION, Alameda Co., Cal.

MR. H. P. WAKELEE, San Francisco: I have used your Squirrel Poison and found it to be just what you claim for it. It is sure death. Yours,

C. M. DOUGHERTY.

The Guadalupe Island Company—San

Francisco, California.

Notice is hereby given, that at a meeting of the Directors, held on the 8th day of May, 1874, an assessment of ten (10) cents per share was levied upon the capital stock of the corporation, (the Guadalupe Island Company) payable immediately to Arthur Rodgers, Treasurer of the company, at its office, 306 Pine street, San Francisco, California.

Any stock upon which this assessment shall remain unpaid on the 15th day of June, 1874, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on the 3d day of July, 1874, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

ARTHUR RODGERS,

Secretary of the Guadalupe Island Company, No. 306 Pine street, San Francisco, California. ml6-tf

AGRICULTURAL NOTES.

AMADOR.

CROPS.—*Ledger*, May 16: We paid a flying visit last week to the northern portion of the county, and were well pleased with the general appearance of growing crops everywhere. As a general thing, we never saw in the foot-hills, at any previous season, crops giving so favorable indications of a heavy yield, and on summer fallowed lands the product will be very abundant. Nearly every kind of fruit is now out of danger from late frosts, and every variety will be abundant, peach, plum, apricot, fig and all earlier fruits are rapidly advancing and will tax the branches to support the fruit upon them. We observed among the peach trees but very few instances of curl leaf and in nearly every instance confined to seedling trees. At no former season have we observed the pasturage over the hills more abundant than now; the native grasses and wild clover presenting an unusually vigorous growth, and the entire foot-hills seem as if by magic to have been turned from barren wastes to green pastures.

CALAVERAS.

CROPS.—*Chronicle*, May 16: The growing crops are looking splendidly in this section. Grain is now beyond the reach of drouth, and if the world don't come to an end before the first of June nothing can prevent a bountiful harvest. The most promising fields we have seen are on Hexter's ranch, near town, on the old Stockton road. Just the sight of them is enough to keep stock fat.

CALISTOGA.

CROPS.—*Free Press*, May 16: The crops, not the "three black ones," but 3,000, have been infesting our valley this spring. Much damage has been done to corn and other vegetables by them. In some places they will prevent a good stand of corn from being obtained at all.

COLUSA.

COTTON.—*Sun*, May 16: Andrew Rutland informs us that his fifty acres of cotton is all up nicely, some of it in the fourth leaf, and that he will begin to thin it out in a few days. The cut-worms are working on it some, but he thinks he will get a good stand. We have heard of several other small patches that are up. We shall keep the run of this industry with a very great interest.

FRESNO.

THE CROPS.—*Expositor*, May 13: The weather has been very beneficial to the growing grain crops, which in a week or two more will be out of the way of all danger from climatic changes. It is very certain now that the wheat and barley crops of this county will be excellent, as from all parts we are receiving the most encouraging news, except in the Panoche valley, where we learn they will be light. In that valley they have had but little if any rain for two months. There is a "streak" of country lying along the Diablo mountains, where the rain-fall is always light and very uncertain. In the foot-hills of the Sierras, on the plains, and on King's river the farmers are all jubilant. Harvest time will be lively, and we are of the opinion that during that time the demand for labor will be very great.

HUMBOLDT.

RAIN NOT YET ENDED.—*Times*, May 16: The rain of Monday continued at intervals through yesterday, and the signs give token that the end is not yet. Rain at this time will occasion much delay to the farmers who were busily engaged in putting in their crops when the storm came.

LAKE.

FROM LOWER LAKE.—*Cor. Register*, May 16: Crops never looked better than at the present time, and farmers expect large crops of both grain and hay.

The rain-fall for this month is 2.33 inches, the heaviest rain-fall in May known to the white settlers of this place. Jack Frost followed in its wake, but did no serious damage in this vicinity.

MONTEREY.

FAILURE OF GRASS.—*Democrat*, May 16: For years past grass has not been so short as it is this season south of Soledad, cold preventing its growth while the rains were falling; and, besides, the total rain-fall in that quarter was much less than the average. As in Long valley, for example, where, as we are told, the crops will not even furnish hay, farmers as well as stock owners in the quarter indicated will rank this year among the dry seasons.

NEVADA.

FRUIT.—*Union*, May 16: This year is to be a great one for fruits of all kinds in the mountain regions. The peach trees were never healthier, and have never promised a better crop, although this is the off year for peaches. The apple trees are in full bloom and are safe from frosts. The weather for the past few days has been doing its level best to encourage the trees to a full bearing.

SAN LUIS OBISPO.

THE CROPS.—*Tribune*, May 16: Mr. Lindenmayer reports the crops in Guadalupe and Santa Maria to be in a very flourishing condition, and beyond all danger. The late rains caused some apprehension, but, fortunately, no heavy winds prevailed at the time, and the grain escaped being broken down.

The haying season has commenced around San Luis Obispo, and the farmers' hopes for a large yield are more than realized.

SAN BENITO.

THE CROP PROSPECT.—*Enterprise*, May 16: Parties who have had occasion to travel over

nearly every section of our valley during the past ten days, bring the most cheering news with regard to crops. The entire valley is one almost unbroken field of grain, and at this season never were the prospects for an abundant harvest so bright. The early sown grain is immense in every direction, and the late rain and cool weather, have brought out the late growth to an extent which warrants the belief that it too will make a fair average crop.

SAN JOAQUIN.

THE CROP PROSPECT.—*Stockton Independent*, May 16: The weather for the last two weeks has been very favorable for the growing crop, and it seems now almost impossible that any casualty could occur to prevent an enormous yield throughout the larger portion of the valley. San Joaquin county will probably produce as much as ever before, so that the total yield of this valley will be at least one-third more than in 1872. Our farmers have reason to rejoice on account of their favorable prospects, and should the prices keep up the amount realized for the surplus crop of this valley will secure an era of permanent prosperity for all classes.

STANISLAUS.

CROP PROSPECTS.—*PRORABLE GRAIN YIELD.*—*News*, May 16: Within the past week we have seen a considerable portion of the grain fields of our county, and heard from many others; and after seven years of observation, we are prepared to say that the present is the most flattering season of them all. We cannot well conceive of any untoward circumstance that is likely to occur to injure the rapidly growing and maturing grain, between now and the season of harvesting.

It was estimated that the total grain crop of our county for the year 1872, amounted to 5,800,000 bushels. We are confident we are within bounds when we place the acreage in grain, the present season, at ten per cent. greater than that year. If we judge the probable yield by a comparison of the prospects, at this season, between the two years, the crop yield should certainly be at least twenty per cent. better than then. If we are right in our calculations, and we believe from the evidence before us that we are, the probable wheat and barley crop of Stanislaus county should be placed at 8,000,000 bushels.

Our information comes from six different portions of the county, furnished by cool, calculating, experienced farmers, and in five, out of the six districts mentioned, the report places the prospect at from fifteen to forty per cent. better than was ever before known at this season of the year, whilst in the one exception it is placed above an average.

From such reports, and our own observation, we feel that we have a right to base our estimate of the probable grain yield of Stanislaus county, for the present season at 8,000,000 bushels—of course, leaving out destructive winds or a general conflagration.

SISKIYOU.

FRUIT PROSPECT.—*Union*, May 16: Never was there a better prospect for an abundance or, for that matter, a super-abundance, of fruit, in this county than at the present time. The crop, however, is not yet assured. It is not too late for it to be injured, or even totally destroyed, by frost. Various kinds of fruit trees are now in bloom and the weather is cold, but fortunately for some time past the nights have not been clear. If the fruit escapes the frost, there will be more than people will know what to do with.

TEHAMA.

PROSPECTS.—*Independent*, May 16: From all parts of the county we continue to hear good reports of conditions of the growing grain. The last four or five days' pleasant warm weather has had a tendency to push the crops ahead very fast, and our farmers are of the opinion that we cannot have enough north wind to do any material damage. The general opinion is that we will raise from a half to two-thirds more wheat this year than we did last year.

TULARE.

GOOD.—*Times*, May 16: Mr. A. B. Crowell, from Mussel Slough, reports that crops in that vicinity are in a flourishing condition. Large amounts of grain will be harvested there this year. The ditch companies are progressing finely, and they will be able to supply water for the next crop.

FROM ELK BAYOU.—*Cor. Delta*, May 16: As yet there is little land under cultivation. What there is will compare favorably with any of the dry plains north of us. The Newell brothers have one hundred and thirty acres of grain, all of which they will turn into hay. About sixty acres of this grain, if it were allowed to mature, would yield not less than sixty bushels to the acre, and some of it more. Blake and son have some fifty acres of grain that is very good. I. N. Wright, near Tulare, has one hundred acres in grain that is good. The last named gentleman is cutting his grain also for hay. If it were thrashed, it would yield sixty bushels and upwards. The balance of the country is unbroken, but most of it is just as good as any that is in grain.

VENTURA.

FROM LITTLE NOOK.—*Cor. Signal*, May 16: Planting is nearly done, and in good condition. Haying has begun, and soon the harvesters will be at work gathering in the grain. March and April passed with very little rain, so barley and wheat will not be quite so heavy. Although we have but little reason to complain.

There are several barley fields in the Santa Clara valley which will yield 60 bushels per

acre. Among them is that of Mr. Larson, east of Saticoy. They will in that neighborhood all average 45 bushels to the acre. The average of the county will exceed 40 bushels to the acre.

YOLO.

HAYING.—*Mail*, May 16: The farmers out about Cottonwood, we are informed by Mr. Cole, are busily engaged in cutting hay. Some few fields of volunteer and summer-fallowed grain, drowned out by the incessant rains, are being made into hay, and quite a large lot of wheat foul with oats and clover, meeting the same fate. He reports that some of the barley fields will be ready for the reaper in about three weeks, and that as a general thing the harvest will be a full yield.

San Jose Farmers' Club.

The Club met at the usual hour Saturday, and was called to order by President Casey.

In regard to grafting almond on to peach stocks, President Casey said he had tried it thoroughly, and found it to be an entire success, the trees bearing full each year.

Mr. Herring said he thought the Languedoc almond was the variety best adapted to this climate.

Mr. Casey said the best varieties he had found were the seedlings raised by Mr. King and known by his name. He preferred grafting to budding.

Mr. Holloway said the boring process was highly recommended for grafting.

Mr. Casey said he had tried this in the East, but without much success.

Mr. Bergland said he thought the almond would outgrow the peach, and the tree would become top-heavy and break down.

Mr. Casey said he had almonds grafted on peach stocks for some six years, and the growth of the two were in perfect union. He thought Mr. Bergland's objection was of no force.

A communication from H. J. Bradley, in reference to the election of Superintendent of the Infirmary, was read, and a large portion of the time of the meeting was taken up in its discussion, at the close of which the regular question was postponed until Saturday next; after which the meeting adjourned.—*Mercury*.

Jewell & Co.'s Redwood Water Pipe.

In our issue of May 16th we published the following:

INQUIRY ABOUT WATER PIPES.

EDITORS P. EAS.—If the readers of the *RURAL PRESS* who have used redwood water-pipe, manufactured by Jewell & Co., in San Francisco, will give their experience with it, they will confer a great favor on several in this vicinity, as we will set ourselves to work putting it down, if reports are favorable.

It is asserted by some that gophers will gnaw and destroy it. If they will, it is of no use to us. We want a cheap and durable pipe for conveying water, and we hope to hear favorable reports of the redwood pipe, as that appears cheapest in regard to price.

O. N. CADWELL.

Carpinteria, Cal., May 2d, 1874.

The attention of Messrs. Jewell & Co. having been called to the above, they sent out letters of inquiry to parties who were using their pipe, and have furnished us with the following answers for publication:

FROM J. W. PEEK, PROPRIETOR OF WOODLAND WATER WORKS.

MESSES. JEWELL & CO.—I have never known or seen any indications of gophers troubling any wood pipes here. Yours, J. W. PEEK.

Woodland, May 18, 1874.

LETTER FROM R. O. TRIPP, POSTMASTER.

MESSES. A. M. JEWELL & CO.—GENTLEMEN: In reply to your note of the 15th, I will say that I have been using water through redwood pipe, the same as the sample sent you since July, 1860, and have never seen a gopher or squirrel hole in the pipe yet. And I have on hand about four hundred feet of pipe that I took up last summer, after using it thirteen years, that is good for ten years longer. If there is anything the matter with redwood pipe I have not discovered it yet.

Yours respectfully, R. O. TRIPP.

Woodside, San Mateo Co., May 18, 1874.

LETTER FROM W. CANTELOW.

MESSES. A. M. JEWELL & CO.—DEAR SIR: I have used A. M. Jewell & Co.'s redwood pipe for conducting water, which has been in the ground about a year. I have tomatoes growing on the ground over the pipe; have noticed that gophers have cut the tomato plants about one hundred and fifty feet from the pipe, but as the plants have not been cut close to the pipe it is difficult to judge what the result would be. I am well pleased with the pipe, and I would not hesitate to lay the pipe where gophers are plenty.

Yours truly, W. CANTELOW.

Vaca Valley, May 18, 1874.

LETTER FROM SWEETSER & DE LONG.

MESSES. JEWELL & CO.—GENTLEMEN: Yours of the 15th came to hand this evening. In regard to gophers injuring the pipe, we are well satisfied they will not injure the pipe. We have a mile and a half laid where there are plenty of gophers; in fact, when we laid the pipe there was hardly a space of twenty feet where they had not been at work, and if they would injure it we should have seen it before this.

Yours truly, SWEETSER & DE LONG.

Navato Ranch, Marin Co. May 18, 1874.

BAKER & Hamilton, of 13 and 19 Front street, will please accept our thanks for copies of their splendidly illustrated catalogues.

The cotton crop in Colusa county is up nicely, and promises a handsome yield.

Crows are doing great damage to the corn crop in Napa Valley.

It is the best economy to buy implements that are proved by years of trial, and the experience of the most intelligent operators, to be every way "the best." "The Blanchard Churn" has been used over twenty years, and over seventy five thousand are now in successful operation. It is "the best" churn in use. They are made only by Porter Blanchard's Sons, Concord, N. H.

For the very best Photographs go to BLADLEY & RULOFSON'S GALLERY, with an "Elevator" 429 Montgomery street, San Francisco. 2v7-6m

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., May 19, 1874.

FOR WEEK ENDING May 5, 1874.

STAGE SHIP FOR THEATERS.—Samuel H. Chapman, Sacramento, Cal.

MACHINE FOR MILLING METAL.—William Hawkins, San Francisco, Cal.

PACKAGE FOR AXLE GREASE.—John G. Hucks, San Francisco, Cal.

ICE MACHINE.—Samuel B. Martin, San Francisco, Cal.

CAR BRAKE.—James Herd, Jacksonville, Oregon.

CAN OPENER.—Albert H. Hall and Cofran I. Hall, Snisun City, Cal.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

The Mining and Scientific Press Marching Onward.

Our careful system of compiling, judiciously condensing, and conveniently arranging into regular departments, has been heartily endorsed. It renders the paper worth more to readers, who can find handily the which interests them most.

The weekly issues of the Press will contain reliable

Information for Practical Miners.

Treating on the Opening of Mines; Mining of Ores; Milling of Ores; Smelting of Ores; Separation and Roasting of Ores; Amalgamation; Saving of Gold and all precious Metals; New Processes of Metallurgy; New Discoveries of Mines; Mining Engineering and Hydraulics.

For Inventors, Mechanics and Manufacturers.

All new and important developments in Scientific and Mechanical Progress; Patents and Inventions of the Pacific States; Progress of Home Industries; Hints for Local Manufacturers; Illustrations of New Machinery; Reports of Popular Scientific and Industrial Lectures.

Our Mining Summary

Gives the progress of mining work from week to week in the various counties and districts throughout the principal mining regions of the United States, arranged in alphabetical order. It is the most extensive record of mining operations published in the world. It affords the intelligent miner a rare opportunity to know and profit by the work and experience of his neighbors. Miners have few sources of practical information in their calling, and should embrace every reliable means for improvement. Mining Operators and Shareholders, at home and abroad, weekly examine our Summary with increased interest and profit.

Our "Domestic Economy"

embraces new and important facts which should be known in every cabin and household. Short and interesting—the articles under this heading are freely read and practiced with profit and improvement to the readers.

The Press is not strictly a "paper for professional, scientific men," but rather a

Liberal and Popular Scientific Journal.

Well calculated to make practically scientific men from our intelligent masses. This is our stronghold for accomplishing good. Plain, correct and pleasing language, easily comprehended by all, confined mostly to short articles, is our endeavor.

For Self-Improvement.

Every issue of the Press abounds with articles of an elevating character, to stimulate the higher virtues and natures and progressive intellects of both men and women.

Hundreds of Dollars

Are oftentimes saved to the readers of this paper by a single hint or article of information in its columns. Such instances have been repeatedly reported to the editors and proprietors during their long connection with the Press. Our paper presents

The New and Novel Developments

In the progress of this comparatively new section of the Union (but recently settled and now rapidly increasing with a population of the most intelligent and venturesome people, attracted from nearly every quarter and clime on the globe), enable us, with due enterprise, to display vigor and freshness in our columns not met with in similar journals elsewhere. The same circumstances also render such a paper more especially valuable to its readers in a new, and to a certain measure, untrodden field, where the best methods and processes of industry are not so well established or traditionally known as in older communities. Published experiences often save costly experiments and disastrous results.

A Great Variety of Industrial Information.

In brief and fresh form, suited to the wants and tastes of the readers of this coast, which is not obtainable otherwise so timely, or in so cheap and convenient form. As an industrial publication, meeting the wants of so many kindred industries, this journal stands pre-eminent and without a precedent.

Subscriptions payable in advance—\$4 per annum. Single copies, post paid, 10 cents. Address

DEWEY & CO.,

MINING AND SCIENTIFIC PRESS and PACIFIC RURAL PRESS Office, 338 Montgomery St., S. F.

DAIRY RANCH FOR SALE.

Near San Luis Obispo, well stocked and fenced, with fine improvements. Plenty of wood and water.

Apply to T. H. HATCH & CO.,

320 Front street, San Francisco.

Or, R. M. PRESTON, Old Creek, San Luis Obispo. 2v7-3m

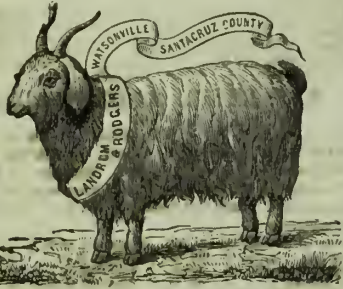
Stock Notices.

N. GILMORE
IMPORTER
AND BREEDER



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.
Address N. GILMORE,
El Dorado, El Dorado County, Cal.



We respectfully invite the attention of wool growers to our fine stock of Cotswold Sheep and Angora Goats. We have 200 head of Pure Breed Angoras to select from; we have some of the finest Goats in America; we guarantee everything we sell to be as represented; our prices are as low as any in America for the same grade of stock. Call and see, or address,

LANDRUM & RODGERS,
Watsonville, Cal.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

U. S. LIVE STOCK EXCHANGE,
CORNER OF FIFTH AND BRYANT STREETS, S. F.

Cattle, Sheep, Milch Cows, Hogs and Horses sold on commission or bought on farm for cash.

Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State. Thoroughbred Durham Cows wanted. Address,

DAWSON & BANCROFT, 449 5th St., S. F.
Special rates to members of the Grange. m9

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,
San Rafael, Marin Co., Cal.

JERSEY CATTLE.

A few head of very choice Jersey Cows—Heifers and Bull Calves—for sale. Apply to
15v7-3m R. G. SNEATH, Menlo Park.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE
Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO. 2v7-6m



THE BEST
Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE
PUBLIC.

Send for Descriptive Circulars and samples of work.

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m



FOR SALE.

25 full blooded Spanish Merino Bucks, one and two years old, from stock imported from Addison county, Vermont, in 1872. Call and see, or address,
B. F. WATKINS,
Santa Clara, Cal. m9-2m

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID & ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

The STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kane's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Soap, Harness Soap, Thomas' Cool Water, Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Cologne, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street,
16v7-3m SAN FRANCISCO, CAL.

TIPTON & BURTT'S

MEDICINAL

SHEEP PREPARATION,

Warranted FREE FROM ALL POISON. A safe and positive cure for SCAB, TICKS and LICE, and a sure promotion of the growth of the wool. It has been used in Tehama County for the past two years, with most gratifying results, and we have the pleasure of referring to the following gentlemen as to its merits, viz.: H. A. Rawson, Jas. Gooch & Bro., J. W. Montgomery, J. Ehy, Curtis & Brown, H. Bosauka, Jos. Cone, J. W. Gate & Sons.

It is a liquid and put up ready for use in 2½ gallon tins, four tins in a case.

WHITTIER, FULLER & CO., Sole Ag'ts,
21 Front street.....SAN FRANCISCO.
28 K street.....SACRAMENTO.
18v7-3m

J. WAGNER.

MANUFACTURER OF

FRENCH BURR MILL STONES AND PORTABLE MILLS.



General Mill Furnishing. Portable Mills specially adapted for Farmers' use. 113 and 115 Mission street, San Francisco. 13v7-3m-2am

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St., bet. Montgomery and Kearny Sts., S. F. 14v7-3m

The Sewing Machine

—FOR THE—

GRANGERS.

NO COMBINATION!

NO MONOPOLY!

The New Improved FLORENCE,

Side Feed and Back Feed.

Agency established on the Pacific Coast in 1863. The lightest running, most simple, and most easily operated Sewing Machine in the Market. Always in order and ready for work. If there is a Florence Sewing Machine within one thousand miles of San Francisco, not working well I will fix it without any expense to the owner. Samuel Hill, Agent, 19 New Montgomery Street, Grand Hotel Building, San Francisco.

Mr. I. G. Gardner, State Agent for the California Granges, is authorized to make liberal terms to all Grangers who purchase the FLORENCE. No combination against favoring the Grangers has ever been joined by Florence Agents.

SAMUEL HILL, General Agent.
18v7-3m

NOTICE TO FARMERS. Something Entirely New. HOME SEWING MACHINE.

This machine is manufactured after an experience of twenty years. It contains within itself every known improvement. It is the best because the simplest, easiest to understand and by far the lightest to run, and the equitable adjustment of all its parts makes it the most durable Machine in the market. Take the INTERESTED STATEMENTS OF NONE, but EXAMINE for YOURSELF. SEND FOR A CIRCULAR.

It uses a Shuttle, Straight Needle, Two Threads, and makes a stitch alike on both sides.

E. W. HAINES, Agent,
17 New Montgomery St., Grand Hotel Build'g, S. F.

We also continue to sell another machine, the HOME SHUTTLE SEWING MACHINE.

Price, \$45.
Mme. Demorest's Reliable Paper Cut Patterns. Send for a Catalogus. 15v7-cow-6m



The New Wilson
SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for tight and heavy work. Examine and compare it with the highest priced machine in the market. G. A. NORTON, Gen. Ag't for the Pacific Coast. 397 Kearny St., S. F. ap25-1f

PRICE, \$50.

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m 304 California Street.

WHALE OIL SOAP,

—FOR—

Destruction of Bugs on Plants, Etc.

PHENIX OIL WORKS.

517 Front Street.....SAN FRANCISCO.
2v7-1m

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it. WILLIAMS & MOORE, Prop'rs. 3v7-3m Stockton, Cal.

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO.,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with Dropper.

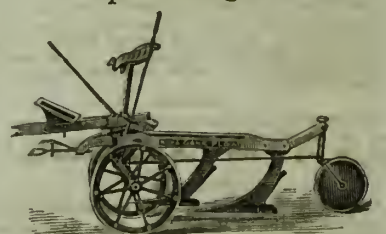
World Reapers, and Mowers with Dropper and Hand Rakes—side delivery. Clipper Mowers and Reapers, with Dropper.

Cayuga Chief Mowers and Reapers. Sulky Rakes—Furst & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,
30 and 36 Inch Cylinder, with or without Power.

"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps; Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators, Mortise Head Hay Rake, Scythes and Snaths,

Soule, Ketsinger & Co.'s First-Class Farming Tools,
Gold Medal Forks, Hoes and Rakes,
Batchelor's Forks,

Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,
Road Scrapers,

Canal and Garden Barrows,
Hay Cutters—Burdick's
National, Belcher & Taylor's
Self-Sharpener and Hide Roller.

Also Agents for
CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,
3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.

THE ORIGINAL AND RELIABLE
DOUBLE MOTION
ETNA
MOWING & REAPING MACHINES
MADE FOR
TREADWELL & CO. SAN FRANCISCO
Sole Proprietors for the Pacific Coast



Hoadley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & Co., San Francisco.

McLAREN, PILCHER & BELL,
MANUFACTURERS, DEALERS AND INTRODUCERS OF
NEW INVENTIONS
FOR THE PACIFIC COAST.
MANUFACTURERS OF
CURREN'S PATENT HARVEST SHARPENERS,



[PATENTED JANUARY 30TH, 1872.]

The only successful Grinding Machine in existence for Harvesting Machines. No farmer who has a Reaping and Mowing Machine can afford to be without it. It is simple, cheap, quick, durable and portable GRINDING INSTRUMENT, which is adjustable to any kind of knives, so that it will sharpen the section immediately, without removing the cutter or unhitching. For particulars call on or address,

McLAREN, PILCHER & BELL,
605 Clay street, San Francisco. 15v7-6w
Agents wanted.

MATTESON & WILLIAMSON'S

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m **MATTESON & WILLIAMSON,**
Stockton, Cal.

THE
CELEBRATED MITCHELL WAGON



SOLD BY
MILLS & EVANS
508 MARKET ST.
15v7-3m

H. C. SHAW,
STOCKTON, CAL.
Agricultural Implements,
201 and 203 El Dorado St., Sign of "Webster Bros."
General Agent for the San Joaquin Valley for the
Vibrator Threshers, Studebaker Farm Wagons
and Improved Single Geared Headers.
The Baxter & Webster Single Gear Headers are built
only at my establishment. Address, H. C. SHAW,
14v7-3m Box 95, Stockton, Cal.

G. CREGO.

S. C. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

-OF-

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:

C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingles, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,
24v6-3m San Francisco.

WM. ZARTMAN & CO.,**CARRIAGE and WAGON MAKERS,**

COR. ENGLISH & HOWARD STS., PETALUMA.

Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate.

SPECIAL RATES TO GRADUATES. 12v7-3m

NURSERY NOTICES.**O. W. CHILDS,****Horticulturist—Los Angeles, Cal.**

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

Ornamental and Evergreen Trees for Sale
at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrons Deodare, or De-vine Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubb's Hotel.
Send for Catalogue. 14v10

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, **W. H. & G. B. PEPPER,**
Petaluma, Sonoma Co., Cal. 21v6-1y

PEACH and PLUM TREES.**15,000 IN DORMANT BUD;****SEVEN OF THE BEST VARIETIES**

Of Peaches and five of Plum. The Tinley Peach, Georgia Freestone Seedling, the first offered in the States its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

BRYAN & DOMINGOS,
P. O. Box 151, Sacramento, Cal. 4v7-2m

Patrons of Husbandry.**JOSEPH SEYMOUR & SON,****Manufacturing Silversmiths and Jewelers,**

36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7

Send P. O. Money Order with your order to W. H. Baxter, room 12, 320 California street, San Francisco. It will save Express collections and overland Express charges.

JOSEPH SEYMOUR & SON,

12v7-3m Syracuse, N. Y.

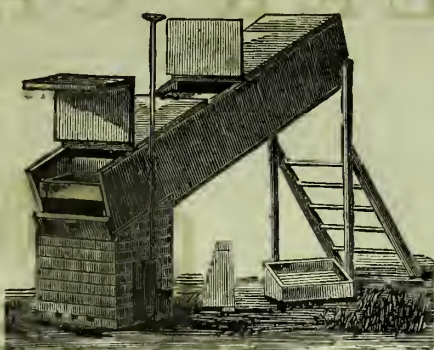
CO-OPERATIVE MARBLE WORKS.**JOHN DANIEL & CO.,**

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,**MANTEL PIECES, ETC.,**

421 Pine street, between Montgomery and

Kearny, SAN FRANCISCO. 21v7-1y

Ryder's American Fruit Drier.

This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent,

306 California street, San Francisco

THE CELEBRATED**SLUTHOUR PUMP.**

Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING AND THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from 1/2 to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

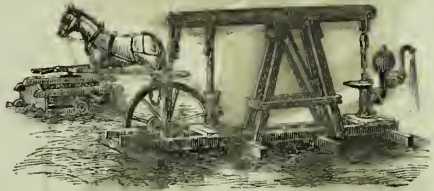
Commission and Forwarding Merchants.
Agents for Eastern Manufacturers, 306 California street, San Francisco.

VINE and FRUIT GROWERS,

TO RAISE LARGE CROPS

YOU MUST IRRIGATE.

To irrigate successfully, you must have the power that does not give out when the wind fails.

Laufkotter Bros. & Churchman's Horse-Power,

[PATENTED FEBRUARY 13TH, 1872.]
Never fails to supply more water than four or five Windmills, even supposing you had all the wind you want. It is also suitable for running light machinery, such as Barley Crackers, Corn Shellers, Fanning Mills, Grain Separators, or for Sawing Wood. They are never failing, cannot get out of order, easily worked, substantial, and always give satisfaction wherever they have been used. One horse can easily work two 6-inch pumps, with a continuous flow of water. Force Pumps, from 3,000 to 10,000 gallons per hour. WINDMILLS of all kinds manufactured to order. Wells Bored, Windmills and Horse-Powers set in any part of the State, and repairing of all kinds done.

Manufactured and for sale by

LAUFKOTTER BROS.,

20v7-2m-3m Cor. J and 10th Sts., Sacramento.

THE ALDEN**Fruit Preserving Company**

OF CALIFORNIA.

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.**W. M. WHEAT, Vice President.****FRANK PYLE, Sec'y and Supt.****BANK OF CALIFORNIA, Treasurer.****H. K. CUMMINGS.**

1858.

H. H. RALSTON.

1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,
ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer

LANDS & HOMES FOR SALE**RANCHOS****FOR SALE ON A LONG TIME.**

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,

542 MARKET STREET,

ap25-tf N. E. Cor. Montgomery.

FARM FOR SALE.

165 Acres 1/2 mile from the town of Windsor; 1 mile from depot; 2 1/2 miles from the famous Russian river. The place is beautifully situated; land all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and outhouses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2,500 cords of black oak timber; and wood brings \$5 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to J. O. H. DIMITCH, P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap18-tf

RANCH FOR SALE.

BY VIRTUE OF AN ORDER OF the Probate Court of the city and county of San Francisco, the undersigned will sell the Ranch of the Estate of H. Rush, deceased, in Solano county, consisting of about 4,000 acres of farming land, bordered by 1,200 acres of tule land, three-fourths of entire tract inclosed by Suisun Slough, having landing on same for vessels from San Francisco. Terms reasonable. For particulars inquire of H. F. CRANE, 729 Montgomery street, or D. BALLARD, 106 Davis street, San Francisco. SARAH E. RUSH, Administratrix. m9-1m

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,

ap18-tf 329 Montgomery street, San Francisco.

FOR SALE.**100 Acres of Good Land,**

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-tf

P. H. SUMNER.**Buy Real Estate while at Low Rates.****NINE WATER-FRONT LOTS, CHEAP,**

On Gift Map 4.

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. hptf

SMALL FARM IN SONOMA FOR SALE.

A farm of 70 acres, handsomely improved, with orchard and vineyard, and 25 acres in wheat, plenty of wood and water, etc., situated within one and a half miles of the town of Sonoma, and same distance from the steamboat landing; price moderate; terms easy. Apply to BERRY & CAMP, 418 Montgomery street, Real Estate Agents. 20v7-1m

THE CELEBRATED NEW DRAW-FEED**WHEELER & WILSON****SEWING MACHINES**

Are without exception the most desirable for family use. They are the LIGHTEST RUNNING Machine in the market, and sew from the thinnest to the thickest material with equal facility.

These machines have, since their invention, stood at the head of the list in public favor, and the recent improvements to them have increased their superiority still more. Buy no Sewing Machine until you have tried these.

WHEELER & WILSON MAN'G CO.**E. W. HARRAL, Agent,**

20v7-4m-15p 427 Montgomery street, S. F.

FRANK MILLER & SON'S**MOWING MACHINE OIL,**

IN PATENT CANS, ALREADY FOR USE

IN THE FIELD.

NO FARMER should be without it, as the season for mowing and reaping comes on. For sale by Baker & Hamilton, M. C. Hawley & Co., E. S. Whitcomb and other agricultural implement dealers. m2-1m

SOMETHING NEW.**NO MORE BROKEN EGGS.**

Use the DEFANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street, Agents for the Pacific Coast. 11v7-3m

PEA-FOWLS.

A FINE PAIR OF PEA-FOWLS, BETWEEN ONE AND TWO YEARS OLD,

For Sale. Price, \$25.Address, **M. EYRE, Napa, Cal.**

m2-4t

KOHLER CHASE & CO.,

633 CLAY STREET,

AGENTS FOR THE

SAN FRANCISCO.



THE ONLY FIRST-CLASS PIANO SOLD AT A LOW PRICE.

Beware of the CHEAP pianos sold from \$300 to \$400, made to look well and sound well (when new), but without durability or real merit.

21v7-1am 3m

WATERHOUSE & LESTER,

IMPORTERS OF

WAGON AND CARRIAGE MATERIAL,

BODIES, CARRIAGE PARTS,

Wheels, Axles, Springs & Carriage Hardware

SOLE AGENTS FOR THE PACIFIC COAST FOR

Clarke's Adjustable Phaeton Sunshades.

Send for price list.

ALSO AGENTS FOR

Woolsey's Patent Wheels.

The best and handsomest Wheel made, having great strength and a fine finish. There is no other wheel that has the metallic-shouldered band; and it can be repaired as easily as the common wood wheel.

Send for illustrated circular. Address

WATERHOUSE & LESTER,

122 and 124 Market street, and 19 and 21 California street, 17, 19 and 21 Seventh street, 21v7-3m

FOR SALE.

A FIRST-CLASS DAIRY FARM & STOCK RANCH.

Situated in Lake county, twelve miles from the flourishing town of Lower Lake, immediately on the road from Lower Lake to Bartlett Springs, containing 880 acres of land, 400 acres of which is choice grain land, 80 acres of the best natural clover land, and the balance good pasture land, all of it under good fence and divided in seven divisions; abundance of water in every part of it, also well timbered. Title perfect—U. S. patent. This ranch is situated in the healthiest part of California, and has been used as a dairy ranch, where the celebrated Durst's Clear Lake cheese has been manufactured for a number of years, and is well adapted for that purpose, as also for grain, sheep and cattle raising. There is on the place a splendid dwelling-house, only built two years; two large barns, cheese and milk houses, other out-houses and corrals, and water very handy in abundance. Price, \$10,000; only one-third of the purchase money required to be paid down, balance can stand to suit purchaser at a reasonable rate of interest. There is also for sale 60 first-class dairy cows, all the dairy and farming implements, harness, etc., at a reasonable price. For further particulars inquire of J. DURST, on the premises; J. O. GETZ & BROS., Lower Lake; or GETZ BROS. & CO., 613 Front St., San Francisco. m23-1m

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas, Buff, Partridge and White Cochins, Spangled, Golden and Silver Polish, Spangled, Golden and Silver Hamburgs, Pure White-faced Black Spanish, Silkies, Game, Leghorns, White & Brown, Silver Gray Dorkins and Houdans, Aylesbury and Rouen Ducks, Bronze Turkeys, the largest in California.

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS. 7v6-tf-16p2

BYRON JACKSON,

MANUFACTURER OF

Patent Self-Feeder & Elevator Attachment

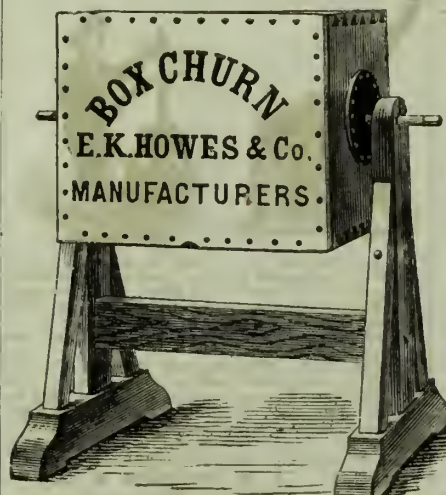
For Separators, at the Yolo Planing Mill and Machine Shop, Woodland, Yolo County, Cal.

This improvement was patented in 1867 and in 1870. For the past two years I have been introducing it to the public with great success. It is pronounced by all that have tried it to be the greatest labor saving invention of the age. No thrasher will be without it after witnessing its operation. It saves all the hard work of feeding and injury to health, and one-half the labor required to supply the grain from the stacks. It will pay for itself in less than thirty days, besides doing better work. For particulars send for circular; it gives all necessary information, besides the best plan for using the Horse Forks ever adopted. Entire satisfaction guaranteed if properly used. 21v7-3m

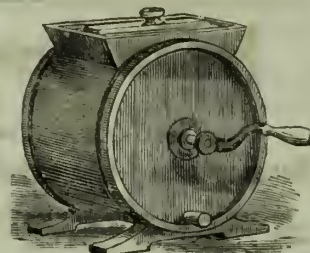
The "Planet" Double-wheel Hoe will work Oats, Roots, Garden Crops, Cuttings, Seedlings, &c., closer, better and six-times faster than the hand hoe. CALIFORNIA PATENT. A. L. ALLEN & CO. 119 S. 4th St., Phila., Pa. A LIVE AGENT WANTED IN EVERY TOWN!

E. K. HOWES & CO.,

NOS. 118, 120 AND 122 FRONT STREET, SAN FRANCISCO.



BOX CHURN.



CYLINDER CHURN AND DASHER.



THERMOMETER CHURN.



BLANCHARD CHURN.

SOLE MANUFACTURERS ON THIS COAST OF

All Descriptions of Churns, Butter Workers & Moulds, Butter Tubs, (35, 50 & 60 Pounds), Butter Kegs—Plain and Gal Hoops—Wholesale & Retail.

Send for Price List and Illustrated Catalogue. Single Churns sent by Express, C. O. D., if desired. 6v7-16p-4ow-3m



EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz.; Buff Cochins, \$3 per doz.; White Faced Black Spanish, \$4 per doz.; White Leghorn, \$5 per doz. Buff Cochins and Light Brahmas Fowls for sale. Address: G. A. DEAN, Pacific Straw Works, 335 Bush St., San Francisco. 12v7-3m-16p

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Game, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILLIPS, 608 Clay street, S. F. 11v7-1m

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GEES,

58 pounds to the pair, at maturity.

Eggs for Sale Now.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best.

Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address:

M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage. 11v7-2m-16p

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,

ENGLISH RYE GRASS,

RED TOP,

ORCHARD GRASS,

TIMOTHY,

MEQUIT,

RED CLOVER,

WHITE CLOVER

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than Poor Ones!



OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

A few trills of imported Dark Brahmas, of the celebrated Black Prince strain, for sale at \$40 per trio. Also, one trio imported Golden Polish, at \$30. For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the world, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco.

9v7tf

W. M. BRANDON, JACOB W. ROOFER

BRANDON & ROGERS,

California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges. 20v6-1y-16p

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose:

Or C. J. CLAYTON,

Clayton, Contra Costa Co., Cal.

10v7-6m

PACIFIC RURAL PRESS

Volume VII.]

SAN FRANCISCO, SATURDAY, MAY 30, 1874.

[Number 22.]

Among the Merinos.

The RURAL PRESS is in the habit of sending a reporter into the country occasionally, to see if the great agricultural performance is proceeding according to programme. Since our last issue one of these representatives was sent into Alameda county with general orders to interview dame nature, but more especially to visit the sheep ranch of

Severance & Peet

At Niles station.

The little place is supposed to have been named after a Mr. Nile; but tradition must be in fault here; for the rich harvest now in prospective there, and the remarkable evidences of general fertility to be seen all about the surrounding country, warrant the belief that it was named after that wonderful valley of Egypt.

Very soon after leaving Oakland the country commences putting on airs; and all along the line of the railroad are fields for which we may safely say "there is no such word as fail;" for this season at least. Barley and wheat are very promising indeed; standing about shoulder high; well headed, but still the greenest of the green. There were, however, a few ominous looking patches of yellow dock in some fields, and here and there were places where wild mustard was getting a little dominant; but most of the fields were remarkably clean; while the massiveness of the growth of grain is truly wonderful.

More corn fields are to be seen along this route than our reporter expected to find. The corn was in good condition, too. Some of the fields were undergoing their first hoeing. This crop is certainly very promising at present, and ought to turn out well; but we fear the cool nights of mid-summer will not permit that rapid, uninterrupted growth, which is indispensable to it. No eight hour law, or even sixteen hour law, is applicable to growing corn. It must grow as rapidly at night as during the day. In fact in good corn countries it makes its greatest growth at night.

A good many vegetables are grown in this district. We saw one particularly nice little bed of about

Eight Acres of Onions.

Sown broadcast. Other smaller patches were sown in drills. Potatoes, peas and other vegetables were also well represented; and these, with other cultivated and hoed crops, looked clean and well cared for. Some fine orchards and many small vineyards may be seen from the car windows.

Hay making is about commencing. The crop is only expected to be a fair one. It will be seen that our reporter has reserved Severance & Peet's flock of

Full Blood Merinos

For his last offering. This celebrated stock was originally imported from Vermont by these gentlemen, and they continue to import every year. They are all No. 1 Spanish merino sheep. Their present stock numbers about 500. Of this number, 150 are breeding ewes, 165 bucks, the balance being yearlings. They find a ready sale for their stock. They have sold this spring over 200 ewes, mostly with lambs. On the morning of the visit referred to, 102 were forwarded to Los Angeles county; and two bucks, one year old were

Sent to the Sandwich Islands.

They recently sold four rams for \$1,000. Their sales since January 1st, 1874, have amounted to \$18,000. At the last State agricultural fair, this stock received the first premiums for breeding ewes, yearling ewes and yearling bucks.

Severance & Peet keep no sheep but merinos, making this a specialty; and by their care and business enterprise, backed by judgment and experience, they have been able to furnish a stock that has achieved a wide reputation. The wool on some of the flock was examined, and found to be of fine quality, long and remarkably heavy. The fleeces of one band of breeding ewes recently shorn weighed from 18 to 22 lbs. A peculiarity of this breed is the growth of wool on their legs; the wool offering a good clip for the shears

Down to the Very Hoofs.

In fact there is no part of the animal, with the exception of a small spot on the inner side of

the fore and hind leg, that does not require clipping.

The quarters in which this stock is kept are ample and well arranged. There are two stables, one of which is 100 by 80 feet, the other being 60 by 30 feet. The two will accommodate 500 sheep. There are also various sheds, and two large yards, which are swept frequently, thus securing cleanliness for the sheep and saving manure for the ranch. In all the sheds, troughs are kept constantly supplied with sulphur and salt mixed, to which the sheep have free access. A clipping room and store house for wool are also provided. The ranch contains 200 acres; and is within five minutes' walk of the railroad station. It is pleasantly and advantageously located, is well worked, and the tasteful dwelling, with an abundance of out-buildings, gives it a very attractive appearance. In the immediate neighborhood of the dwelling is a vineyard of two acres with a large fruit and vegetable garden; and adjoining this is a patch of sugar beets, which are grown to feed to the sheep in winter. The ranch is



A TROPICAL SCENE.

abundantly supplied with water by a private ditch from the Alameda creek. Another ditch, thirty feet wide, is nearly completed, which is to convey water from the above named creek to Centerville. It runs through this ranch and within a few rods of the dwelling.

One of the most striking features of this neighborhood is the long range of "Mission hills," which form a continuous but beautifully varied border to this beautiful valley. An occasional bald head is to be seen among them, but for the greater part they are green and lovely, having nothing rugged or forbidding in their aspect. They are cultivated far up their sides in spots, and the various tints of grass and grain on their undulating surface forms a picture which gladdens the eye of many a railroad traveler. These hills form the northern border of the celebrated sheep ranch of Severance & Peet.

Our reporter would like to say something about matters and things inside of this house, which is so pleasantly surrounded; but he is somewhat young and quite bashful, and fears that any compliments scattered here, no matter how sincere they may be, might possibly be looked upon as an attempt at remuneration for the excellent lunch and kind attentions of the ladies of the household. But he does not feel at all delicate about advising those who wish to see some first-class stock, and to enjoy at the same time a delightful visit, to take a trip to the sheep ranch of Severance & Peet.

ANOTHER PIONEER GONE.—Francisco Ziba Branch died at the Arroyo Grande, San Luis Obispo county, at the advanced age of 71 years. Mr. Branch arrived in California in 1831, and has been a resident of that county since 1836.

Do Not be Too Sanguine.

The present outlook for California, and especially for its agricultural interests, is one of unparalleled hopefulness. But while we rejoice with our friends, and send to them weekly our hearty congratulations, we would caution them against building too high a structure upon the present agricultural and financial basis. A man deserves but little credit for keeping out of debt when nobody will trust him, but when everything is prosperous with him, and dealers of all kinds urge their wares upon him, assuring him that the time of payment is of no consideration whatever, then a man deserves credit for refusing credit. Prosperity tries men's souls (or their purses, which is about the same thing,) more than adversity; and although this may seem a queer sort of a trial to prepare our friends for, we think it well timed, and are sure it is well meant. Let those who are in debt take advantage of the prosperous season to get

Fish Importations from the East.

An aquarium car will start on its journey to this coast on the 3rd of June, to make a second attempt to cross the continent with a load of living fish. The car will be in charge of Livingstone Stone, the gentleman who was in this State last year obtaining salmon eggs for the Eastern States. The car in which the fish are to be brought this time is 40 feet long, with broad head, passenger trucks, twelve wheels, air brake and Miller platform, and is well made, and appropriately fitted for the purpose. The salt water fishes on the list to be taken are as follows: Lobsters from Massachusetts bay; oysters from same place; scup from Martha's Vineyard; striped bass, New York harbor; tan togs, Martha's Vineyard; salt water eels, same place; king fish, weak fish and blue fish from New York harbor.

The fresh-water fish to be brought are black bass, glass-eyed pike and horn-pout, from Lake Champlain; eels, from the Hudson river; cat-fish, from New Jersey; Shad, from the Hudson; river; red minnows and alewives, from Massachusetts.

To take across almost any of these varieties would be a great care and labor; and to take across the whole is quite an undertaking. The car will leave Charleston, N. H., about the 3d of June, reaching Sacramento and this city about the 10th. It is to be hoped that the experiment of bringing these fish across will be more successful than the attempt was last year, when the car was wrecked, and those of the fish which did not fall into the river where the accident occurred, were destroyed.

A Tropical Scene.

Luxuriance of vegetation and an apparent stillness and calm are attributes of all tropical scenery, as most people who have seen views of places in low latitudes well remember. Those who have resided in such localities vouch for the fact that this stillness is not apparent, but real, and applies to the people as well as the country. In most tropical countries the inhabitants are comparatively indolent, and a large proportion of their time is passed in idleness. We all know that the effect of a hot day in this country on most people is to cause them to seek some shady nook where they can lie and rest, and doze away the afternoon in contented laziness. Those of us who have experienced these feelings will excuse in a measure, the residents of Mexico, Central America or the south sea islands for their idleness, when we remember that a tropical climate, with its many days of warm weather is likely to influence those people as warm days do us. The tropical scene shown on this page is one taken in the interior of Tahiti, and the place looks like a pleasant one to pass a few idle hours.

A LITTLE SMUT.—Some of the farmers who have called upon us of late, have intimated that a little smut is to be seen in certain localities. It is not supposed by any that there will be any perceptible injury from smut in the present crop, but its presence, even in the smallest degree, is to be regretted; as it is rapidly disseminated, and its growth is ruinous. The late spring rains which have done so much for our wheat crop may have favored the development of the wheat-smut fungus. It is not supposed that any condition of atmosphere creates this fungus; but a moist heavy atmosphere undoubtedly favors the growth of the spores which adhere to the grain when sown. It would be well to watch closely for indications of the presence of smut, and be guarded accordingly in selecting the seed for next year's crop.

THE St. Louis Cotton Association has decided to offer premiums aggregating \$10,000 for cotton to be exhibited at the annual fair of the Agricultural and Mechanical Association, to be held in that city in October next.

MR. SHORB, of Los Angeles, has received a consignment of trout spawn, which he will place in his hatching troughs.

THE Connecticut State poultry society, one of the most promising in the country, is to hold its next fair in New Haven.

A COUNTY agricultural society in Illinois offers a premium of \$300 to that township in the county which has the best roads.

CORRESPONDENCE.

Jottings on the Road.

EDITORS PRESS:—A party of five, your correspondent being one, started one beautiful morning last week, to visit Alum rock and Penetencia cañon, both noted resorts, and where most of the picnics this summer have been. Three miles from San José, and we are riding rapidly over the new road, hard, gravelled and wide, with two rows of Monterey cypress and pine trees on either side, and in a few years they will shelter the road from the sun's fierce rays.

The ascent is so gradual that it is scarcely noticed, until winding around the brow of the hill. On looking back, we see the lovely Santa Clara valley, with San José embowered in trees, spread out, as it were, at our feet; and in the distance the Santa Cruz mountains and the bay may be dimly seen, through a hazy, purple mist. Then a sudden turn, and we swiftly descend, and exclamations of delight burst from the whole party. Penetencia creek ripples like a silver thread many feet below us on one side, and on the other rise ragged, rocky hills or mountains—some might call them—looking as if they had been cut with a knife, so smooth are they at the side of the road.

Alum rock is one of the principal points of interest, and stands guard, like a huge sentinel, just before reaching the terminus for carriages. The curious may scrape particles of pure alum from the crevices with a pen-knife. A little farther, and we reach the picnic grounds, where there is a small hotel and a fine dancing floor, which is built where there is not a single tree to shade it from the sun. Even at this early hour are a score of carriages, loaded with people who are bringing hampers of provisions intending to spend the day there. After a hearty lunch, leaving the remainder of the party to rest and lounge, my protector and I started to walk up the cañon, as far as practicable, to view the beauties of nature. There is a narrow path, convenient for lovers, as they have to walk very close together; and now winding along the creek, then crossing it on large rocks, we come to a chalybeate spring. There is a wooden tunnel extending into the hill 30 or 40 feet, from which is issuing inky water, and not far distant is another spring, white with sulphur. Dozens of people are drinking it, though some look as though it was choking them; and, not to be behind the rest, I taste it. Ugh! that's enough for me. One taste will do; though it may be pleasant, after one is used to it. A few are filling huge bottles to carry home, to drink during the week. We saw trout in the stream, and one gentleman, who is very reluctant to have his name in print, after fishing half an hour, caught—one.

A mile from the picnic grounds, on a large boulder in the center of the creek, I am writing this; too far from either bank for my companion to disturb me, although a pebble now and then strikes my paper; but such trifling affairs do not disturb my equanimity. On the brow of a hill, about one hundred and fifty feet above me, so high that it almost dislocates my neck to look up at it, a stream of foamy water is rushing down over the rocks, from a flume, which is half a mile long, and is used to shoot wood down the hill, as there is no road. About fifty cords of stove wood are lying in the gulch, and the water dashes over and through it.

But we hear a "hallo!" ringing through the woods, and though loth to leave, obey orders, and scrambling over rocks, seeing a few snakes, bending beneath low-branched trees, we are soon in sight of our party; and before long are riding rapidly homeward, meeting forty carriages between Penetencia cañon and San José.

Mrs. ELIZA E. ANTHONY.

San José, May 21st, 1874.

Calycanthus.

EDITORS PRESS:—I notice in the Press of the 9th inst., somebody enquires about *Calycanthus*; where to procure seeds, etc. *Calycanthus Floridus*, as well as some other varieties of the same plant are natives of the Southern States. The above variety attains a height of about two feet, is readily propagated by layering and well adapted to this climate. Neither the shrub nor its flowers are at all attractive. Its leaves exhale a thyme-like fragrance when bruised. For the sake of variety it should be found among the collections of every amateur.

Abundance of good plants of *Calycanthus Floridus* may be found on sale, in their season (the shrub being deciduous), at the nurseries of Mr. John Rock, of this city. A. KAMP.

San José, May 14, 1874.

EDITORS PRESS:—Will some one of your readers please inform me how to can or bottle strawberries so they will not lose their flavor? Also, how to can green peas and corn, so they will keep. I have canned them the same as trout, thoroughly cooking and sealing up, but in less than a week the covers would fly off, and of course they would be spoiled. And oblige,

E. E. A.

Climate, Fruit Trees, Poultry, Etc., in California.

EDITORS PRESS:—I have received several copies of your paper, and wish to ask you a few questions: Can you send me a traveling map of California designating the counties, and at what price? Which is the healthiest part of the State, northern, central or southern? Are rheumatism or neuralgia prevalent there? Are fruit trees subject to blight, black heart or other diseases? What is the average life of a peach tree? Is poultry subject to cholera there? Can you tell me of some paper or publication that will give me an idea of the resources of Central and Southern California?

J. B. REEVE.

Shelbyville, Ill.

[Our correspondent can obtain such a map as he desires of Appleton & Co. of this city; price \$3, postage probably about four cents. The central and northern portions of the State are supposed to be the most healthy; rheumatism and neuralgia being scarcely known there. In fact these diseases are almost exclusively confined to the valleys of the Sacramento and San Joaquin rivers. Fruit trees in California are not subject to blight and black-heart. The average life of the peach and other fruit trees is not supposed to be as long in this State as in localities where they mature later and are less prolific in their bearing. But it should be considered that they are more readily replaced, and are vastly more productive; and furthermore the apple-worm and canker are not known here. You can eat an apple or plum safely in the dark. Poultry is not more subject to cholera here than in the Atlantic states. If fowls have the care and attention here which they receive in rougher climates they would undoubtedly live longer. The Resources of California, published by Wentworth & Co., 302 Montgomery street, San Francisco, will probably afford our friend satisfactory information in regard to his last question. He had better procure a few numbers of the above publication.—Eds. Press.]

A Chance for the Boys.

EDITORS PRESS:—Having commenced to make a collection of birds' eggs and nests, I would like collectors in each and all the counties of California, Oregon, Washington Territory, and in fact, all the States and Territories west of the Rocky mountains. Knowing that a large number of boys read the RURAL every week, who are able to help me in my work by collecting them, I will give them an exchange of flower seeds, which I think will be the best reward that I know of for boys, except a good horse to ride. Nothing is more pleasant for the young than the culture of flowers; it occupies their spare time and gives them an idea of the beauties of God's creations.

There being a great many birds in this State, I cannot get very well without the help of others, I call on the boys of the RURAL to aid one of their number. I will send 15 papers of choice flower seed to any one that will send me from 25 to 100 eggs. Mind you, I don't want all of the same kind; a nest of each kind will do. I want the boys to guarantee that all eggs are as represented. I want no doubtful ones, for they will be excepted. I want specimens of all California birds except turtle-dove, swallows, chipping and song sparrows, yellow bird, cat bird, robins and California quail. I want an unlimited number of hawk and owl eggs, for which I will give a fair price.

Send me a list of all birds common to your section of the country, and I will let you know what I want. Collect eggs and nests now, and write to me to know how to send them. Now boys, write, for the season will be soon over, and don't lose the offer of a choice collection of flower seeds. All letters addressed to me will be duly received and answered. Address:

AMATEUR NATURALIST AND FLORIST.
Lock box 5, Oakland, Cal.

Stacking Grain.

EDITORS PRESS:—In looking over your correspondence columns, and as the season advances and farm labor is pushing, I notice quite a falling off in rural correspondence. In reading your paper two years I have never seen an article on one branch of farm labor, and that is stacking grain. This is a subject that does not appear to need discussion, but to see the slovenly manner in which some farmers pile their grain is enough to disgust any average stack hand. But the modern derrick fork is such an improvement on the old way, that it will not make much difference how it is stacked, so it is in large piles; I say it don't make much difference how it is stacked, but it is always better to stack it in layers, as it is easier to get off; and by all means put it in large stacks, say 40 to 50 feet square; two, four or six in a place and about ten feet apart, so as to give plenty of room to drive the derrick wagon between them. Reflecting people must know from the bountiful crops to be harvested, that hands are going to be anything but plenty, therefore derrick forks are bound to be all the go, so it is well for them to stack their grain accordingly.

Lincoln, May 25th.

F. G.

Agricultural Fairs—Premiums. Lists, Etc.

EDITORS PRESS:—It is my intention to show a few head of cattle at the coming fairs, and I desire to make as extensive and creditable an exhibition as my small herd will permit. At the same time I do not wish to be put to the expense of grooming, stalling and feeding any more than I have calls for to exhibit. Under these circumstances, I would request your influence with the agricultural societies to hasten the issue of their various premium lists. Can you not now publish the dates on which the different fairs will be held? or if not all, say those of Sacramento, Solano, San Joaquin, Sonoma, San Francisco and Santa Clara?

I am anxious also to know whether the societies will adopt the recommendations of the Cattle Breeders' Association, as expressed in the resolutions passed at their meetings of the 2d inst., and published in your issue of the 9th inst.

All of the resolutions passed are very much to the point, but that which requires "reliable pedigrees of all cattle competing as thoroughbreds" to be filed with the Secretary of the Society seems to me particularly good. It is true that some few parties will suffer by it, if carried out, (as it should be,) as their cattle, which are as good as anybody's, excepting that the former are without pedigrees, will have to be ruled out. Better far, however, that those few should be denied the privilege and pleasure of exhibiting, than that the whole country should be overrun with a lot of cattle, said to be thoroughbreds, but which may or may not be such, and which it is impossible to keep track of, owing to the lack of pedigree.

Please request the Secretary of the Cattle Breeders' Association to keep posted through your valuable journal, of the doings of the society, and of such communications as he may receive from agricultural societies.

Would it not be a good idea for the different breeders to send you notes about their herds, stating the deaths and increase which may occur, so as to avoid mistakes, and perhaps frauds, in the future?

SOLANO.

BEEES.

FOUL BROOD IN HIVE.—A. Pettigrew, an experienced English apiarist, says: Foul brood in bee hives is an incurable malady. From some cause, and in some seasons more than others, larvae or half-hatched bees perish in their cells. These cells are at first separate from each other, and are covered with lids concave in form; the lids of healthy, normal brood are convex or rounded. The cells of dead brood multiply fast, and by reason of their numbers come in contact with one another. This disease does not appear to spread by contact or touch, but by the multiplication of cells all over the brood combs. The matter in the cells is of a dirty red color, as thick as honey, and almost as offensive to the smell as rotten eggs. The matter of foul brood is so putrid and offensive to bees, that all prosperity departs from the hive in which it is found; indeed the bees of infected hives frequently abandon them, and go off as swarms; sometimes they creep underneath their boards and build their combs there. Of course experienced bee keepers do not keep diseased hives until they become uninhabitable. The stench of this disease can be easily smelt outside the hive, and symptoms of its existence may be seen in the conduct of the bees.

HONEY COMBS AND UNSELFISHNESS.—The instinct of bees in the construction of their cells has always been an object of wonder to those who are capable of appreciating it. Every cell has straight lines and sharp corners; but never does any cell present its sharp corner to its neighbor's cell—a soft even side to every neighbor's. Each fit to each, firm to support, and yet soft in the contact. No interstices are left where filth might accumulate to annoy and defile. Thus let man meet man as they tread the crowded path of life. Always a side to your neighbor that is soft and strong. No sharp corner of selfishness that will pierce your brother.—Arnol.

POISONOUS HONEY.—A large swarm of bees having settled on a branch of the poison ash—*Rhus Vernix*—in Westchester county, N. Y., was put into a hive and removed to the stand where it was to remain. Next morning the bees were dead, swelled to double their usual size, and turned black. A few were alive, yet torpid and feeble, and died soon after exposure to the air. This was attributed to the poisonous effluvia of the ash, upon which they remained for a short time.—Nicholson's Journal.

WEIGHT OF HONEY IN BOXES.—In the ordinary glass honey boxes now in use, it requires about 35 cubic inches to hold a pound of honey. Larger boxes lose less space, and hence require a less number of cubic inches. Thus a box 4x5x6 inches contains 120 cubic inches, and, therefore, when well filled and sealed over, holds about 3½ pounds. A five-pound box requires about 33 inches to the pound, and a 10-pound box about 30 cubic inches.—Apian.

BEE ranches are being established at the many suitable localities for them, which are to be found in the mountains around Julian city, San Diego county.

KIRBY, an English writer on bees, says there are about 250 species of them in England.

HORTICULTURE.

Transplanting Evergreens.

Transplant just at the time when the buds are fully swelled, and when they are ready to break into growth. See that the roots do not in any manner become dry after being lifted from the ground. Make the holes sufficiently large to insure placing the roots in their natural position, so that they come properly in contact with the earth placed about them, and that it is firmly pressed around and between the interstices of the roots. Set them so that the trees shall not be any deeper than they have been before. Mulch them with at least four inches of litter for the first twelve months, and you should have no difficulty. If care be taken that the roots have no direct contact with air to dry them while being moved, and they have a reasonable amount of moisture the first season, you will find them the most certain of transplantation of any trees, except willows, poplars, etc. If the roots are allowed to dry, the sap is changed into resin, or an insoluble gum, and death is almost certain to ensue. We have known evergreens to be killed by five minutes' exposure to sun and wind, but if the roots be kept moist, they may be transported long distances.—Western Rural.

GARDENING IN OLD AGE.—A writer in the Cornhill Magazine recommends to one in the autumn of life, to take to gardening, if he has not already experienced its pleasures. Of all occupations in the world, it is the one which best combines repose and activity. It is not idleness; it is not stagnation; and yet it is perfect quietude. Like all things mortal, it has its failures and disappointments, and there are some things hard to understand. But it is never without its rewards, and perhaps if there was nothing but successful cultivation, the aggregate enjoyment would be less. It is better for the occasional shadows that come over the scene. The discipline, too, is more salutary. It tries our patience; and it tries our faith. But even in the worst of seasons, there is far more to reward and encourage, than to dishearten and disappoint. There is no day in the year without something to afford tranquility and pleasure to the cultivator of flowers, something on which the mind may rest with profit.

PARSLEY FOR EDGINGS.—Parsley properly belongs to the vegetable garden, but it makes a beautiful edging for flower beds, the bright green of its finely curled leaves giving a pretty finish to flowers that lack foliage. Last year a few seeds of the Champion Moss-curl parsley sown in the hot bed, gave us some strong plants that were set out in the border, and proved to be not the least of our possessions. Those ladies who decorate their tables will find parsley a valuable acquisition. The leaves, arranged on a plate or glass fruit dish, make a nice foundation for flat bouquets of balaams, pansies and other short stemmed flowers that need to rest on the surface of the water. The seed germinates slowly, and one must not be surprised if the plants do not appear for several weeks, so it is best to reserve some corner of the hot bed for it, or wait until the ground is warm enough to sow in the garden.—Rural New Yorker.

GARDENING ON SHARK.—A good story, and all the better in being true, is told of one of our citizens, who let a piece of ground to a man in shares. The man would hire the lot, but the owner, doubtful of getting any money of the tenant, proposed to let it upon the promise of receiving half the products. Occasionally during the summer he passed the spot and was pleased with the cultivation it was receiving and with its goodly show of vegetables. Harvest time came and passed, and he heard nothing from his tenant, till, in response to a hint, the latter sent to him a watermelon and three shriveled cucumbers. Indignant at this shabby treatment, he called upon the man and asked him what he meant. "Why, you see, 'squire," replied the tenant, "the pesky boys stole of your half but the melon and the cucumbers."—New Bedford, Mass., Mercury.

A WRITER in a French horticultural journal relates this suggestive experience: After sunset I place in the center of my orchard an old barrel, and inside of which I have previously well tarred. At the bottom of the barrel I place a lighted lamp. Insects of many kinds, attracted by the light, make for the lamp, and while circling around it strike against the sides of the barrel, where, meeting with the tar, their wings and legs become so clogged that they fall helpless to the bottom. In the morning I examine the barrel, and frequently take out of it ten or twelve gallons of cockchafers, which I at once destroy. A few pence' worth of tar employed in this way will, without any further trouble, be the means of destroying innumerable numbers of these insects, whose larvae are among the most destructive pests the gardener or farmer has to contend against.

A PROFITABLE CROP OF APPLES.—Mr. Joseph Harris tells in the American Agriculturist how he raised a crop of Northern Spy apples on four acres, which sold for \$1,256.50. Several trees yielded five barrels each, and on count 186, 190, 218 and 222 apples filled a barrel. He attributes his success to a proper thinning of the fruit in summer. If, when the fruit sets too full, you pick one half the number, you will have the same bulk of apples in the fall, and being so much larger and more perfect, will bring twice the money.

CATTLE BREEDERS.

Thoroughbred Cattle in California.

Within the past two years considerable and increasing interest has been taken in the improvement of the common cattle in this State. Appreciating the advantages to be derived from an early start in the business, several of our more enterprising farmers and rancheros have made judicious selections from the choicest herds to be found in the United States and Canada, and some even from those in England. It is thought by many that, owing to the late importations, the demand for and consequently the prices of fine bred cattle will depreciate; in our opinion, there is no fear of such an event occurring. The trouble is that we have not enough thoroughbred cattle in the State. If we had more, or if even those which are now here were more widely scattered, their great superiority over common cattle would soon become evident to the most cautious ranchero in the country, and he would not hesitate to profit by the introduction and diffusion of this improved blood among his stock; and where the demand is, there also will the profit be. At present, almost any farmer is willing to give \$100 @ \$200, and in some instances even more, for a graded bull of good appearance, but he will turn with a smile of pity from and for the man who would ask that figure for a thoroughbred calf. "Pedigree?" says he, "what's the use of a pedigree to me? My grade is as good looking a bull as your thoroughbred and he has no pedigree." True, friend, but whence those good looks if not from the blood of his thoroughbred sire? Moreover, although good looking himself, you will find that he cannot impart those qualities to his offspring as his sire did to him, for there is not enough of that good strong blood in him. Therefore is it, that the pedigree is of some value, inasmuch as it is a guarantee of pure, unalloyed blood for many generations back; and, therefore it is, that a thoroughbred is worth so much more than a graded bull. Nine farmers out of ten know how to appreciate the pedigree of a horse; why should they not apply the same principle and reasoning to that of a bull, in which they are (or should be) so much more interested? The "no fence law" passed by the last Legislature will tend to do away with a great portion of those immense herds of cattle which roamed at will through our southern countries, and we shall have to look nearer home for our supplies of beef. But, the nearer home we get, the more enhanced becomes the value of our pasture lands, and as the farmers very truthfully say, they cannot afford to raise steers when it takes four years, before they will dress from six to seven hundred pounds, and of very poor quality of beef at that. So long as our farmers stick by the common Spanish or deteriorated American cattle, they never will succeed in making money off them, but let them for two or three years give the improved cattle a trial, and they will find that not only will these make the same amount of beef and of far superior quality (and therefore commanding the highest market prices) in half the time it took their scrubs to mature, but their farms will be materially improved by the manure which these cattle return to the ground off which they feed. If each of our farmers kept a few head of cattle or sheep to run over their stubbles we are confident that we should not hear of so many poor crops and farming getting "played out."

There is room, and plenty of room, for the thoroughbred cattle in California, and for all that may be imported for a good many years to come, and we trust that the breeders will not be disheartened if their investments do not make as early returns as they had counted upon.

SHORT-HORNS IN ENGLAND.—The demand among the English farmers for Short-horn bulls is greater this year than last. At the English sales there have been 74 more sold than last year, and at an average advance on last year's prices of \$10 each. Last year the total amount invested in young bulls at the sales was \$40,000. This year, \$55,000. This answers the question as to the country getting overstocked with Short-horns, as some in our own country have unwisely supposed it would. Short-horns are very much more numerous in England and adjacent islands than any other breed of cattle. What we call natives here are hardly seen there, their cattle being bred up by thoroughbred crosses. Though there are herds of thoroughbreds in nearly every neighborhood, still the increase is wanted, and there are but few English, Scotch or Irish farmers who are not well posted in all the advantages to be gained by keeping improved farm stock. They are particularly exacting as to the points of sheep and pigs, and are every year becoming more so as to cattle.—*Western Farm Journal.*

PARENTAGE.—As a general rule the best bred parent impresses its character more strikingly on the progeny—a strong argument for using only sires of sound accredited descent. Still another consideration points to the importance of using first-rate male animals. Whilst the progeny inherit in tolerably equal proportion the qualities of both sire and dam, some of the most prominent and selling qualities of cattle are chiefly inherited from the sire. Size, skin, hair, horns, or absence of horns, the bony frame and the general mien usually follow from the male; whilst the internal organs, temper and constitution come more notably from the female.

Securing Colors by Breeding.

Amongst cattle, the pairing of red and white parents very frequently produces roan progeny. One hundred of such unions taken at random from the shorthorn "Herd Book" yielded ninety roan calves with only four red and six whites. A white bull with red cows appears from the records of the shorthorn "Herd Book" to produce roan calves with greater certainty than the red bull with the white cows, from which union there falls a greater percentage both of reds and whites. Both bull and cow being red, not more than one-sixth of the calves come of any other color, and not one per cent. were white. In the same way, when both parents are white, there is such an overwhelming predisposition to white color, that in twenty such unions registered in Mr. Stratford's valuable pages, I find nothing but white produce. When, however, one or other of the parents is of mixed color, such as red and white, or roan, which is of course only an intimate regular admixture of red and white, the calves do not come with much uniformity, but exhibit variable proportions of red and white and roan. Extracting 200 cases of pairing of red bulls and roan cows, I obtain an almost equal proportion of red and roan calves, with only a record of four whites. Reserving the color of the parents—namely, taking the roan bull with red cows—does not merely affect the color of the progeny but still leaves about equal numbers of reds and roans, with not more than two per cent. of white. Red and white parents appear chiefly to beget red calves. From 42 such unions taken at random from the "Herd Book," I find 38 reds, 4 roans, and no whites. Red and white bulls mated with roan cows left 30 reds, 46 roan, and only 2 white calves. Two red and white sires, both of good Oxford descent, with red cows, produced 22 red calves and only one roan. Conversely, roan bulls on red and white cows left 47 and 45 roans. Amongst shorthorns, when both parents are roan, more than half the progeny follow suit. Of 333 cows born of roan parents, 197 are roan, 72 white, 64 red. Roan bulls with white cows leave a record of 39 roan and 36 white calves. White bulls with roan cows leave 61 roan, 49 white, and 5 red. Such facts—and from the Herd Books of the several descriptions of cattle they might be immensely amplified—indicate that the color of cattle may be fixed and transmitted quite as easily as that of pigeons and poultry, which skill and practice breed to the tinting of a feather. With a little time, patience, and careful selection, a cattle fancier after two or three generations might with tolerable certainty obtain his animals of any ordinary color he required. Several other conditions modify the tolerable general rule that calves partake of the color of their parents. The most prepotent, usually the most distinctive breed of the pair, impresses a larger share of its own color as well as of its other characters. Often a well bred shorthorn bull will communicate his color and good points to the calves of a mongrel herd of many hues and types. I had a red bull for several years, which, although the sire of upwards of 120 calves, and mated often with white cows, never produced a white calf.—*The Farmer.*

POULTRY YARD.

Best Age of Hens.

The advice contained in the following paragraph is from an experienced poultry raiser, who has made both money and reputation by following this branch of domestic industry. His suggestions, if followed, will enable those who raise poultry to keep young and profitable fowls, instead of a great number of old and feeble fowls which are not worth the food they consume:

A pullet hatched early in the spring begins to lay at the approach of winter, and pullets hatched late in the summer begin to lay in the ensuing spring, and it is by saving a certain proportion of pullets from the early and late broods, that you make sure of winter eggs; a few early hatched chickens for catching the highest markets, and a numerous flock of chickens in the warm months, when rearing is less precarious. The hen continues in her prime for two, and, at most, three years—therefore save every year pullets equal to a third of your brood stock, selling off at a trifling price the same number of aged hens, or offering them up in a stewed dish or well baked pie. However, I made no scruple about keeping a heavy, symmetrically-made, splendidly feathered "partlet," of four years, for the sake of her stock. Many farmers grumble about their poultry, from not paying attention to such a simple matter as their not looking over their brood stock once a year, drafting all the old dames (known by the developed scales on their legs), and reserving from the market basket the most promising young pullets raised during the season.

As the manure of the hen house is the best for onions, so onions chopped fine and mixed with Indian meal are occasionally the best food for chickens. It should be given once or twice a week, and will prevent gapes, and all kinds of inflammation of the throat and eyes.

FUMIGATING poultry houses with sulphur, thrown on glowing coals in an earthen vessel, and keeping the house closed for several hours, is said to be a perfect remedy for insects of all kinds. The poultry must be removed before the experiment.

Practical Hints.

BANTAMS and Asiatics may be kept together, without danger of crossing.

ANY number of varieties of pigeons may be kept in the same loft without danger of mixing or crossing, if care is taken to keep them properly mated. Those not having mating coops, should place the couple which are required to be mated in a room by themselves until they become attached to each other, then allow them their freedom.

PERSONS interested in pigeons should send to the Secretary of "The National Columbarian Society," No. 14 Murray street, New York, for copy of constitution and by-laws. Every member gets the *Poultry Bulletin* free.

TO KEEP free from lice whitewash the building and perches, and to one part of whitewash add two ounces of "coal tar creosote, or impure carbolic acid," put up in bottles by Dr. Spuib, of Brooklyn, kept by all druggists; also make a weak wash of the same and warm soft water, and wash the fowls therein; this is a sure remedy.

MARKING FOWLS.—The best method of marking fowls is to cut the web of the foot, and keep a record as follows: Outside web, right foot, from yard No. 1; outside web, left foot, No. 2, and so on. Male fowls over one year old, are called "cocks;" male fowls, under one year old, are called "cockersels," except games, which are called "stags."

HOW TO TRIM OR "DUB" A GAME STAG.—When the comb is well developed, take a sharp pair of shears (old fashioned lamp shears with crooked handles are best,) hold the bird under your left arm, grasp his head with your left hand, placing left thumb under his beak, then with one clip remove his left ear-lobe, then his left wattle; next his right ear-lobe and right wattle, then his comb. With only five clips this can be accomplished in thirty seconds, then place the bird on a good walk, and he will be effected by the operation no more than if he had had five quills plucked from his wing.

TO PREVENT FOWLS FROM FLYING.—Cut with a sharp knife eight or ten of the outside quills (primaries), of one wing only. Never cut the short feathers (coverts), and when the wing is closed no cut quills are visible.

I. Y. BICKNELL.

Egg-Eating Fowls.

It is always considered that fowls first eat eggs for the sake of the shell, because they have not access to the ingredients that compose it. Lime is the principal ingredient, and as there is much of it in the hull of corn, they get some of it in that way, but they should be provided with a heap of bricklayers' rubbish.

If each run is not provided with grass, heavy sods of earth should be cut covered with growing grass. If they are to be had, some lettuce should also be given, but they must be green. Whole feed morning and evening, barley meal or ground oats at noon, give whole corn and house scraps. This, with plenty of green food, road grit and old plaster should keep them in perfect health. If they are so, they will not eat their eggs. But after this vicious habit has been formed it is almost impossible to cure them. First let them be watched, and as soon as the hen gives notice that she has laid, she must be driven from the nest and the egg removed. We have sometimes cured them by filling an egg shell with mustard and cayenne pepper and let it remain in the nest. This dose will sometimes have to be repeated, or at least until all the fowls have had enough to satisfy them that they don't relish that kind of eggs. We have also cured them by the use of china eggs in the nest and around it, that is on the floor of the coop. Their constant pecking at them makes their beaks sore, and making no impression on the nest egg, they give it up as a bad job. When these remedies fail, the best thing to do is to apply the hatchet pretty near the back of the head.—*Poultry Argus.*

SCALY LEGS IN FOWLS.—It is a little difficult to determine the cause of the affection, called scurvy, on the legs of fowls, but not at all difficult to apply relief for it. If the fowl has been permitted to run for a considerable time, and until its legs are encased in scurf, a thorough washing with warm and strong soap-suds, to remove the outer scurf, and after drying the legs make an application of hog's lard and flour of sulphur mixed together, will generally effect a cure. In very bad cases a second application may be necessary. This affection generally manifests itself by a sort of ashy appearance on the inside of the legs of fowls just below the hock joints and about the feet. At this period a simple, thorough greasing with lard alone will entirely arrest and remove it, as we know from practical experience. Kerosene oil has been tried effectively in many cases. The lard and sulphur are sure to relieve.—*Poultry Bulletin.*

FOOD FOR POULTRY.—Never stint poultry in variety or quality of their food. Good food is a positive economy. The best and heaviest corn is the cheapest. The best food is that which gives the most of what nature demands for the formation of muscle, bone and fat. Fine bran or middlings is richer in two of these important ingredients than any other kind of food, but being deficient in gluten, is not warmth-giving, and is better when combined with the whole grain, which, when mashed, forms a most wholesome and nutritious food.

An English agricultural paper says that eggs for setting should be stored with large end down.

THE SWINE YARD.

Feeding Fall Pigs.

Many of our best farmers are coming to the conclusion that it does not pay to winter pigs in the usual out-door pens, and are making their pork from early spring pigs that can be kept growing from the start, so as to dress two hundred when six or seven months old.

As sows well produce two litters a year, I concluded last fall to try the experiment of winter feeding for the early spring market, with a litter of 13 pigs born Sept. 20; gave them the range of the stercory in the barn basement—a place that never freezes—until 16 weeks old, then confined them in a small pen in one corner to fatten, feeding corn meal soured in a barrel with milk, and for a change mush and milk, with a few mangels daily for an appetizer; dressed and marketed them at different times, commencing the latter end of February and selling the last one near the close of March, at average age of 5½ months. The account stands as follows:

13 weanlings at \$2.....	\$26 00
5,500 lbs. corn meal, \$150 per cwt.....	82 50
11,000 lbs. skimmed milk.....	22 00
20 bushels beets, at 25c. per bushel.....	5 00
Total.....	\$135 50

Twelve of the pigs weighed dressed in aggregate 1,596 lbs., an average of 133 lbs. each, and sold for \$142.93, leaving a balance of \$7.43 which just about pays for marketing and dressing.

I get paid for the 13 weanlings at 5 weeks old two dollars each, including one that was lost by accident when fifteen weeks old, and the proportion of food consumed by him up to the time, 150 lbs. of meal and 300 lbs. of milk.

I get paid for the milk at the rate of ten dollars a season per cow, and I have got a large and valuable addition to the manure heap to pay for corn and feeding.

I have calculated upon an extra price at this particular season of the year, and was not disappointed. The flourishing manufacturing village of Silver Creek was near, and had not succumbed to the panic, and James H. McIntyre, who keeps the market there, bought the pork and cut it up for his appreciative customers.—*Cor. of Chautauqua Farmer.*

NUMBER OF SWINE IN WESTERN STATES.—It is well, occasionally, to take a statistical view of any particular product that one may have just ideas of supply and demand. We are indebted to the Department of Agriculture for the following statement of the number of swine of all ages in the States named, compiled from the preliminary tables of the Statistical Department, by J. R. Dodge:

States.	Hogs. No. in 1874.	Hogs. No. in 1873.
Tennessee.....	1,420,600	1,596,600
West Virginia.....	334,000	351,800
Kentucky.....	2,008,000	2,113,700
Ohio.....	2,017,400	2,217,000
Michigan.....	510,800	543,500
Indiana.....	2,496,700	2,713,900
Illinois.....	3,409,700	3,706,300
Wisconsin.....	618,800	658,400
Minnesota.....	201,200	209,600
Iowa.....	3,693,700	3,847,700
Missouri.....	2,603,300	2,656,500
Kansas.....	454,600	457,200
Nebraska.....	128,500	121,300
California.....	448,600	427,300
Oregon.....	171,200	163,300
Total.....	20,547,400	21,783,700
Decrease.....	1,236,300	

PORK RAISING.—My own theory of pork raising based upon experience, observation, and probably a little philosophy of things, if written for the benefit of others, would be about as follows: During the hot summer months I would feed very little solid feed, such as corn in the ear or uncracked. I would keep hogs upon green feed constantly, either grass, oats or rye, and feed them at regular intervals, once or twice per day, upon mashed feed, either shorts, chopped oats or rye, buckwheat, etc., feed in troughs. When fed in this way and at the same time allowed access to water and shade, hogs will bear crowding through the hot months, a very good time if not the best, to take on flesh. This puts them in the best of condition for corn feeding, which should commence about the 1st of September, when the new crop is still soft and tender. Treated in this way hogs become probably as perfect as any method could make them. Upon the whole, too, I believe it the cheapest and most economical.—*Cor. Germantown Telegraph.*

KIDNEY WORM PARALYSIS.—A correspondent of the *Western Rural* says: The most effectual cure that I have ever seen tried is the simple plan of taking a piece of light board, about six inches wide, striking the hog across the small of the back a few strokes several times a day. I have seen it tried in numerous cases where hogs had been down for weeks, and have never known a failure. It is worth a trial.

COUGH IN SWINE.—A Hamilton county (Iowa) correspondent of the *Rural World* says: "If the shoats are not doing well, and the hair or bristles do not lie smoothly—the shoats having been fed principally on corn, and they go coughing around—we come to the conclusion that they have got worms, and a teaspoonful of turpentine is then given to each, in the form of a drench. If the coughing does not cease in the course of a week, give another spoonful; usually the first dose will be sufficient."

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

Patrons who are subscribers to the RURAL PRESS should pay their subscriptions promptly in order to secure club rates.

Progress of the Order.

Interview with Worthy Master Hamilton.

We had the pleasure, a few days since, to enjoy a quiet interview with Worthy Master Hamilton, of the State Grange, who has recently returned from the East. Brother Hamilton is quite enthusiastic over the prospects and prosperity of the Order wherever he has been. We give, in another column, some extracts from an address which he delivered at Kelseyville, Lake county, in which he alludes to his visit east, and the cordial reception which he uniformly met from members of the Order and Granges wherever he went.

To give some idea of the growth of the Order throughout the Union, and the amount of business devolving upon the Secretary of the National Grange, at Washington, Brother Hamilton informs us that twenty-three clerks are kept constantly employed at that office; a full wagon load of mail matter is received and must be attended to every day.

He also informs us that the agricultural statistics already in that office amount to more than ten times that accumulated by the State Agricultural Bureau, so deeply interested are the people in this movement, and so eager are they to furnish, through their Granges, information the National Grange may wish to acquire.

Brother Hamilton spent much of his time while absent, among the friends of his early childhood in the State of Delaware, and while there was not unkindly of his duty to the great cause he has espoused. No sooner were the greetings of friends over than our brother set to work to plant the Order in that State, where it had never before entered. The result was the organization of nine Granges, composed of the best material in the State. Nearly all were organized with full lists of charter members, and on several occasions a larger number of persons were present than could be received. These Granges were so scattered throughout the State as to form nuclei for a sufficient number of additional Granges, to secure an early organization of a State Grange. A number of localities were all ready, when Brother H. left, to receive the visit of an organizing deputy, who had been carefully selected and thoroughly instructed for his work. Brother Hamilton was present by special invitation, at the meeting of the State Grange of Maryland, at Baltimore.

ONLY ONE LEFT.—Within ten days from the present date the Order of P. of H. will be planted in the State of Nevada. Connecticut has recently received the work, three Granges being set down for that State in the last monthly report. Rhode Island will soon be the only State without the Order, and we presume that but a few weeks will elapse ere we shall be able to chronicle an unbroken union of all the States in the great work of reform and disenfranchisement. We may here remark, that although we have ceased to give the monthly record of the formation of Granges, outside of California, the Order is nevertheless increasing more rapidly than ever before. In fact the number of Granges throughout the Union has doubled within the last six months!

THE GRANGERS' BANK.—The meeting of stockholders of the Grangers' Bank, which assembled in this city, last week, was very fully attended. Proceedings passed off with much spirit and unanimity, and large additional subscriptions were received to the capital stock. A code of by-laws was adopted, which will be printed and circulated at an early day. The prospects of the bank are exceedingly flattering, and business will be commenced at an early day. We would call attention, in this connection, to a notice in our advertising columns, that the first installment of ten per cent. has been levied, payable in coin, on or before the first day of July next, at the office of the President, 320 California street.

PATRONS AND NEWSPAPERS.—A Minnesota Grange has adopted a novel and praiseworthy method of educating its members and keeping them posted on current events, and adds fifty cents from the Grange treasury to every dollar subscribed for newspapers designated by the Grange.

ORGANS.—An Illinois Patron writes: There are a great many so called "organs" of the farmers' movement springing up all over the country. Some of them have real merit, but others are humbugs, and started for speculation. Better take a paper known to be reliable.

A LIBRARY for the Patrons is to be opened at Marshall, Michigan. Some \$500 dollars have been raised for the purpose, and it is proposed to ask the Patrons in the county to contribute to the fund.

THE Catholic clergy of Minnesota are disavowing their flock from joining the Granges, because they are secret organizations.

The Business Phase.

There is scarcely any class of items which confronts the readers of the daily news more frequently "about these days" than the brief accounts of the organization of business enterprises by the Patrons of Husbandry. These simple news items, published as they are in all classes of papers, will be more effective in inspiring confidence in the earnestness and efficiency of the Order, than all the declarations that have been sent abroad by it. The next staggerer which will claim the consideration of those who doubt the stability of the Order, will be the financial success of these Grange enterprises. A good many people have indulged in forebodings, as to the probable result of the Patrons undertaking to manage the business of buying and selling for themselves, and disposing of their products. The attempt on their part, all inexperienced as they are supposed to be, in business matters, to do what has hitherto been done by men who "have had a life-long experience in the business" is pronounced rash in the extreme. But in the first place the farmers are not as inexperienced in business matters as they are represented to be; in the second place they are taking these matters not out of the hands of "those who have had a life-long experience," etc., but of mere tricksters and adventurers. It is not a legitimate business that the Patrons propose to dispense with. They will be as little missed by the consumers as by the producers. Whatever of business capacity and worth may be thrown out of employment by this commercial reform will readily find a more useful field in which it can operate.

The Grangers' Ten Commandments.

- I. Thou shalt love the Grange with all thy heart and with all thy soul, and thou shalt love thy brother Grangers as thyself.
- II. Thou shalt not suffer the name of thy Grange to be evil spoken of, but shall severely chastise the wretch who speaks of it with contempt.
- III. Remember that Saturday is Granger day. On it thou shalt set aside thy hoe and rake, and sewing machine, and wash thyself, and appear before the Master in the Grange with smiles, and songs, and hearty cheer. On the fourth week thou shalt not appear empty-handed, but shall surely bring a pair of ducks, a turkey roasted with fire, a cake baked in the oven, and pies and fruits in abundance for thy Harvest Feast. So shalt thou eat and be merry, and "freights and fares" shall be remembered no more.
- IV. Honor thy Master, and all who sit in authority over thee, that the days of the Grange may be long in the land which Uncle Sam hath given thee.
- V. Thou shalt not go to law.
- VI. Thou shalt not hurt thy straw, but shall surely stack it for thy cattle in winter.
- VII. Thou shalt do no business on "tick." Pay as thou goest, as much as in thee lieth.
- VIII. Thou shalt support the Grangers' Bank; for thus it becometh thee to fulfill the laws of business.
- IX. Thou shalt by all means have thy life insured in the Grangers' Life Insurance Company, that thy wife and little ones may have friends when thou art cremated and gathered unto thy fathers.
- X. Thou shalt have no Jewish middlemen between thy ranch and Liverpool, to fatten on thy honest toil; but shalt surely charter thine own ships, and sell thine own produce, and use thine own brain. This is the last and great commandment. On this hang all the law and the profits. And if there be any others, they are these: Choke monopolies, break up rings, vote for honest men, fear God and make money. So shalt thou prosper; and sorrow and hard times shall flee away. —California Granger.

BEAUTIES OF GRANGE LIFE.—A Kentucky Patron says: The Order of Patrons is the only association that originates, exists and works with its members in their daily avocations. It is a part of the farmer's life. It does not call him from his work to put his mind on any other subject, but tends to recreation in his daily duties, and, by cheerful instruction, to lighten and elevate his labor. Its teachings are the loftiest man can seek. It does not interfere with his religious or political views. In morality it seeks the highest points. Honesty is inculcated, education nurtured, charity is a prominent characteristic, temperance is supported and brotherly love cultivated. It is designed to bind the farmers together in fraternity, and, by encouraging education, advance to a higher state of perfection the science of agriculture. We aim to encourage the planting of fruits and flowers, by which to enhance the value and increase the attractions of our homes—adorn them with those beauties so lavishly given us by the God of nature. There is no calling more elevating than agriculture, when viewed as instructed in our Order.

FARMERS' INSURANCE ASSOCIATION.—The articles of incorporation of the California Farmers' Mutual Fire Insurance Association were filed on the 23d inst. Object, to insure dwellings, houses and barns, or other buildings; also hay and grain and other property. The directors are: W. H. Baxter, Andrew Wolf, I. G. Gardner, J. D. Blancher and G. P. Kellogg. Capital stock, \$100,000, divided into 10,000 shares, of the value of \$10 each. The certificate states that \$5,000 has been subscribed.

Will the Secretaries of District and County Councils oblige us by reporting the following information?—Name of Council in full; place and date of meetings; name of Master and Secretary, with address of each, in order that they may appear in our directory.

BIG HARVEST FEAST.—It is the general expression among the Grangers that as soon as the harvest is over they will have a grand Harvest Feast at some central point. It will be the biggest "feast" ever seen in this county. —Columbia Sun.

From the Granges.

OAKDALE GRANGE, STANISLAUS CO.—Our Grange is young, not having yet attained the first quarter of its financial existence; yet it is progressing very satisfactorily considering the inconvenience we are compelled to undergo from the insufficient dimensions of our present place of meeting. However, we expect soon to rejoice in more light and air, and a more capacious hall. At our last meeting we conferred the fourth degree upon a class of nine, who had passed through the farm and up the lawn to the W. M. Office, upon which occasion we had the pleasure of enjoying our first harvest feast. Although we were "heavy on the trencher," and did ample justice to the well represented products of the pantry, orchard and farm-yard, there was a plenty for as many more, including the editors of the PRESS. After our feast we were called to order by W. M. Emery, who introduced Bro. C. J. Cressey, of Modesto, who spoke to us at some length as to the objects, advantages and necessity of the eventual success of the financial movement of the Granges. Farmers are reasonably jubilant over the prospects of an unprecedented harvest for this immediate locality.

Oakdale, May 20th.

GRANGE PICNIC AT WOODBRIDGE.—EDS. PRESS:—At the last meeting of Woodbridge Grange, it was decided to hold a picnic on Tuesday the 2d day of June, 1874, that being our regular fourth degree day, at which time we shall confer the fourth degree on a class of thirteen. All the Granges in the county are cordially invited to attend and have a good social time. Members of the Order are requested to meet at our hall in Woodbridge, at 10 o'clock A. M. Woodbridge Grange is prospering very well, aiming to "go slow and keep in the middle of the road." At the last meeting our members subscribed for some eighty shares of the capital stock of the Grangers' Bank. The crop prospects are very flattering in this vicinity and good crops are almost beyond a doubt. Yours fraternally, A. S. THOMAS, Sec'y.

SANTA CLARA COUNTY COUNCIL, P. of H.—EDITORS PRESS:—The County Council will meet at Santa Clara, on the second Monday, (8th) of June. Special matters of importance will be disposed of by the Council, and a full attendance of fourth degree members, as well as delegates, is desired.

I. A. WILCOX, Sec'y.

New Granges.

COTTONWOOD GRANGE, COTTONWOOD, SHASTA CO. was organized May 1st, by Deputy J. W. Colby, of Butte county, with a full list of charter members, and the following officers: G. G. Kimball, M.; C. Dunham, O.; J. W. Spear, L.; James Patterson, C.; Wm. Ludwig, T.; John Barry, Sec'y; Nicholas S.; Wm. Lane, A. S.; Frank Glass, G. K.; Mrs. Hattie Abel, Ceres; Mrs. Nancy A. Glass, Pomona; Mrs. Anna Nicholas, Flora; Mrs. W. W. Smith, L. A. S.

VENTURA GRANGE, VENTURA, SAN BUENAVENTURA CO. has been organized by Deputy Milton Wesson. J. Willett, Master; Charles S. Prebble, Sec'y.

HOW FARMERS DO THEIR OWN BUSINESS.—As an illustration of the success with which farmers are meeting in doing their own business, we give the following illustration of how it is done in the dairy agency in this city:

A dairyman consigned 185 pounds of butter to the agency on the 30th of March. An account was rendered April 1st of the lot sold at 33 cents, aggregating \$61.05, and netting the consignor \$56.86.

The same party sent on the same day to a regular commission house in this city, two parcels of butter, weighing respectively 186 pounds and 92½ pounds, from the same churning as that sent to the dairy agency. An account of this consignment was rendered some two weeks later than the first, as follows: 186 pounds sold for 22½ cents; 92½ pounds sold for 25 cents. Net proceeds of the two parcels, \$58.97. In other words, 185 pounds netted at the dairy agency within \$2.11 as much as was realized from 278½ pounds of butter consigned to a regular commission house. Who, in view of such a showing, will say that farmers cannot do their own business?

W. H. BAXTER—DEAR BRO.: Will you have the kindness to forward me a form of rules and by-laws, adapted to the government of incorporation like ours. We have incorporated for the purpose of warehousing, storing, buying and selling grain, and doing a general merchandise business. If you can oblige me in the above request, you will much oblige.

Fraternally yours, JOHN KIMMER.

Davisville, May 24, 1874.

The above has been placed in our hands for answer, and not having any form of by-laws at hand, we publish the query, and should be pleased to receive from one or more Granges which have incorporated, a copy of their rules and by-laws to publish as a form for the guidance of others which might like to incorporate.

A GRANGE Shipping Association, with a capital of \$100,000, has been established at Tolone, Illinois.

THE Patrons of Goodhue county, Minn., are making preparations for a monster celebration of the Fourth of July next.

Santa Clara County Anniversary Picnic.

We made brief mention, last week, through our correspondent, Mrs. Carr, of this celebration. A more lengthy report from "I. A. W.," the Secretary of Santa Clara Grange, being crowded out, extracts from which, however, we give in the present issue as follows: Over one table, I noticed the mottoes: "The Grange, the source of supplies," "Labor is Power," "As goes the Grange, so goes the world." But I must not take the room of your valuable paper to particularize.

Patrons, with invited friends, came in buggies and carriages, and in horse-cars—all in neat holiday attire—the former wearing eschews, the latter emblems of the Order, embracing in all, the intelligence and flower of the valley, from country and town. It was estimated that 500 carriages and other vehicles were packed in the avenue, extending one-fourth of a mile from the entrance to the grounds, and the cars all day long plied the thoroughfare leading from Santa Clara and San José, hearing to and fro the masses of human beings continually coming and going; and yet, the utmost harmony and good feeling prevailed throughout the day.

There was no let or hindrance to any who wished to engage in social chat, the promenade or the dance, with good vocal and instrumental music to enliven the occasion.

Worthy Master Leonard called to order at half past eleven, when most of the women and children were well seated, the Brothers and others occupying the available room within hearing distance. After an appropriate song by the Grangers, a prayer by Bro. Oliver, and music by the San José band, Bro. Leonard sketched the history of our county Granges, the first of which was organized twelve months ago, the anniversary of which we had come to celebrate, and which exemplified the rapid growth of the Order everywhere.

After the reading of the Declaration of Principles and Purposes, and music, Prof. Carr was introduced, and delivered an elaborate and well-considered address, tracing the status and progress of man, as an agriculturist, through past ages, rising higher and still higher in the proficiency of his calling and in his manhood, after every struggle with the enemies of his progress; those who, in one way or another, took their needless percentages from his earnings. The old feudal system came in for a good share of attention. Those who owned the land had generally run the government, and in their own interest, in the days when tenantry prevailed; and where it prevails today in the Old World, they still lord it over the tillers of the soil, keeping them but little above the common slave. This false system has offered no reward to merit, but always high inducements to the young men of the country to abandon the farm and the home, and seek the better-paying avocations of office-holding and speculating out of the producer and the consumer. Hence, public sentiment has been perverted, and labor despised, because poorly paid, and the people a prey to those who had no sympathies in common with them.

But a brighter era is dawning upon the working masses in the New World. Free government and free education are doing the work here; and the farmers are fast emancipating themselves from the unreasonable exactions heretofore made upon their industry.

Prof. Carr has a peculiar position as champion of the cause of agriculture, in his professorship in the State University. And if the Grangers of the State will only second his efforts, in applying agricultural science to practical agriculture, by furnishing his pupils a working farm near the University at Berkeley, his ambition will be gratified, and agriculture will receive a new impetus; while the tillers of the soil will rise to a new position in life, in assuming the proper position of their God-given manhood. Fraternally yours, I. A. W.

Santa Clara, May 13, 1874.

WHAT THE PATRONS SEEK.—The Patrons seek a more progressive and better system of agriculture. They favor all enterprises that shall benefit the country, but will stand ready to tread with an iron heel on all that is unjust and oppressive. They will claim for labor its just reward, and will regard those highest who have done the most for manhood, rather than those that have done the most for themselves. The Patrons will seek, as far as practicable, to bring the producer to the door of the consumer and thereby do away with a large number of agents and drummers—not because they dislike them, but because they have no use for them. These are some of the leading objects of the Order, and the causes that have called it into existence and action are patent to all reflecting minds. We are aware that there are those who have no sympathy for the movement but as its principles are founded upon the rock of eternal right, as long as its principles are adhered to, we believe the organization will have a power for good to all mankind.—Main Farmer.

THE LOUISIANA SUFFERERS.—In addition to the contributions in aid of the Louisiana sufferers already given, we notice to-day \$41.50 from Hollister Grange, and \$66.75 from Guadalupe Grange, Santa Barbara county.

LOCAL OPTION.—Fifteen elections have been held in as many townships in the State. Of this number eleven have gone against license. Several are yet to be held, among which Oakland.

The Farmers' Movement.

EDITORS PRESS:—In perusing the newspapers of the day, the mind is quickly impressed with the idea that the spirit of reform is slowly, but surely pervading the minds of the American people. Grand schemes whose ramifications have spread far and wide and that have threatened the peace of the government in the monstrosity of their grandeur, have suddenly been thrown open to the public gaze, their rottenness and corruption exposed and their shrewd and bold directors covered with shame and guilt. In the halls of Congress and of legislation, the voice of a tax-ridden and oppressed people have at last found utterance. Ground to the dust beneath a fierce oppression, the producers of the country have at last risen in their despair to seek redress for the grievances which for years they have born without a murmur, although they have threatened the very peace of their homes and made their occupations almost a curse; grievances which are every day growing greater in their crushing and degrading proportions and which must and will soon be redressed.

Union is power; and the uniting and combining, and concentrating of capital, to the advancement of individual interest, is always more or less dangerous. A monarchy, with its long established customs and usages, bound together by moneyed bands and a privileged class whose very salvation lies in the wise administration of laws, can to a certain extent control the avaricious grasp of men who seek to undermine her power and use it for their own selfish ends. But in a republic, where all are free, where every man is his own lord and sovereign, where there are no privileged classes to dictate in terms of authority, nothing but just legislation can save the government from the base machinations of men whose sole power lies in the money which they control.

For years past this country has been suffering from the evils heaped upon it by reckless and unscrupulous corporations, at the head and front of which stands the railroad monopoly. By far the greater portion of American capital has been, and is being invested in railways. With such an immense amount of capital at their command; and in a country where gold seems to sear the conscience of all officials; with the law-givers beneath their feet, and striding forward with a resolve that mocks the idle dream of opposition, is it a wonder that the many abuses which they have instituted and organized, should have at last become so enormous in their proportions, that they have undermined the solid foundation upon which our industries and finances were supposed to rest? Is it a wonder that courts and legislatures have become so corrupt and demoralized as to consent to be bought to play the parts of sycophants to more ambitious wills? Is it a wonder that they should trample upon individual rights and liberties; set at defiance all laws and boasting rest in the security of their own power? Is it a wonder that they have received, by legislative acts, domain sufficient to constitute one of the mightiest empires of the globe? Is it a wonder that they should laugh to scorn the complaints of the oppressed farmer, when he demands justice at their hands? Gold is the mighty lever which has given them such power, and nothing but the ballot-box can resist its sway. The president of our nation might die to-morrow, and the proud step of the mighty capitalist as he treads the corridors of his gold room, would vary not an iota in its wonted steadiness. But let a Vanderbilt or Scott breathe their last, and there would come a crash that would shake the mansions of finance throughout the country.

The cause of the agriculturist, who bears the brunt of all these abuses, is the people's cause; upon his weal or woe depends the prosperity of the entire nation; and not until the farmers, in the Grange assembled, took up the cause of the oppressed, did there seem to be much redress in progress for his many wrongs. With what scorn did those unthinking minds, political demagogues, crack-brained politicians and the middlemen receive the declaration of the objects and aims of the Patrons of Husbandry! How they ridiculed the idea of the hard-handed sons of toil, the men who are the very props and pillars of the boasted government under which they live, taking upon themselves the responsibility of righting their own wrongs. Vain parasites to mightier minds, they could not comprehend the great movement of the agricultural class to revolutionize the American Government and place it upon a foundation from which it could never totter. Who was it that, when our country was yet in its infancy, and struggling for a place among the nations of the earth, rushed to the standard of the stars and stripes, and offered their lives, their fortunes and their sacred honor in her defence? Who is it that has made America what she is to-day—one of the greatest commercial nations upon the globe? By whose toil and from whose hands comes the mighty produce that has caused commerce to push its wharves into the sea, to block up the wide rivers with its fleets, and to send its ships to every clime?

From the very class of men who are to-day uprising, combining and concentrating their power, and with a calm, steady, unwavering front to the foe, are determined through the pacific influence of the Grange to liberate the American farmer from his many wrongs, and from beneath the fearful oppression under which he groans.

But it may be asked, how is this to be ac-

complished? By removing through just legislation the scepter of tyranny and monopoly from the hands of the few; by ennobling and enlightening the moral and intellectual sentiments in man; by fostering the genuine feelings of fraternal and brotherly love in the relations of the old to the young, the strong to the weak, the patron to the client, the master to the servant. Is this impossible? Then is man's destiny a mere "blustering tale that is told, full of sound and fury, signifying nothing." I am no seer to predict, no prophet, like him who, pointing to the mystic letters on the emblazoned wall, and foretold to Babylon's terror-stricken king the fall of his empire and his untimely death. But to my mind, should Patrons of Husbandry fail in their grand design of freeing the American farmer, there are signs as fearful and as dangerous as those which startled the proud Belshazzar on his throne, environed though he was by prince and satrap, concubine and slave.

OSCAR P. DOBBINS,
Sec'y Vacaville Grange.

Fruitland Grange, Los Angeles County.

EDITORS PRESS:—I notice in your paper that the name of A. B. Hayward is published as Master and E. N. Nicols as Secretary of Fruitland Grange, No. 72. They, with others, resigned and withdrew from this Grange, to organize another. The following are our officers: N. O. Stafford, M.; Robert McFadden, O.; J. W. Layman, S.; A. W. Abbott, L.; J. P. Johnson, A. S.; J. J. Johnson, C.; H. H. Wakeham, T.; G. L. Russell, Sec'y; A. T. Bates, G. K.; Miss N. O. Stafford, Ceres; Mrs. J. W. Layman, Pomona; Mrs. G. W. Vance, Flora, and Miss M. D. Hotel, L. A. S.

We still number 63, after 19 withdrawals to form the new Grange, more convenient in location. Next Saturday a class of seven will receive the first degree; a class of 14 received the fourth degree to-day, and the harvest feast was celebrated. How beautiful the emblem: The Grange the emblematic field, we the workers therein; we enter as laborers and are conducted step by step to the position of husbandman and matrons. How forcibly is taught the beautiful and sublime truth of revelation, as well as of nature, that the reward is for those that diligently and faithfully persevere to the end.

Through the kindness of yourselves, or some other friend, I am receiving the PRESS regularly; and without any attempt at flattery, I am willing to say that, as a farmers' paper, it has no equal that I have any knowledge of, and I shall use my public influence to extend its circulation. Yours fraternally, G. L. RUSSELL.

Santa Ana, May 9th, 1874.

Extracts from an Address

DELIVERED BY J. M. HAMILTON, MASTER OF THE CALIFORNIA STATE GRANGE, AT THE GRANGERS' PICNIC HELD AT KELSEVILLE, LAKE CO., MAY 16TH, 1874.

PATRONS, BROTHERS AND SISTERS:—It affords me more pleasure than I can express to meet with you to-day, to receive your kind greetings and participate in the festivities of this occasion. Since we last met I have stood face to face with friends of other years, on the far side of this broad continent, amid scenes familiar to my childhood, where the hopes, joys and fears of early manhood were first experienced, and where my boyish fancy first dreamed and gilded bright pictures of the future. After an absence of twenty-three years, I held again in friendly clasp the hands of those whose touch ever gave me pleasure: the old familiar tones of loved ones have again sounded in my ears; the well remembered features of dear friends have again gladdened my eyes; and although age had dimmed many an eye, had taken the clear ring from many a voice, and silvered many an honored head and made me realize in its fullest force that time with its winging had not been idle among those I loved, still my welcome from old and young was no less kind, and the friendly greeting of all made me feel that my memory had been kindly cherished.

"And although years had passed o'er me and summers had fled,
And I stood before them like one from the dead;
Those days and those scenes, though past and afar,
Still lived in the blaze of bright memory's star."

But, Patrons, amid all the pleasures I enjoyed, all the festivities in which I engaged, all the kindness and fraternal feeling displayed towards me, my fealty to my own California home never for a moment wavered. Your Granges, your names, and your acts, have been sounded in many a stranger's ear, and the beauties of our land, blooming with flowers of many a hue, with its giant forests and crystal fountains, its fabulous products of garden, orchard, vineyard and field, furnish themes sufficient to interest many an audience, and brought forth many an earnest wish from old and young, from grave and gay, that they too might some day in their own person, at least visit our Arcadia, and see and taste, and feel the flowers and fruits and life-inspiring breezes of our favored State.

The meeting of the National Grange at St. Louis was a perfect success. Candor, kindness, impartiality and brotherly love seemed to animate every bosom; meeting for a common purpose, having a common object in view, fully impressed with the interests at stake and the mighty struggle for reform in which the Patrons are engaged, all selfish, all sectional, all selfish feeling was laid aside, and each seemed to strive to outdo the other in charity and love. The representatives from the everglades of Florida, from the granite hills of New Hampshire, from the land of the cotton and the cane, from the rock-bound coast where the Atlantic waves roll up their ceaseless requiem, from the valley of the Father of Rivers teeming with myriad population, from the prairie homes of the great West, and from our own Pacific shores they came—the mystic tie of brotherhood annihilated both time and space; the days we had spent, the miles of travel we had passed to meet; all appeared to be forgotten, and the friendly clasp and warm greeting of brother and sister would have convinced the world, if it could have been present, that there was no bloody chasm to bridge over by the Patrons, no wounds to heal, no difficulties to regulate; but all was peace and harmony and good will amongst us. Our noble sisters bore their honors bravely and well, and ruby lip and sparkling eye and silvery voice were ever present with us in our councils, and words of wisdom, of pleasantness and of song from them aided as well as cheered our common labors. Friendships were formed, acquaintances were made, kind feelings were

developed which many of the present will never willingly let die.

In its inception, our Order was intended to be a social and educational institution, after the plan of "agricultural clubs," only more comprehensive in its plan by including both sexes in its ranks, adding to its attractions pleasing forms and ceremonies, to which was also added the charm of secrecy. Our Order, in recognizing the sphere and ability of woman, and admitting her to membership and place among us, only acts in accordance with the Divine precept which at the foundation of our race proclaimed "it was not good for man to be alone."

We recognize and admit that the success and prosperity of many an agriculturist must be fairly attributed to the industry, energy and management of his household by his wife. Those who have tried it, know full well how much of our comfort, our convenience and our enjoyment depend upon the right management of our affairs at home; and full well do we know that these and the delights and pleasures and charms of the social circle can only be attributed to the influence of woman. How many have been indebted to the sagacity and intuitive perceptions of their wives' foresight and counsel in the hour of need? How many have been stimulated to acts of industry and prudence by the energy of a wife, and how many have been restrained from rashness in the hour of prosperity, and cheered and soothed in the hour of adversity by the tones of a loved one's voice. Recognizing, then, as we do, that woman was not only intended by our Creator to be a helpmeet for man, but that she really does contribute so much to our prosperity, our enjoyment and our happiness, it is but right we should place her in the position to which she is so fairly entitled, and make her our equal in all matters of interest pertaining to the house and farm. * * * * *

At these meetings we bring our wives and children with us, and by example and precept teach a fondness for agricultural pursuits, inculcate a desire for information upon points which are of importance, and seek to develop in the minds of the young a spirit of inquiry upon those subjects, a proper knowledge of which will enable them to daily labor to make such a practical application of, as either to save from toil or secure a much greater return for the time and physical labor expended. We confer as to the best plan of raising crops, the best plan of beautifying and adorning our homes and make them more attractive. A tree, a shrub, a flower, planted by our hands, watched by our eyes, and fostered by our care, gives us an interest in its growth, which makes it a part, as it were, of ourselves, and gives us a spot where our heart-strings may cluster, and binds us with memory's magic chain to objects and scenes with stronger ties than triple bonds of steel, and takes the recollection of a happy home, wheresoever we may wander, the dearest spot on earth. * * * * *

When our Order was in its infancy, when our members were few, our strength but puny, and our aim social and educational, we met with no opposition: we were permitted to float smoothly along without an adverse gale; no formidable barriers were placed in our way, no particular attention was given us by capital or monopoly. Strong in their own fancied security, if the "farmers' movement" was alluded to, it only served to cause a smile, and perhaps be dismissed with a jeer; that, as a class, "brains were wanting to make any movement of their effective." The scholar, the politician, the capitalist passed us by, and looked upon us as beneath their notice; but now how changed! In the language of Worthy Master Adams: "To be a Patron of Husbandry is to be no longer of doubtful propriety; but the proudest in the land are knocking at our doors. The Order has become recognized as one of the great powers in the land, and our gates are besieged from ocean to ocean by hordes of speculators, demagogues, politicians, grain buyers, cotton factors and professional men, who suddenly discover that they are 'interested in agricultural pursuits,' but only as a hawk is interested in the sparrow.

These sounds of revelry, these signs of rejoicing, these festive gatherings, are the legitimate outpourings of honest hearts which belong to the yeomanry of our land. They are the spontaneous offerings of thanksgiving for the dawn of a new era which promises better and brighter days for the "tillers of the soil" than they have ever before enjoyed. When the test of true manhood, honor, honesty and capacity, shall be the crucibles in which to try men's fitness for place and power; when might shall no longer make right; when the avaricious grasp of monopoly and capital shall be loosed from the throat of labor; when the honest producer shall stand upon an equal footing with the consumer; when the sun-burned brow and horny hand shall no longer be looked on with disfavor, and these signs of labor be considered as disgraceful or consigning their possessor to a low rank in society; but when they shall be recognized as a badge of honor, and regarded as a signet of nature's nobleman. * * * * *

The mystic tie of brotherhood binds them to the Order. Brother's and sister's hearts beat responsive to each other. Hand to hand and shoulder to shoulder, they stand in support of what they know to be their rights. Their banner floats proudly in the breeze, bearing on its ample folds the inscription, "Down with monopoly, down with oppression;" and so men with wondering eyes turn to this beacon light, and marvel at the meaning of this new constellation which has appeared on the horizon, and ask what it means. This proud response comes from more than a million hearts. It simply means justice for all! We ask no more, we take no less!

San Jose Farmers' Club.

The Club met at the usual hour and was called to order by President Casey.

Mr. Holloway, from the Committee to investigate the Board of Supervisors, reported that the Committee had made some progress, and asked further time; granted.

In the matter of selecting a subject for next Saturday's debate it was resolved to discuss the advisability of Local Option.

Mr. Holloway presented a specimen of seven-headed Egyptian wheat, raised in Solano county, which is said to yield double as much as other kinds; that the millers do not like it on account of its being so hard, but it is popular with shippers.

Mr. Erskson said Mr. Lick sowed several acres of it some years ago, under the name of Italian wheat. It is used for manufacturing macaroni and vermicelli, but there is not much farina in it. Mr. Lick fed most of his crop to his chickens. It yielded from three to eight heads to a stalk.

Mr. Holloway here propounded some social conundrums, which, not having an agricultural bearing, we omit.

Mr. Hobson—I have an idea in regard to a matter that is serious to me; that is, the raising of our children—that part that applies to their work and occupation. We are going ahead building our school-houses. It is all very proper to educate our children in that way, yet there is a necessity for something else; our children who are large enough to do work are not taught to do any work at all. We pass laws compelling parents to send their children to school, but there is no effort being made to turn them to work. We expect them to work for a living, and to do that work we must teach them to labor. The farmers have no work for them to do; there is no chance to put boys to mechanical labor to learn a trade. We may be educating them better than we were, but there is a system of labor required. What way we shall get at that I don't understand, but it seems to me to be the duty of all citizens to unite for the purpose of getting some sort of manufacturing establishments here, that the children can get work in, whether they get any pay for it or not. If we don't make some arrangement we shall miss the right kind of education.

Mr. Holderness denied the right of the Government to come between the parent and child in the matter of education.

The regular question for debate was the policy of plowing orchards.

Mr. Erskson—My mode of cultivating orchards would be this: not very deep plowing, but endeavoring to keep the weeds down; not to cultivate a crop in the orchard under any circumstances, but to keep the weeds down by light plowing and cultivating. I have seen great harm done by deep plowing. When I came to this place I am living on in town, I found my apple trees not doing well. I dug around the trunks and found the roots had been spaded, and that there were bunches formed on the ends of them like clubbed feet; there were no fibers on the roots at all. I dug away in the soil and endeavored to clean off the roots and cultivate the fibers, and I was successful, and my trees began to do well. I found it had been the custom to dig round the tree with the spade at right angles to the roots; the right way to spade is with the edge of the spade towards the tree. Plowing cuts off the roots and injures, if not entirely destroys, the tree. One case I know of is that of Mr. Prindle, who lives near Santa Clara. He told me that his orchard was dying. I found he was in the habit of plowing deep, and on examination I found also that the fibers of the roots had been cut off, and were coming up out of the top of the soil. He cut out all his old trees and commenced cultivating differently, and now has a fine orchard.

Mr. Bergland—Orchards vary in different soils. In sandy soil a piece of board placed under the tree will cause the roots of the tree to spread laterally and throw out fibers. In a clayey moist soil the roots will spread of themselves. If the loam is not deep so the roots can go down you cannot plow deep; but if the ground is of such a nature that the roots can penetrate it, you can plow clear up to the tree. It is natural roots we want, and I think the soil should be plowed deep, because it will make the soil loose, bring up this moisture and the roots will go down. In wet soil you must be careful about plowing, for the roots get moisture near the surface and don't go down for sustenance.

Mr. Holderness—I have seen a friend of mine who had a peach orchard; he wanted it to do better, and he dug around the trees and put in some fresh stable manure; and in consequence every one of the leaves were badly curled. I suggested that he should put on old manure. Fresh stable manure is very destructive to all vegetation, and most particularly to tender plants.

Mr. Holloway—There is some importance attached to this question. It appears to me that whatever mode is best for the cultivation of orchards in this climate would generally be a better mode of manipulating the soil. The idea has obtained here in this Club that a man must not only understand the general climate he is in, but must study his own particular locality. Back yonder in Kentucky and Tennessee they would plant their orchards out to get their trees growing and would use that orchard for anything they wanted, and would get fine fruit generally. I have seen orchards there with trees as large as our large oaks, that were used for a common pound or pasture ground. But my experience here is that you can't plant anything in an orchard and have good fruit. I once believed that it was necessary to plant something in an orchard to feed gophers on, but a gentleman told me that if you didn't keep anything in your orchard to attract gophers, they would emigrate, but if there was anything there to attract them they would be sure to congregate. I think an orchard should be cultivated altogether with a cultivator; that a plow should never be allowed to go in an orchard. I don't think that any cultivator that turns the top soil under and the subsoil up is good cultivation for anything. Mr. Newman, in my neighborhood, has been plowing his orchard with a heavy plow for some time, and the soil would always be thrown up in large clods, which would be as hard as an adobe brick. But lately he has cultivated it with a chisel cultivator which cuts only the top soil, and his orchard is beginning to look smooth and nice. The idea of cultivating deep in this country is all a notion and a delusion; it actually makes the subsoil harder than if you had never broken it up at all. It is a great misfortune to break your soil very deep for a dry season, for it helps it to dry out, and if we are to have a wet season, if the soil is broken to any depth and there comes a soaking rain, it will run that soil together harder than it was before you broke it up, for the reason that it was porous before—made so by a million of little roots, which the plowing kills out. Nature does her work right, and when we learn to copy Nature we will have made an advance in everything pertaining to farming. My idea is, that not only with orchards and vineyards, but all soil should be cultivated with something like a cultivator, that will cut your soil shallow. Nature puts all her fertile soil on top, and when you turn it down you reverse Nature.

Mr. Hobson—You should cultivate the surface of an orchard thoroughly. I think there is no necessity for plowing the ground deep. This depends upon the soil, of course, but in this country if you plow deep you can never get the ground as porous again as it was at first; it will settle back each time harder than ever before. The only reason I see for subsoiling is, that the surface soil being exhausted, by turning it under and letting it rest it recuperates, and then it can be turned up and cultivated again. The roots of trees get their sustenance from near the surface, from the atmosphere as well as the soil, and you must have your ground loose so that the atmosphere can penetrate it; hence the necessity of cultivating the surface; but if you cultivate deep and cut off the root, you destroy or injure the tree. Our common wheat has a surface root which extends from the stalk five feet; it has other roots going down to steady the plant, but it is through this surface root that it receives nourishment. In the East the trees are planted wide apart, but in California our trees have not grown so large, and we plant them close together and expect to get a crop in two or three years. It would seem that it was not necessary to plant anything between them, but we can raise a large amount of vegetables close around the trees and yet have good trees. If you want to make a great amount from a small piece of ground, you can plant your vegetables close to the trees and close to each other, and get just about as much and as good fruit as any other way.

After some discussion as to the influence of the moon on vegetation, the Club adjourned.—Mercury.

THE WORK READY FOR NEVADA.—Brother Hamilton informs us that he expects to start for Nevada on Monday, June 1st, to plant the Order in that State. Quite a number of localities are ready and waiting for his presence.

PAY AS YOU GO.—If the Grange does nothing else than to inaugurate the pay down system, it will add 20 per cent. to the income of the farmer, merchant and mechanic. Credit was always a bare-faced swindler.

CHARTERS.—The charters for the various Granges throughout the State are now signed and ready for delivery at the office of the Secretary of the State Grange. Those which are not called for soon will be forwarded by mail.

A LUTHERAN MINISTER in Freedom, Wisconsin, recently refused to conduct the funeral services of a deceased farmer because he was a Patron. The church dismissed him.

THE Farmers' Friend (P. of H.), of May 16th, comes to us with a complete list of Subordinate Granges in its State, Pa., the number being 228.



Spring Cleaning.

The melancholy days have come—the saddest of the year,
Of cleaning paint and scrubbing floors, and scouring
far and near.
Heaped in the corner of the room the ancient dirt lay
quiet,
Nor rose up at the father's tread, nor to the children's
riot.
But now the carpets are all up, and from the staircase
top
The mistress calls to man and maid to wield the broom
and mop.

Where are those rooms, those quiet rooms, the house
but now presented,
Wherein we dwelt, nor dreamed of dirt, so cosy and
contented?
Alas! they've turned all upside down, that quiet suite
of rooms,
With sops, and suds, and soap, and sand, and tubs and
pails and brooms;
Chairs, tables, stands, are standing round at sizes and
at severals,
While wife and housemaids fly about like meteors
through the heavens.

The parlors and the chamber floors were cleaned a week
ago;
The carpets shook, the windows washed—as all the
neighbors know;
But still the sanctum had escaped—the table piled with
books,
Pens, inks and papers all about—peace in its very
looks—
Till fell the women on them all, as falls the plague on
men,
And then they banished all away, books, papers, ink
and pen.

And now when comes the master home—as come he
must of nights—
To find all things are “set to wrongs” that they have
“set to rights,”
When the sound of driving tacks is heard, though the
sound is far from still,
And the carpet-woman's on the stairs, that bawling
of ill;
He looks for papers, books or bills, that all were there
before,
And sighs to find them on the desk or in the drawer no
more.

And then he grimly thinks of her who set this fuss
afoot;
And wishes she were out at sea in a very leaky boat;
And meets her at the parlor door with hair and cap
awry,
With sleeves turned up and broom in hand, defiance in
her eye;
He feels quite small, and knows full well there's nothing
to be said,
So holds his tongue and drinks his tea, and sneaks
away to bed.

KNOW YOUR CHILDREN.—Hundreds of men
have no time to get acquainted with their chil-
dren. They see in a general way that they are
clean and wholesome-looking; they pay the
quarterly school bills, and grudge no expense
in the matter of shoes and overcoats. They
dimly remember that they once courted their
wives, and said tender things in the parlors,
where the cheerful gaslight shed its glow, or on
moonlight evenings under rustling leaves. The
time for that has quite gone by, and they
would seem as bashful as a school-boy reciting
a piece, were they to essay a compliment to the
lady at the other end of the table. They have
forgotten that home has its inalienable rights,
and among them, first and foremost, the right
to their personal presence. Nothing rests a
man or woman who has been busy about one
set of things, better than a total change of em-
ployment or feeling. A nap on the lounge is
all very well, but after a half hour of it, if the
most tired man will shake off dull sleep, and
have a romp with the children, or a game of
bo-peep with the baby, he will be rested much
more thoroughly than if he drowsed away the
whole evening, as too many business men do.
—*Hearth and Home.*

GOOD ADVICE.—Mr. Spurgeon sentimentally
expresses a number of thoughts “worth remem-
bering” in the following appropriate sentences
which he publishes as “advice gratis.” No-
body is more like an honest man than a thor-
ough rogue. When you see a man with a good
deal of religion displayed in his shop window
you may depend upon it he keeps a very small
stock of it within. Do not choose your friend
by his good looks; handsome shoes often pinch
the feet. Drink nothing without seeing it;
sign nothing without reading it, and make
sure that it means no more than it says. Don't
go to law unless you have nothing to lose. In
any business never wade into water where you
can't see the bottom. See the pack open before
you buy what is in it; for he who trades in the
dark asks to be cheated. Keep clear of a man
who does not value his own character.

It is not much thought of, but it is certainly
a very important lesson, to learn how to enjoy
ordinary life, and to be able to relish your being,
without the transport of some passion, or grati-
fication of some appetite. For want of this
capacity, the world is filled with whetters, tip-
plers, cutters, sippers, and all the numerous
train of those who, for want of thinking, are
forced to be ever exercising their feeling or
tasting. —*Steele.*

Some “new beginners” are practising on such
specimens as these: “How much does a fool
weigh generally?” A simple ton.

Circumstantial Evidence.

No! I cannot consent to find the prisoner
guilty! The evidence is purely circumstantial,
and despite the apparent strength of the chain,
I shall insist on a verdict of “not guilty.”

Years ago, while trying to work my way
through college, I learned a lesson that will
keep me from ever being instrumental in con-
victing a man on circumstantial evidence.

On the 18th of February, 1871, a burglary was
committed in the town of Wappinger's Falls,
near Newburg, New York. The savings bank
of Sweet & Barlow was entered, the two safes
were blown open and their contents rifled.
Professionals had done the job, for a pane of
glass had been cut out, and the door-lock pried
off, holes had been drilled through the sides of
the safes, powder introduced and the massive
iron plates had been blown asunder.

Henry C. Brown, the book-keeper, usually
slept in the building, but on this night he was
away at a party. Returning at four o'clock, he
started to ascend the covered stairway at the
side of the bank. It was a cloudy, rainy night,
and in the darkness he saw some indistinct ob-
ject on the stairs. Thoughtlessly he poked it
with the end of his umbrella. This object was
the burglar appointed to guard the stairway! Car-
rying the umbrella in one hand, he placed a
revolver against Brown's breast, and fired. The
book-keeper shrieked and ran, and the would-be
murderer fired twice more. The shots and cries of the frightened man soon
aroused the town, but the burglars had disap-
peared. Strictest search failed to discover the
slightest trace of the villains. Brown's coat
and vest were powder-burnt, and the bullet
was found deeply imbedded in the gold watch
he carried in his upper left-hand vest-pocket.

Such a bold, audacious burglary, and such
a heartless, cold-blooded attempt at murder,
were well-calculated to arouse the wildest ex-
citement. Suspicion set led finally, and un-
mistakably upon an individual, who had been
prowling around town for a week or more.
Apparently he was a book agent. He claimed
to be a student endeavoring to raise means to
defray expenses of his tuition. Upon arriving
in town he had made several inquiries about
the location of the bank, and the names of its
officers, pretending to want their influence on
his subscription list. It was rumored that con-
clusive evidence would at the proper time be
produced to prove him one of the burglars.

The officers found upon inquiry that he had
paid his bill the night before, saying that he in-
tended to leave early the next morning. The
landlady knew nothing of the man except that
he had gone. She did not even hear him go,
for when he applied for board he was particu-
lar about obtaining a room on the ground floor,
isolated from other lodgers.

The stage left Wappinger's Falls for New
Hamburg at five o'clock, to meet the morning
train down the Hudson. This stage overtook
the suspected individual about halfway to New
Hamburg, walking along in the rain, and
slush, and at his request, carried him the rest of
the distance. Meanwhile, descriptions were
telegraphed all over the State, of “A young
man with sharp, piercing black eyes, dark hair
and moustache, about five feet ten inches in
height, wearing a heavy scarf, and a loose sol-
dier cloak.” It was just after the terrible rail-
road accident at New Hamburg, when the pas-
senger train of the Hudson River R. R. had
crushed through the bridge and buried so
many people in the icy water beneath. J.
Scandling, the well-known State officer, had
been present during all the excitement, super-
intending the raising of the lifeless bodies.
Standing in the telegraph office, he chanced to
catch the description, from the clicking, as the
message flashed over the wires to Poughkeepsie.

I was the book-agent, and upon my arrival
at the depot Mr. Scandling promptly arrested
me. At half-past four I had awakened,
dressed, and left the house without seeing any
one. In order to collect two dollars from a
man at the coal-house to whom I had sold a
book, I walked on before the stage, and re-
ceived the money. Learning, for the first time
of the burglary, I soon understood that I was
in a dangerous position, “A stranger in a
strange land,” with little money, and less in-
fluence, I was to be carried back into the midst
of an angry mob. It would utterly be impos-
sible for me to adduce any evidence as to my
whereabouts at the time of the burglary, as I
had been alone in my room.

In all the vast surging crowd that awaited
my arrival, there was not one face that betrayed
pity or sympathy. They glared at me as
though I were a Bengal tiger, and for a while it
seemed as if I should be strung to a lamp-post
without the formality of a trial. A preliminary
examination, however, was speedily held. A
crowd that for several days had been lying in
the front yard of the house where I lodged,
was first brought into court. It had been used
by the burglars in prying off the lock of the
door. My landlady testified that it was in the
yard the evening previous. The prosecuting
attorney next produced a beautiful tatted neck-
tie. It was the one I usually wore. The
night before, when getting ready for bed I
missed it, and had searched for it everywhere
in my room. Mother had worked it for my
Christmas present. They testified to finding it
on the floor, about six feet from the empty
safes. A murmur of satisfaction arose from
the excited mass of people as the necktie was
held up to view.

And now, all eyes were turned toward
Brown. He was pale and excited, and
had but partially recovered from his fright.

He testified to having seen me standing in and
around the bank many times, and to my hav-
ing been the last man to leave, the night be-
fore. He produced the watch, showed the half-
imbedded bullet, and then, to my utter horror,
swore positively that by the flash of the pistol
he believed he recognized my face as that of
the burglar who shot him.

I don't believe I heard much more of the evi-
dence. Dazed, bewildered, crushed, I leaned
my head on the table before me, to shut out
the gaze of the jeering, exulting mob. The
only witnesses in my favor were the well-worn
Latin grammar, and the little covered Bible
which they found in my valise while searching
for burglars' implements. These, however,
availed nothing. The crafty lawyer said some-
thing about hypocrisy and cunning, which
soon turned the tide of feeling in the old chan-
cel. He argued long and forcibly, but I paid
little heed. I was conscious that after a time,
the judge arose to pronounce sentence. He
spoke briefly of the terrible tide of crime that
seemed to be sweeping over the country, and
of the hideous act that had so nearly cost them
a valuable citizen the night previous. The tes-
timony was so direct, that his duty was plain,
and much as he pitied my youth—just then
loud voices caused every eye to turn toward
the door. Several horsemen had leisurely
ridden up a few moments before, and it was
one of their number that was now forcing his
way into the room. I raised my head and recog-
nized the honest face of stalwart Tom Craw-
ford, my landlady's son. I was little ac-
quainted with him, except as an influential
man, and should have paid no further attention
had he not raised his gloved hand, and with a
gesture of authority bade the judge “Stop!”

In a few brief words he explained that at the
time the shots were fired, he sprang from his
bed, intending to go down town, to see what
was the matter. Remembering that his over-
coat hung in my room, he went to the door and
knocked. Receiving no answer, he tried the
knob, found the door unlocked, and entered.

He said that I was sleeping heavily, and that
although the coat hung near the head of the
bed, I did not awake or make any motion.
Turning to where I sat, he said: “That poor
boy knows nothing whatever of this crime.”

The excitement had been too much for my
overtaxed nerves. The gloom had been so
deep, so hopeless, so dreadful, and then the re-
action so sudden, and unexpected, that with a
cry of joy I sprang toward Tom, and fell faint-
ing at his feet. Kind hands soon brought me
to consciousness, but not before I had been
cleared of every suspicion of guilt.

Tom had hurried down town after leaving
my room, and was one of the first on the spot.
Hastily organizing a party, he had started in
search of the burglars, and after a long and
fruitless hunt, had returned to learn that I was
about to be convicted of burglary, bank-rob-
bery and attempted murder.

MAX ADLER gives an account of a Memphis
miss who was so addicted to the piano, that she
drove away a family of toads that had resided
in the basement of the house for forty years
until the piano was introduced. Here is how
they migrated: Day before yesterday, when
the playing began, out came the toad, unable to
stand it any longer. He had another toad with
him, and they went and got the lid of an old
black-box, and fixed a string to it, and
packed into it their little store of dead flies and
things, and three or four small toads, and all
their domestic comforts, and hitched on to that
string and began to move down the street in
search of a new residence.

A CAPITAL story comes from Vienna a propos
of Liszt's last performances in that city.
It is said that the great pianist found himself
in the company of a number of ladies, who bog-
ged him in hyperbolic terms to procure for
them “the ecstasies, the artistic raptures, which
his magnificent talent inevitably produces.”
He obligingly seated himself at the piano and
played. When he had finished, some of his ad-
mirers had fainted. “Well,” said Liszt, “I
played wrong notes all through intentionally—
so badly, indeed, that I should have been
turned out of doors at any elementary school
of music!”

THE walls of churches, especially those of
stone or brick, should be covered with climbers.
It adds wonderfully to the architectural effect.
Roses cover the walls of Chislehurst church.
Roses may cover the walls of most churches.
No one would worship less devoutly in June if
the somber light of the place of worship were
compensated for by perfume of flowers in the
air. No one need worship in any air the less
devoutly if the perfume of flowers affects their
senses. Worship ought to be purer therefore.
—*Rural New Yorker.*

SOMETHING LIKE A POINTER.—A gentleman
has a thoroughbred pointer dog which is said to
be the most efficient animal of its kind. It
never lets any chance slip by it. The other
day, as it was trotting along the street, its
master observed that it ran up to the front
steps of a house and pointed dead at the door-
plate. He whistled, but the dog refused to
budge an inch. Upon going up to see what
the matter was, he found that the door-plate
bore the name of “A. Partridge.”

ACCORDING to the Vienna papers, a tenor
singer has recently presented himself to the
physicians of that city, who by means of some
abnormal formation of the vocal organs, is able
to sing two notes at once! The opera man-
agers will have to double his salary!

A Tale of a Turkey.

As a certain learned judge in Mexico, some
time since, walked one morning into court, he
thought he would examine whether he was in
time for business; and feeling for his repeater,
found it was not in his pocket. “As usual,”
said he to a friend who accompanied him, as he
passed through the crowd near the door; “as
usual, I have again left my watch at home un-
der my pillow.” He went on the bench and
thought no more of it. The court adjourned,
and he returned home. As soon as he was qui-
etly seated in his parlor he bethought him of
his timepiece, and turning to his wife request-
ed her to send for it to their chamber. “But,
my dear judge,” said she, “I sent it to you
three hours ago!” “Sent it to me, my dear?
Certainly not.” “Unquestionably,” replied
the lady, “and by the person you sent for it!”
“The person I sent for it!” echoed the judge.
“Precisely, my dear, the very person you sent
for it! You had not left home more than an
hour when a well-dressed man knocked at the
door and asked to see me. He brought one of
the very finest turkeys I ever saw; and said
that on your way to court you met an Indian
with a number of fowls, and having bought this
one quite a bargain, you had given him a cou-
ple of reals to bring it home; with the request
that I would have it killed, picked, and put to
cool, as you intended to invite your brother
judges to a dish of *molle* with you to-morrow.
And, ‘Oh! by the way, Señora,’ said he, ‘his
excellency the judge requested me to ask you
to give yourself the trouble to go to your cham-
ber and take his watch from under the pillow,
where he says he left it as usual this morning,
and send it to him by me.’ And of course, *me
querido*, I did so.” “You did!” said the judge.
“Certainly,” said the lady. “Well,” replied
his honor, “all I can say to you, my dear, is
that you are as great a goose as the bird is a
turkey. You've been robbed, Madame; the
man was a thief, I never sent for my watch;
you've been imposed on, and as a necessary
consequence the confounded watch is lost for
ever!” The trick was a cunning one; and after
a laugh, and a restoration of the judge's good
humor by a dinner, it was resolved actually to
have the turkey for to-morrow's dinner, and
his honor's brothers of the bench to enjoy so
dear a morsel. Accordingly, after the adjourn-
ment of court next day, they all repaired to his
dwelling, with appetites sharpened by the ex-
pectation of a rare repast. Scarcely had they
entered the salon and exchanged the ordinary
salutations, when the lady broke forth with
congratulations to his honor upon the recovery
of his stolen watch! “How happy am I,” ex-
claimed she, “that the villain was apprehended!”
“Apprehended!” said the judge with surprise.
“Yes; and doubtless convicted too by this
time,” said his wife. “You are always talking
riddles,” replied he; “explain yourself, my
dear. I know nothing of thief, watch or con-
viction.” “It can't be possible that I have
been again deceived,” quoth the lady; “but
this is the story: about nine o'clock to-day a
pale and rather interesting young gentleman,
dressed in a seedy suit of black, came to the
house in great haste—almost out of breath. He
said that he was just from court, that he was
one of the clerks; that the great villain who
had had the audacity to steal your honor's
watch had just been arrested; that the evidence
was nearly perfect to convict him, and all that
was required to complete it was the turkey,
which must be brought into court, and for that
he had been sent with a porter by your express
orders.” “And you gave it to him?” “Of
course I did; who could have doubted him, or
resisted the orders of a judge?” “Watch—and
turkey—both gone! pray, what the devil, *u ad-
ame*, are we to do for a dinner?” But the lady
had taken care of her guests, notwithstanding
her simplicity, and the party enjoyed both the
joke and their viands. —*World of Anecdotes.*

A SECRET.—William Wirt's letter to his
daughter, on the “small, sweet courtesies of
life,” contains a passage from which a great
deal of happiness might be learned: “I want
to tell you a secret. The way to make yourself
pleasant to others is to show them attention.
The whole world is like the Miller at Mans-
field, ‘who cared for nobody—no, not he—
cause nobody cared for him.’ And the whole
world would serve you so if you gave them the
cause. Let people see that you do care for
them by showing them what Sterne so happily
called the small courtesies, in which there is no
parade, whose voice is too still to tease, and
which manifests themselves by tender and af-
fectionate looks and little acts of attention,
giving others the preference in every little em-
ployment, at the table, in the field, walking,
sitting and standing.”

NEAR Rochester there is an eccentric old fel-
low who lives alongside a graveyard. He was
asked if it was not an unpleasant location.
“No,” said he; “I never jined places in all my
life with a set of neighbors that minded their
own business so stiddy as they do.”

An ill-natured cotemporary says that Penn-
sylvania should shake in her shoes, at the news
of the discovery of coal in Rhode Island; for,
should the same prove middling thick, and un-
derlie the whole State, the produce would be
as much as seven bushels.

A NEW HAMPSHIRE Irishman became fright-
ened while being lowered into a deep well the
other day, and cried out to the men above that
if they did not haul him up he'd cut the rope.
To save the rope they hauled him up.

The Light of a Cheerful Face.

There is no greater every-day virtue than cheerfulness. This quality in man among men is like sunshine to the day, or gentle renewing moisture to parched herbs. The light of a cheerful face diffuses itself, and communicates the happy spirit that inspires it. The sourest temper must sweeten in the atmosphere of continuous good humor. As well might fog, and cloud, and vapor hope to cling to the sun illuminated landscape, as the blues and moroseness to combat jovial speech and exhilarating laughter. Be cheerful always. There is no path but will be easier traveled, no load but will be lighter, no shadow on heart or brain but will lift sooner in presence of a determined cheerfulness. It may sometimes seem difficult for the happiest tempered to keep the countenance of peace and content; but the difficulty will vanish when we truly consider that sullen gloom and passionate despair do nothing but multiply thorns and thicken sorrows. Ill comes to us providentially as good, and is a good if we rightfully apply its lessons; who will not, then, cheerfully accept the ill, and thus blunt its apparent sting? Cheerfulness ought to be the fruit of philosophy and Christianity. What is gained by peevishness and fretfulness, by perverse sadness and sullenness? If we are ill, let us be cheered by the trust that we shall soon be in health; if misfortune befall us, let us be cheered by hopeful visions of better fortune; if death robs us of dear ones, let us be cheered by the thought that they are only gone before to the blissful bowers where we shall meet to part no more forever. Cultivate cheerfulness, if only for personal profit. You will do and bear every duty and burden by being cheerful. It will be your consoler in solitude, your passport and commender in society. You will be more sought after, more trusted and esteemed for your steady cheerfulness. The bad, the vicious, may be boisterously gay and vulgarly humorous, but seldom or never truly cheerful. Genuine cheerfulness is an almost certain index of a happy and a pure heart.

A RATHER remarkable case came up lately before the Sheriff of Perthshire. A farmer near Auchterarder had sold a cow to a person named Perth, and the buyer summoned the farmer in order to recover damages, seeing that he had given false information about the cow. "I asked him," said the plaintiff, "if she was a good milker." "And what was his reply?" He said, "She'll astonish you!" "I took the cow home, but she has not a single drop of milk." "Well," said the Sheriff, "I rather think she did astonish you."

A STORY is told of a negro who prayed earnestly that he and his colored brethren might be saved from what he called the "upsettin' sin." "Brudder," said one of his friends at the close of the meeting, "you ain't got de hang ob dat ar word; it's besettin', not upsettin'." "Brudder," replied the other, "if dat is so, it's so. I was prayin' de Lord to save us from de sin of intoxication, and if dat ain't an 'upsettin' sin,' I dunno what am."

LAVATER says, "You never know a man until you have divided an inheritance with him." We would also say that you never know a man until you've got into a scrape with him, and can see whether he is willing to take his fair share of the blame. Men are hardly ever so ungenerous as when they have been colleagues in some affair which has turned out to be unfortunate.

"NOTHING," said an impatient husband, "reminds me so much of Balaam and his ass as two women stopping in church and obstructing the way to indulge in their everlasting talk." "But you forget, dear," returned the wife, meekly, "that it was the angel who stopped the way, and Balaam and his ass who complained of it."

ECONOMY, some one has said, is wholly a different thing from penuriousness; so very different, indeed, that it is only the economical person who can afford to be liberal, or even to live with ease and magnanimity. True economy acquires all things needful to our enjoyment.

A WIFE was enjoined by the doctor to give her husband all the delicacies she could procure, as there was no prospect of his recovering. "No prospect of his recovery?" said the loving spouse; "then what's the use of wasting dainty bits upon him if they won't cure him?"

STRANGERS visiting Augusta, Me., while the snow was in the streets, were particularly cautioned not to kick any old hats they might notice in the path, as several citizens had had their heads seriously bruised in this way before they were dug out.

COLERIDGE, when lecturing as a young man, was once violently hissed. He immediately retorted, "When a cold stream of truth is poured on red-hot prejudices, no wonder that they hiss."

"JOHN," said a doating parent to her gormandising son, "do you really think you can eat the whole of the pudding with impunity?" "I don't know, na," answered the young hopeful; "but I guess I can with a spoon."

At what time of life may a man be said to belong to the vegetable kingdom? When long experience has made him sage.

Young Folks' Column.

Anita.

[For the RURAL PRESS.]

Family-laden,
Wee, wise maiden—
Knits her brow in dainty knots;
How to dolly
Cure of folly
Occupies her busy thoughts.

"Dolly's wet her
Feet, to get her
Posies, in the morning dew;
Sure to be sick—
Cold or colic—
Like as not, the measles, too!

"There is Freddy
Always ready
Into awful 'fairs to fall;
Bad as Rosy—
Doodness knows, I
Don't know how to manage, 'tall!

"Jack or Norah's
Telled a story!
One or t'over ate ma's cake!
While there's silly,
Greedy Willy
Got a drefful stomach-ache!

"Naughty Bessie
Tored her dress; she
Wants anuver one, I's spouse;
I tell you what
It takes a lot
Of work to keep my dolls in 't'ose'!"

Look! she lays her
Down by Cressa—
What can he be the matter, now?
Blue eyes closing,
Blinking, dozing—
Wee, white hands and lily brow—

Cheeks so waxen,
Tresses flaxen,
Footstep, that a fairy's seems—
All now wander
Over yonder,
In the happy land of dreams!

Happy Children.

As house-plants cannot flourish without sunshine, so children cannot thrive and be happy without love. How radiant are their bright faces as they respond to tones and words of affection from the lips of their parents! Little they know of the deep solicitude of the constant care exercised towards them; but they do fully understand and appreciate protestations of love and tenderness. Why should we be chary of these, when they cost only speaking? "I know," said a lady not long ago, "that my mother loved me tenderly, but during my childhood I doubted it. If I were really dear to her I queried, why did she never tell me so? Why did she never caress me, and assure me of her love? She thought her actions spoke loudly enough without words. I could not read her actions then as I can now, and how I longed to hear her call me loving names, and to have her to wrap me in the sweet embrace of her strong mother-love." Many a little heart aches just as this lady's did, and can be made happier by the spontaneous utterances of maternal affection, than by beads, or dolls, fine clothes or costly toys.

Children who grow up in this constant atmosphere of love, are rarely mischievous, never vicious. The mightiest of all agencies to lead the young in paths of virtue is in the hands of parents, and to command this agency, they need but give expression to the natural overflow of their hearts.

Children to be happy need encouragement and praise. It is not enough that they escape censure. Negatives are always cold and black. Our little ones want warm positive approval when they have done right; thus they will be made to feel that the paths of wisdom are paths of pleasantness and peace.

A WONDERFUL BABOON.—Le Vaillant, the African traveler, tells some wonderful stories about the instinct of the baboon. He traveled with one for a long time as a guide. Its name was Snees. He knew the shops where the best sherbet was to be got. Being short of butter once, Snees brought him a number of coconuts, which he had thrown away till the milk inside had become churned. He watched by his master's side every night, killing the mosquitos which swarmed about the tanks of the Nile. He often helped Le Vaillant in unrolling the mummies and packing his trunks. Le Vaillant brought his baboon to Europe, and Snees showed his gratitude by saving his master's life. Thieves were plundering the house, when Snees ran to the alarm bell, and never ceased pulling it till the inmates were alarmed; the thieves were apprehended just in time, for Le Vaillant says when he awoke there were two gentlemen at his bedside, one with a pistol and the other with a carving knife. The day Le Vaillant died the sagacious baboon broke a blacking bottle—whether accidentally or not is not proved—which blacked him from head to foot; but many persons, who knew Snees well, declares this was done purposely, from a desire of the faithful animal to show respect to the memory of his dead master by going into mourning for him.

THAT man is rich who has a good disposition—who is naturally kind, patient, cheerful, hopeful, and who has a flavor of wit and fun in his composition.

PATTERN after no one, but seek to emulate the virtues of the good—not their imperfections.

GOOD HEALTH.

Can a Person be Anesthetized During Sleep?

This is a very important medico-legal question, and is ably discussed, though not conclusively settled, by Professor Dolbeau, in the January number of the *Annales d'Hygiene*. Professor Dolbeau performed several experiments, and found that sleeping animals were readily aroused by the presence of even small quantities of chloroform in their immediate vicinity. The cases of three patients are also given, who while sleeping were readily aroused by applying small quantities of chloroform at no great distance from the nostrils. In a second series of experiments made on seven patients, ten drops of chloroform were poured on a napkin folded in four, which was gradually brought to the vicinity of the air passages, so that all air inspired had traversed it. In all these cases patients were suddenly aroused from their sleep, some immediately and only one after the eleventh inspiration.

A third group of cases, consisting of twenty-nine patients, was next experimented upon, furnishing different results. These are given in some detail, but it will suffice to say that it was found that in ten out of the number, that is, in more than a third, complete anesthesia could be induced without awakening them. Dexterity in the mode of procedure seemed to have something to do with the proportion thus obtained, for this increased progressively with the number of cases experimented upon.

"New researches will still be required in order to establish the influence which may be exerted on the results by the age of their subjects, their sex, their prior condition of health, personal habits, etc. The purity of the chloroform employed is also a matter of importance. While thus appealing to future researches, your reporter, making certain reserves, still feels he is authorized in drawing a somewhat positive conclusion. Scientifically it is difficult, but often possible, to render persons insensible by means of chloroform who are in a state of natural sleep. Certain precautions, the employment of a very pure article, and great practice are conditions that favor the success of the attempt. It is probable that certain subjects are absolutely refractory, that is, it is impossible to anesthetize them, in spite of every precaution that can be taken. Others, on the contrary, and especially young children, easily undergo anesthesia without being aroused from their sleep by the irritation which the anesthetic produces in the air passages. Under the criminal aspect it is certain that chloroform administered to sleeping persons may facilitate the perpetration of certain crimes. It is, however, probable that the conditions favorable for anesthesia will be rarely combined on the occasion of criminal attempt. But before the tribunals the expert should declare that it is possible, if not easy, to render a sleeping person sufficiently insensible by chloroform to allow his becoming the victim of a criminal attempt."—*Phil. Med. Reporter*.

ARTIFICIAL FEEDING OF CHILDREN.—Nursing by the mother is the only natural feeding, and it can not be substituted by any other with safety to the health of either the mother or child. Wet nursing is only to be resorted to when the mother's milk is not suitable, and when a proper wet nurse can be obtained. The so called "prepared foods" with their flaming advertisements and testimonials, oftentimes spurious, and accompanied, as in one instance, by the picture of a wonderful baby "brought up entirely on this and no other food"—all of these originate in a desire to meet the wants of children deprived of mother's milk, and often stand in the way of a mother's duty of nursing. The country is flooded with them. Some are harmless, many dangerous, and a few useful. The thoughtless indorsement of physicians is sadly to be deplored. A perfect substitute for mother's milk has not yet been made, and it is doubtful whether it ever will be. An exact analogy in solid and fluid constituents can not take the place of human milk, with its inherent, unexplainable, life-giving principle.—*Sanitarian*.

USE OF SWEET OIL AS A DRESSING FOR WOUNDS.—Dr. Jos. W. Howe has recently introduced at this hospital ordinary sweet oil for the treatment of all kinds of wounds. It has several advantages over any of the other dressings in use, and apparently yields better results. The advantages are, that it keeps the air from the wound, and at the same time is a grateful dressing to the patient. It also promotes healthy granulations. The mode of application varies with the variety of wounds for which it was intended. In necrosis, after the sequestrum is removed, the cavity is filled with the oil, and a lint tent introduced. Every day the oil is renewed. In one case of necrosis of the lower jaw this procedure was had recourse to, and, shortly after, the patient was attacked with facial erysipelas, but, strange to say, the side of the face which had been operated on was not affected. In incised wounds, the edges are brought together, and soaked in oil used as an external dressing.

Too much lemon juice if taken in an empty stomach might do harm, but it would be slight. Taken after the food is in the stomach there would be no objection to it on this ground.

Longevity of Man.

The great physiologist, Flourin, concludes that the natural extreme age of man is 100 years, and his conclusions have been adopted by Faraday and all other philosophers and physiologists. The duration of life is measured by the time of growth. When once the bones and epiphyses are united, the body grows no more, and it is at twenty years that this union is effected in man. In the camel it takes place at eight, in the horse at five, in the lion at four, in the dog at two, in the rabbit at one. The natural termination of life is five removes from these several points. Man being twenty years in growing, lives five times twenty years—that is to say one hundred years; the camel is eight years in growing, lives five times eight years—that is to say forty years; the horse is five years in growing, and lives twenty-five years; and so with other animals. The man who does not die of sickness, lives everywhere from eighty to one hundred years. Providence has given man a century of life, but he does not attain it, because he inherits disease, eats unwholesome food, gives license to passions, and permits vexation to disturb his healthy equipoise; he does not always die from age, but kills himself. Professor Flourin divides human life into infancy, youth, virility and age. Infancy extends to the twentieth year; youth to the fiftieth, because it is during this period that the tissues become firm; virility from fifty to seventy-five, during which the organism remains complete; and at seventy-five old age commences.

To some persons it may appear that to extend virility to seventy-five years and let old age commence then, is rather extending the numbers too high; but we suggest that all persons descending from a healthy stock of family, and who have lived wisely, have certainly not spent their virility before the age of seventy-five; who is there who has not often had occasion to admire some venerable white-haired men of about that age, who are fully equal in bodily health, and especially in mental vigor, to those who have lived only half that period of time.

Usually the vitality runs down quite rapidly at about that period; life then lasts a shorter or longer time as the diminution of reserved force is hastened or retarded either by the then existing conditions surrounding the individual or by the impressions which his system has received by his previous manner of life, or experiences undergone.

It is evident that only those for whom every thing has conspired in their favor can attain the limit of one hundred years; and this shows at once why these cases are so rare; man is so complex a being and the causes of derangement so multifold, that it is rather to be wondered at why many who by no means live wisely do not die sooner. This is actually the case; but a naturally strong constitution often overcomes the results of the most pernicious habits, as the drinking of alcohol, excessive smoking, etc., which very soon destroy the weak, who act very foolishly, when they try to follow the example of those who survive in spite of these follies.—*Manufacturer and Builder*.

Typhoid Fever.

The prevalence of this justly-dreaded disease in several localities just at present leads us to offer a few suggestions as to its prevention by proper hygienic measures. That it may be defied in almost every instance by observing proper precautions, there is no doubt at all. All admit that it has its origin in decaying animal or vegetable matter; probably the former, possibly both. This fact was forcibly impressed on our mind during a late trip in the country. In a remarkably healthy neighborhood we found two families quite a distance apart, too, both having several members down with this disease. One glance at the location of each, instantly told why they were thus attacked while their immediate neighbors escaped. The houses in both instances were old and decaying, and stood in such a position that all water which fell near, and all refuse from the houses, flowed directly to them, and were absorbed by the soil underneath. Here the accumulations of years, perhaps, were rotting; both places had a damp, foul smell about them, and the cause of the fever was at once apparent. Farmers are too apt to think that drainage is all well enough for large cities, but of no use about a farm house, whatever. This is all wrong; and the first desideratum in choosing a location for a dwelling ought to be that there shall be sufficient slope or elevation to secure good drainage. If this is not practicable, then the structure should be placed at a sufficient height from the ground, to allow free ventilation beneath; and this should always be left unobstructed; securing the warmth of the building by very tight floors. Another simple precaution of great value is to have the pit or sink, which almost every family has for the reception of refuse matter, so arranged that no foul vapors can escape. This can be arranged by having a double elbow in the pipe leading to it, so that there will be a constant stratum of water in the elbow, to intercept any noxious or unhealthy gases, as they escape. By allowing no animal or vegetable matter to decay around the house, and by keeping the ground dry by proper drainage, with such other little sanitary precautions as will suggest themselves to the ordinary thinking mind, this dreaded, lingering, prostrating disease might almost be banished from the land.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.50; three months, \$1.50. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 80 2.00 5.00
One-half inch.....1.00 3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:
Saturday, May 30, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Among the Merinos; Do Not be too Bland; Fish Importations from the East; A Tropical Scene, 337. The American System of Farming; Feed the Farm; Hints on Hop-Growing—No. 5, 344. How Shall We Dispose of Them? Improved Pruning Implement; Munson's Gimlet Screw Bit; Stove-Lid Lifter and Stand; Alfalfa as a Protection to Cotton and Other Plants; Patents and Inventions, 345.

ILLUSTRATIONS.—A Tropical Scene, 337. Munson's Gimlet Screw Bit; Pruning Implement; Stove-Lid Lifter and Stand, 345.

CORRESPONDENCE.—Jottings on the Road; Calycanthus; Climate, Fruit Trees, Poultry, Etc., in California; A Chance for the Boys; Stacking Grain; Agricultural Fairs—Preliminary Lists, Etc., 338.

BEEES.—Foul Brood in Hives; Honey Combs and Unselfishness; Poisonous Honey; Weight of Honey in Boxes, 338.

HORTICULTURE.—Transplanting Evergreen; Gardening in Old Age; Parsley for Edging; Gardening on Shares; A Profitable Crop of Apples, 338.

CATTLE BREEDERS.—Thoroughbred Cattle in California; Short-horns in England; Parentage; Securing Colors by Breeding, 339.

POULTRY YARD.—Best Age of Hens; Practical Hints; Eggs-Eating Fowls; Scaly Legs in Fowls; Food for Poultry, 339.

THE SWINE YARD.—Feeding Fall Pigs; Number of Swine in Western States; Pork Raising; Kidney Worm Paralysis; Cough in Swine, 339.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 340-41.

HOME CIRCLE.—Spring Cleaning (Poetry); Know your Children; Good Advice; Circumstantial Evidence; Something Like a Pointer; A Tale of a Turkey; A Secret, 342. The Light of a Cheerful Face, 343.

YOUNG FOLKS' COLUMN.—Anita (Poetry); Happy Children; A Wonderful Baboon, 343.

GOOD HEALTH.—Can a Person be Anesthetized During Sleep? Artificial Feeding of Children; Use of Sweet Oil as a Dressing for Wounds; Longevity of Man; Typhoid Fever, 343.

AGRICULTURAL NOTES from various countries in California, 348.

MISCELLANEOUS.—Hints on Building a Stone House; The Strength of Materials; To Make Paper Transparent; New Apparatus for Registering the Direction of Clouds; Preservation of Vegetable Powders; Repairing Mirrors; Boiler Explosions; The Chemical Classification of Iron; Machines to Make People Honest; Floats for Ships' Boats; Completion of an Immense Safe, 346. Notices of Recent Patents, 347.

HINTS FOR STACKING HAY.—Make your stacks long and narrow. It will cure better and there is less danger of its becoming musty; besides it will be easier baling. The prese can be moved easier than you can pitch from the rear of a wide stack. In building the stack, unload alternately on different sections of the stack; this will allow the air to circulate through each load before it is settled down by another placed upon it. About three gallons of salt thrown into a load of hay will preserve its sweetness. Three quarts are recommended by a hay farmer.

LATELY, a trade has been developed among some Rochester, N. Y., shippers about which but little is known. It is the trade in dried potatoes. Potatoes are sliced up and dried in much the same manner as dried apples. One firm in that city has an order on hand now for 50,000 lbs. of these dried potatoes, as well as for 1,500 bushels of onions, which are dried in the same manner. They are intended for the navy. A bushel of potatoes dries away to about ten pounds. When ready, they are put into large tin cans, holding 40 pounds each, and sealed up the same as oysters.

CORN FODDER.—Now is the time for planting corn for fodder in Alameda county. We are glad to see that there is a greatly increased crop being raised on the slopes and in the cañons of the coast range. The "white horse tooth" variety is said to be the best. It gives the largest amount of stalk, and keeps green till the frost touches it. The two-revolving-knife-feed cutter helps macerate and cut the largest stalks, reducing them to excellent food.

A FIRM in Augusta, Me., is filling an order for 50,000 rake and hoe handles for parties in Glasgow, Scotland.

"The American System of Farming."

It is perhaps too late in the day to assert that we Americans are a very modest nation, still it must be allowed that we exhibit, in remarkable prominence, one phase of this virtue; that is, the patient tolerance with which we listen to the boastings of foreigners, and the humility with which we bear the comparisons, which are always at our expense of course, between their habits and way of doing things and ours.

An exceeding readiness to acknowledge our shortcomings is exhibited when the achievements in the arts and sciences of nations are unceremoniously compared. Especially is this the case in regard to American farming, as compared to that of other countries. Our deficiencies are attributed to ignorance or wilful neglect; and our habit of despoiling our inviting soil and then deserting it is denounced as shameful! They point to their hedges, ditches and walls, and tell us to go and do likewise! That is just what we intend to do without their telling us, and before as many generations of laborers have ended their days here as there have in those countries, our farming districts will compare with any thing "at home."

Our adventurous farmer goes into the forest or on the prairie, and, with the labors of himself and family, with the aid of a yoke of steers, converts it into a supporting farm within five years perhaps; overcoming obstacles and undergoing privations with a spirit that should secure the applause of the world. But, instead of this, he is ridiculed and condemned because the condition of his estate is so far inferior to those seen in Europe, which have been under the plow and spade for centuries.

He is like a drowning man; catching at anything within reach; while the critical foreigner stands looking on, drawing unfriendly comparisons between his way of doing things and the old established customs "at home." He may be conscious of the wealth hidden deeper down in his soil than he has ever cultivated; but he has not yet the means of reaching it, and it is a consolation to know that it is there in store for his successors. He knows the value of ditching; but cannot yet avail himself of its benefits; and he would use mountains of manure—if he could get it.

Our own agriculturists have been too willing to join with foreigners in throwing dirt upon our system of farming. This can be partially accounted for, when we consider that our agricultural journals are, many of them, under the control of those whose hearts are "in the highlands," or somewhere else in Europe, and who find it difficult to discover anything good coming out of America. Foreign agriculturists when taking up their abode among us are treated with so much deference that they become spoiled, in a measure, and instead of trying to adapt themselves to their new surroundings, they seem determined to vaup our too pliable system to their old patterns, when they are not suited to the peculiarities of our situation.

It will not become us to ignore the experience of others; but we should be careful that we do not sacrifice our nationality, and even our individuality, in our extreme willingness to learn. We are no doubt sufficiently self-reliant and hopeful in our undertakings, but we certainly lack the deep-seated, unwavering self-respect characteristic of some of our neighbors.

A CALL FROM THE GREAT SEEDSMAN.—Among the pleasant calls lately received from our neighbors and friends from a distance, was an extremely pleasant visit and editorial chat with Mr. James Vick, the celebrated seedsman of Rochester, N. Y. Mr. Vick is taking a pleasure trip through California. He could hardly have chosen a period when California would be in a more suitable condition to receive calls. He expresses the highest satisfaction with what he has seen thus far. Having just been through Napa valley, he expresses the highest admiration of that locality in unqualified terms. He says that he was quite surprised at the evidence of rural refinement and the high condition of agriculture there. Farms thoroughly cultivated, well provided with barns and other outbuildings after the most approved styles, and grounds tastefully laid out with lawns, flower gardens and everything that renders the surroundings of rural life attractive. Of course Mr. Vick would look for these things, and we are pleased at his having found them. We could not have had a more competent judge in these matters sent among us, though he came to visit the people and their country, and not to judge them even in those matters to which he has given his attention for so many years. The fruit and flower gardens of America are probably more indebted to Mr. Vick than to any other man; and it is certainly gratifying to see California thus presenting a beautiful wreath to the great florist; many of the flowers comprising this wreath having been produced by seeds of his own growth.

ANOTHER WAY TO FIGHT THEM.—P. H. Cordes kills squirrels effectually by taking old grain sacks—burlaps—cut in strips, and slowly drawn through melted sulphur. Cut into four-inch patches. Put on end of stick; lighted, punch into holes; stop up holes. They never dig out after this treatment. To make sure of the live holes, stop them all up and then apply the remedy whenever they dig out. Now, when they are too well fed to take poisoned food readily, this remedy, he assures us, is certain.

Feed the Farm.

Of all the operations connected with scientific farming, that of providing the soil with proper manures, or fertilizers, seems to be the least understood. It is astonishing to find, on conversing with a large portion of our farmers, what vague, indefinite ideas they have about it. Many of them seem to regard it as a kind of *dernier resort*; and look doubtfully upon the farm where it is necessary, or at best regard it as only to be resorted to for certain favored varieties of garden vegetables, etc. They will fall tree after tree from any tract of timber which may be on their land, recognizing fully the fact that every one cut down is so much done toward finally exhausting the source of supply, but fail to perceive they are pursuing precisely the same process on the farm, from whence, year after year, they remove heavy, luxuriant crops without making any return for those elements which they thus take away. It is a plain case of subtraction, so plain that the veriest school-boy will promptly decide that, sooner or later, they must get "nothing," for an answer. And this answer is only a question of time. On rich alluvials, or bottom lands, it will take some time, for these obtain a constant though limited supply from neighboring hills or mountains, or from the overflow of sediment-laden streams; but on lands not so favored, those which are flat, or those from which the sediment or wash that enriches their more fortunate neighbors must come, the "worn out" time will arrive much sooner.

Of course there is no such thing as literally wearing out a farm, any more than there is of blotting out of existence the space it occupies; worn out, simply meaning, that we have taken from the soil certain elements which it will be necessary to restore by proper manuring, before expecting it to furnish again crops composed largely of these very elements.

A farm must be fed; just as regularly, just as sufficiently as the laborers or teams that work it; and it will repay the food given it far more faithfully than it is possible for them to do. Farmers in the East are beginning generally to recognize this principle; and are reducing their farming to certain definite results; but here in the West we depend too largely upon the supply which nature has been thousands of years in storing up; and literally waste her generous gifts. In the East, farming is recognized to be what it really is, a simple problem in chemistry, and the farmer puts the necessary elements into mother earth's great laboratory, expecting to—and does—receive back just as certain, definite compounds as the chemist who mixes his acid and base in his, comparatively, petty laboratory to get his resulting salt.

The age is a progressive one; and our farmers are too intelligent a class to ignore the plain principles laid down in the above. Let us have more common sense infused into our farming, even if it is necessary to powder over some of the drier details of chemistry in order to accomplish it; and we will at once recognize the fact that our farms are far more inexhaustible sources of wealth than all the dazzling lodges and chambers of an Ophir or an Almaden.

GREASING BUGGIES AND WAGONS.—Greasing buggies and wagons is of more importance than some imagine. Many a wheel is ruined by oiling too plentifully. A well made wheel will endure constant wear from ten to twenty years, if care is taken to use the right kind and proper amount of oil; but if this matter is not attended to, the wheel will be used up in five or six years, or it may be sooner. Lard should never be used on a wagon, for it will penetrate the hub and work its way around the tenons of the spokes and spoil the wheel. Castor oil is a good material for use on iron axles; just oil enough should be applied to a spindle to give it a light coating; this is better than more, for the surplus put on will work out at the ends, and will be forced by the shoulder and nut into the hub, around the outside of the boxes. To oil the axle-tree, first wipe the spindles clean with a cloth wet with turpentine, if it doesn't wipe without it. On a buggy or carriage, wipe and clean off the back and front ends of the hubs, and then apply a very small quantity of castor oil, or more especially prepared lubricator, near the shoulder's point.

THERE is considerable brush land in Oregon, and Clackamas county has its full share. A farmer from that county, says the *Record*, gives us a description of his success in clearing and working crops on such land, which is of interest to all farmers. He says he slashes and burns off the land at the proper season, and the thicker the brush is the better the experiment works. After burned over clean, wheat is sown and brushed into the ashes, and the result is 25 bushels to the acre, which generally pays all expense of clearing and fencing with the first crop. It costs from \$10 to \$12 to cut the brush, burn it, and fence the land. Of course, stumps and roots are somewhat in the way, and it takes time to have them rot and disappear. The second year, rye can be sown to advantage; after that, grass can be sown, and sheep find excellent pasture, until the roots are rotted and the land ready for steady cultivation.

SEVERE frosts have done considerable damage to the vines throughout France. It is estimated that the grape crop this year will not be above half the average one.

Hints on Hop-Growing—No. 5.

The Poles.

Supplying the hop-yard with poles is one of the most important considerations in connection with this branch of farming. They form an expensive item at the cheapest; and in some hop-growing districts they are procured with difficulty; and the cost of transportation, added to that of cutting, the value of the timber, etc., produces a bill of serious dimensions. And even when the supply is secured this item is at once transferred to the "wear and tear" column of the account, for the best of poles, under the most favorable circumstances, will only last five or six years. They would not rot or wear out in this time, but a continual breakage is unavoidable. Some will be broken in the course of ordinary handling, but the picking season is a severe trial for them. When a lot of pickers are crying "hops," the pole-puller cannot afford to spend more than a moment in wrenching the pole from the ground and placing it across the box. Even the owner would rather have him break it down than spend more than the allotted time in pulling it. It is true the breaking is generally at the surface of the ground, and the pole can be resharpened and used again; but as they are set about two and a half feet in the ground, and as the part lost is the best end of the pole, a few breakings spoils it. In a country like California, where violent winds are scarcely known, no loss would be realized by the blowing down of hop-yards; but as an offset to this advantage poles would probably decay sooner here by dry-rot.

The Requisites of a Perfect Hop-Pole

Are few and simple; still they are rarely combined in the timber-growth of any locality. Poles should average about 16 feet in height, with as small a butt as it is possible to obtain in trees or saplings of this growth. This slight taper is rarely found except in swamps or in the dense undergrowth of rich timber-lands. Our second-growth pines would not answer the purpose; they are too large at the butt. Young cotton-wood trees would do very well. One of the hop-growers of California informs us that he finds a very good pole in the willow. In Wisconsin, iron-wood is the most reliable; after this they have the cotton-wood, or "popple," as it is called there, and bass-wood or linden, with some hickory and elms. In neighborhoods where the natural growth was exhausted, they resorted to split poles, using black oak principally; but it is only where the oak grows tall and straight, and will "split like a ribbon," as the choppers say, that split poles can be procured.

In New York the hop-growers depend almost exclusively on swamp cedar. They are the best poles, all things considered, that we have ever seen. They are tall and straight, of uniform size, are very light and sufficiently strong; for, as we stated above, it is not desirable to have a pole that will not break when it cannot be pulled readily.

Poles should be stacked, and not piled, as they keep better in this manner and are more easily handled. One of the most laborious processes in the handling is the

Sharpening of the Poles.

This should be done at a season when other work is not pressing. The pole should be in an upright position when being sharpened. Tie the tops of three poles together with a rope or hop vine, leaving the band low enough to enable the tops of the shortest poles to rest against the band while being sharpened. Spread the base of these tied poles sufficiently to brace and support each other. The separation of the tops of these poles forms a crotch in which the top of the pole is held while sharpening the butt. Having the block upon which the sharpening is done, in a spot which allows a proper position for the pole, and having the stacks of both the sharpened and unsharpened poles close at hand, a man can turn them off very rapidly. They should have a nicely tapered, sharp point, as this is essential to rapid setting.

At the first setting of poles they should not be hauled upon the ground until the spring work of the yard is done; then string them along as you would material for fencing. When they are once in use they will of course be stacked within the yard, placing the stacks at regular intervals, so that two rows of hills on each side of the stack can be supplied from it.

SAGACITY OF BIRDS.—Certain facts render it probable that birds, in some manner, become aware of cholera infection in the air. Recent European journals state that at Munich, where several cases of cholera have occurred, the rooks and crows, which flew about the steeples and through the trees of the public promenades, have all emigrated; and the same thing happened during the cholera seasons of 1836 and 1854. According to Sir Samuel W. Baker, the same phenomenon occurred at Mauritius, where the martins, which exist in immense numbers the year round, wholly disappeared during the prevalence of the cholera.

THE following are the Mexican grants covering a large portion of the county of Ventura: Simi, 119,000 acres; Conejo, 50,000; Guadalupe, 40,000; Calegua, 10,000; Las Posas, 28,000; Santa Clara Del Norte, 15,000; San Miguel, 7,000; Sespe, 25,000; ex-Mission, 75,000; Ojai, 15,000; Santa Ana, 25,000; San Miguelito, 10,000; Canada Larga, 8,000; El Rincon, 9,000; San Francisco, 8,000, and a small tract belonging to the Temescal grant.

How Shall We Dispose of Them?

All anxiety in regard to the production of crops, of this season at least, is apparently at an end. The question now arises: How shall we dispose of them? We do not consider this inquiry as particularly alarming, but we should at once commence preparations for it.

The marketing and transporting of our wheat crop has received due consideration; and it is hoped that it will be as judiciously and more economically handled than that of any previous season. Besides, this product, or portions of it, can bide its time in being placed upon the market; but with our fruit crop it is "now or never." In all probability, we shall have an enormous amount of fruit to dispose of during the coming summer and fall. The increase of fruit in this State can scarcely be estimated. Each individual fruit-grower can hardly give a "guess" at the amount being produced by himself, to say nothing about being posted in regard to the general yield.

It is not that we think there is too much fruit grown that we thus allude to the great increase. In fact, it is rather from an apprehension that by not having it promptly and judiciously disposed of, it will discourage fruit growing. There is no more fruit being grown than is wanted by ourselves and neighbors; but a system, by which our more distant neighbors and customers can be readily reached, should be at once inaugurated. This was done to a limited extent during the past year by one or two enterprising citizens of Grass Valley, Nevada county. This is one of the most celebrated apple producing localities in the State. In fact the apple and pear crop began to assume the form of an elephant in the hands of the fruit growers. But it was known all the time that people in the mountain towns, and even beyond the mountains were comparatively destitute of fruit; and a fruit trade was opened with them to the great advantage of both parties; the purchaser being as glad to get the apples and pears as the producers were to dispose of them. There is no danger whatever of this market being closed. This is only an instance of what is doing, and might be done to a great extent.

The great improvement in fruit drying will undoubtedly be of immense service in disposing of the present fruit crop, and it is hoped that even in the brief interval between this and the flush season of fruits, still greater facilities will be perfected. Energy on the part of the fruit dryers, with the co-operation of the producers, will do much in this emergency, and the fruit of California will be thankfully received in the East and even in Europe. We will be enabled to show our most distant customers that Californians can place their fruit in their markets in a condition worthy of its quality.

A large portion of our grape crop will be probably disposed of in the form of raisins. Even with the limited experience of our fruit growers in preparing raisins for market, it has already become a legitimate business; and California raisins have a good reputation in the market. Many improvements are being made; and with the conceded superiority of our grapes for raisins, with the readiness of our people to take advantage of any opportunity for improvement, we may safely calculate on a trade in this product which will be enormous in its proportions and fairly remunerative.

Among various and practicable systems of curing raisins, Mr. D. C. Feely, of Santa Clara, furnishes, through the *San José Mercury*, directions to which we would call the attention of those interested in grape culture. Mr. Feely directs as follows:

"First, the grape wants a good, rich, warm soil in which to grow, so as to secure size and substance; then the largest and best bunches only should be used, and they should be selected with the greatest care, rejecting all that have the slightest imperfections. The grape should be allowed to ripen until the saccharine juice has been condensed to some extent; then it should be picked, carefully avoiding friction of the berries, as that destroys the bloom. For drying they should be exposed to hot air of a temperature say from 90 to 100 degrees Fahrenheit. Anything more than this will cook the grape, and anything less will not accomplish the proper condensation of the saccharine matter. He considers hot air preferable to sunshine for curing raisins, because when exposed to sunshine they are apt to be attacked by insects, which develop vermin after the grapes are packed. The hot air destroys any germ that may have been deposited while the grapes were on the vine. He considers a fair shrinkage for No. 1 grapes in curing would be one pound in three, and that of the grapes grown on the vines at least 25 per cent. will have to be rejected as unfit for raisins; but still the business is profitable even with this percentage against the producer."

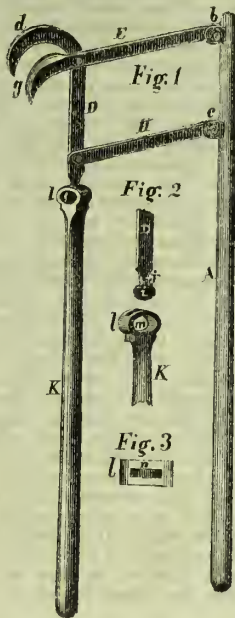
We repeat that we do not by any means wish to create a panic among our fruit-growers. Far from it. On the contrary, it is to avert a panic, and to prevent a curtailment of our fruit-growing, that we now call upon the producers to face the music at once—use all business-like means to get it into market. It will all be wanted; but those who want it will not come to us for it. We must place it before them, and in as attractive a manner as possible.

It is stated that a branch of the Grangers' bank in San Francisco is to be started in Ukiah.

An Improved Pruning Implement.

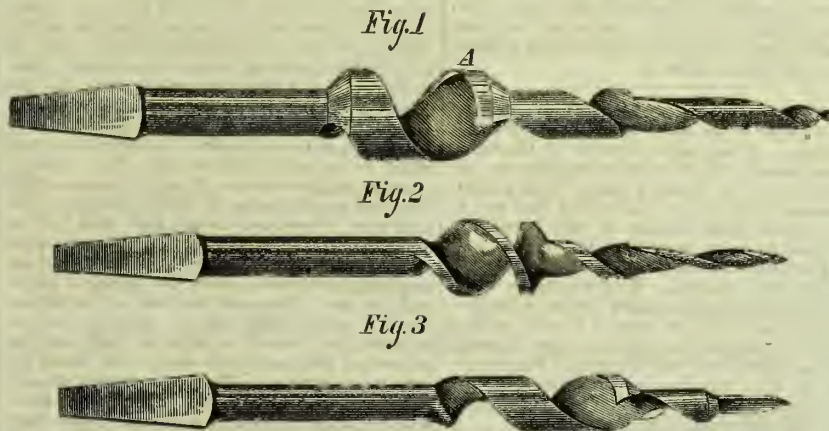
Rufus E. Farrington, of Anaheim, Los Angeles county, has recently patented through the *Scientific Press* patent agency, an improved pruning implement, which will be found useful to fruit growers and gardeners. The general features of the implement will be seen from the accompanying cut. The handles and blades are combined in such a manner that the implement is rendered easier to operate among the high branches of a tree and is under better control than the ordinary pruners.

Referring to the cut, A is a long staff or lance, having two legs, b, c, one at its upper



Pruning Implement.

end, and the other a short distance below it. D is a metal bar, having a hook, a, formed at its upper end, having the concave edge of the hook sharpened. This bar, D, is connected with the staff, A, by means of the shank, E, the end of which is formed into a convex knife blade. The end of the shank, E, is secured to



MONSON'S GIMLET SCREW BIT.

the upper edge, P, by a rivet, or other equivalent means, while at the opposite end another knife blade is riveted to the shank of the hook, D, in the proper position to allow the two blades to work together in the manner of a pair of pruning shears. The inventor then employs a rod or bar, H, for connecting the lower edge, c, with the shank of the hook, D, below the shank, E, and parallel with it, so that the shank, E, and rod, H, serve as parallel levers and connecting rods for operating the blades. Upon the lower end of the shank, D, he forms a flat button, i, by reducing or cutting away the metal upon each side of the shank, just above it, so as to leave the button connected with the shank by a neck, j.

K is a handle having its upper end provided with a metal cap-piece, l. The cap-piece has a transverse opening through it, and a slot, n, leading from its end down into the transverse opening. The slot is just large enough to allow the flat button, i, to pass through it into the opening where, by turning the handle slightly, the two parts will be locked together; so that the handle forms an extension of the shank, D, and connected to it by a flexible joint.

The object of this flexible joint is to permit of the readier manipulation of the implement, in order to swing the limb which is to be cut out of the way of other branches.

The construction of the implement is simple and strong, and having two parallel rods, the movements of the blades are steadied so that the implement can be easily handled.

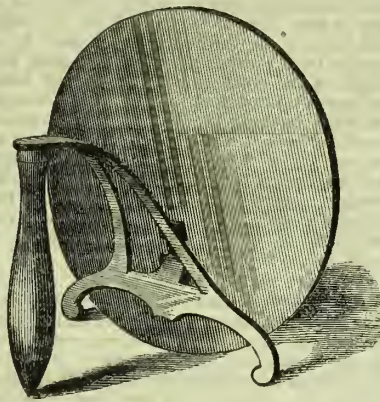
We learn there are some 30 cases of 1872 tobacco in the market, of good quality, in and about the center of Leyden, Mass., still waiting for a buyer.

It is said that four thousand men, from the lumber camps of Michigan, are now in the neighborhood of Chicago, waiting for employment.

Monson's Gimlet Screw Bit.

Wood-workers will appreciate the convenience of the implement shown in the accompanying cut, which is a form of screw bit, invented by Christian Monson, of Moscow, Iowa county, Wisconsin.

As will be seen by the cut the bit is made of three different diameters, corresponding to the variations in caliber of the wood screw so universally in use. The section next the point is made even smaller than the screw, to allow the thread an ample hold upon the wood, and yet to guard against the chance of splitting, as the middle portion is made enough larger to allow the blank part of the screw to drive easily and hold well. The larger portion, A, countersinks the wood for the head of the screw, or even sinks it to any desirable depth. It cuts smoothly, as it has a draw out. The style of Fig. 3, with the triangular awl joint, is calculated only for the very smallest sizes. Of the larger sizes, one bit can, of course, be used for boring three different sizes of holes through an inch board. The invention will commend itself, as



Stove-Lid Lifter and Stand.

it tends to bore and countersink in a perfect manner at one operation, making an improvement in economy of time, labor and expense, and also in durability, as the last projection answers as a brace.

The patentee writes us that, having many other things on hand, he wishes to dispose

Alfalfa as a Protection to Cotton and Other Plants.

One of our most successful California cotton planters informs us that during one or two seasons his cotton plants were infested with a fly, which threatened destruction to his favorite crop. But having met such enemies before in his varied farming experience, and being aware that armies that come in hordes do not remain long in one place, he was not disposed to abandon the field; being confident that both he and the cotton plants could live down any such attacks. Putting one thing and several other things together he concluded to sow alfalfa in an adjoining field; knowing that insects, similar to those which infested his cotton, had displayed a liking for this plant, and knowing also that the alfalfa could survive such attacks while the cotton could not.

The field of alfalfa was accordingly sown, and the results are entirely satisfactory. The flies are abandoning the sensitive cotton plants for the strong and vigorous new comer, to whom the attacks of such an enemy are no more than a flea bite to an elephant. We have heard of other and similar benefits derived from the presence of alfalfa.

But there is another trying emergency in which our newly found friend is pre-eminently useful. In growing down obnoxious weeds it has no equal. We have seen reliable accounts of alfalfa growing down even the

Wild Morning Glory.

And those who are best acquainted with it declare that it will grow down anything. There are many emergencies, both in farming and gardening, where such a helper is needed. Every locality has its particular nuisance in the form of some dominant weed; all varieties of soil have their accompanying evils of this character, and we would advise those whose farms and gardens are afflicted with quack-grass, Canada thistles, yellow dock, chick-weed, etc., to try the efficiency of alfalfa.

While the farmers of California are considerably reminded that Americans, and especially those of our own State, are apt to run wild over anything they take in hand—making an idol of it one day and breaking it to pieces the next—they should be careful how they hold much-needed friends at arms' length. The satirical sermonizing about "running things into the ground" is not applicable to our zeal in regard to alfalfa in California. Let it run into the ground as much as possible. It seems as though this plant is to be to California what the camel is to Arabia. But they should bear in mind the symbolical tradition of the straw that broke the camel's back; and consider that even alfalfa cannot bear everything. They must beware that gophers, squirrels and other pests are preying upon the roots of alfalfa; and spots thus destroyed should be cared for and reseeded. Some who have become acquainted with this crop advise that each field of it be allowed occasionally to go to seed and thus renew itself; but it would seem more farm-like to go over the field every season and sow fresh seed on the weak spots.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., May 26, 1874.

FOR WEEK ENDING MAY 12, 1874.

BUILDING AND PAVING BRICK.—Bar Adler, S. F., Cal.

BROOM MACHINE.—Henry Anderson, S. F., Cal., and James F. Houghton, Sacramento, Cal.

KEEPING BULLION.—Frederic H. Bousfield, S. F., Cal.

BEAKE SHOE.—Henry C. Deering, Hope Valley, Cal.

ANIMAL TRAP.—Augustus M. Gass, Campo, Cal.

CAP AND FAUCET FOR BEER CASKS.—John G. Schiffer, S. F., Cal.

WHEEL FOR VEHICLES.—Michael Mickelson, Ashland, Oregon.

TREADLE.—Edward Duffy and Robert Swarbrick, Oakland, Cal.

TRADE-MARK.

FLAVORING EXTRACTS OR SYRUPS.—McMillan & Kester, S. F., Cal.

"The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

The farmers of Washoe valley are cutting their first crop of alfalfa.

SMYRNA figs grow luxuriantly in the vicinity of Grass Valley.

The Virginia tobacco market is very dull.

MISCELLANEOUS.

Hints on Building a Stone House.

The use of stone in building dwelling-houses finds more opponents than any other material. To the architect's question, "Of what material do you propose to build?" the reply of the client is almost invariably, "Stone;" but a few facts concerning the cost very soon cause the owner to abandon that material, and take one less expensive. A stone house, properly built, is undoubtedly the most expensive edifice that can be erected. It has its advantages and its faults; and, unless it is carefully and thoroughly put together, the latter certainly predominate. Its two principal recommendations are its fine, substantial and showy external appearance, and the facility with which creeping vines may be grown upon it. The building, not requiring paint, permits these vines to grow at random, producing a much desired romantic effect. It cannot be claimed that such a house is any warmer in winter, or cooler in summer, than a brick one; while in comparison with a frame house it maintains the same relation as a cast iron stove does to a sheet-iron stove. The one being much thicker than the other, absorbs more heat, and hence we are required to wait longer before feeling the benefit of the fire; but when once heated, it retains it much longer. The interior of a frame house changes much more readily under the influence of the outside atmosphere. We have seen the walls of the interior of a stone house in midsummer covered with moisture caused by a sudden change in the atmosphere from a close murky atmosphere to a cool, clear one, causing probably a difference of ten or fifteen degrees in less than half an hour, thus producing condensation on the walls. This could not occur in a frame building, both on account of the material of which the walls are constructed, and also of the rapidity with which the outside can affect the inside. In this case the moisture would be removed, not precipitated. The walls of a stone dwelling-house should never be constructed of rough rubblework, for the reason that it is almost impossible to thoroughly fill all the joints with mortar; the stone being rough on the face, does not allow the water to pass off freely, and the result is that, in a driving storm, a very small opening, hardly large enough to admit the small blade of a pen-knife, will take in a large quantity of water and produce dampness. In the construction of churches and other buildings, not dwellings, we have often worked long and diligently to find these small crevices, to stop the flow of water. Stone naturally absorbs moisture, and that, together with any leakages that may exist, produces too much dampness for health or comfort. The proper construction for the walls of a stone dwelling is to have the beds and joints squared, (what is termed squared random-work.) This enables the workman more surely to fill the joints with mortar. All the outside joints should be thoroughly pointed with cement before the building is occupied.

A stone house can be constructed either with hollow or with solid walls. The former method is the plan we generally recommend, for the same reasons as have been given for its adoption in a house constructed of brick. The outer wall should not be less than 16 inches thick, of stone; leaving a space of three inches, and backed up on the inside with four inches of brick work; the inside and outside work to be bound together with iron ties, the same as for a brick house, only that the ties should be about 15 inches long. If a stone house be built in this way, and the same precautions taken as described for a brick house, no fear need be entertained of dampness; but where this system of hollow walls is adopted, and the inside and outside work is bound together by stones going through the whole thickness of the wall, or with binders of brick (instead of iron), dampness is sure to ensue. Hollow walls to be thorough and effectual must have outside and inside work entirely separate from each other.

To build a house with stone use great care in laying up the walls. As this is, unquestionably, the most thorough method of building, it is also (except in some rare cases) the most expensive, even in cases where stone is obtained for only the expense of carting; the cost of the brick for a brick house being more than counterbalanced by the additional labor required in cutting and dressing the stone, and in handling and building it into the wall. In conclusion, we would advise those contemplating building of stone to do so in the most thorough manner. If the cost is too great, do not economize by building cheaply, for the sake of having a stone house. It is far better to adopt a cheaper material. A well constructed frame house is much better and healthier than a cheap stone house. Whatever you do, in the use of any kind of building material, do thoroughly, and you will be relieved of much care and perplexity. Your enjoyment of your home will be much greater, your health promoted, and everything which tends to give that quiet and repose for which home is chiefly valuable will be greatly increased.—*American Homestead*.

To obtain anhydrous or absolute alcohol, boil strong alcohol with quick lime for one hour in a vessel with an inverted condenser, and then distil.

The Strength of Materials.

Gold may be hammered so that it is only 1-360,000 of an inch thick. A grain of iron may be divided into 4,000,000 parts. Still chemistry tells us that there are ultimate parts called atoms or molecules, which are absolutely indivisible. These atoms are attracted to each other by the attraction of cohesion, and repelled by the force of repulsion. By the action of both these forces the atoms are kept in a state of rest. The solidity of a solid depends upon the fact that each pair of atoms are in this state of equilibrium. These atoms are supposed to be of an oblate, spheroidal form. An iron bar would support its own weight if stretched out to a length of 3 1/4 miles. A bar of steel was once made which would sustain its own weight if extended to a length of 13 1/2 miles.

Our ideas of great and small are no guide to be used in judging of what is truly great and small in nature. The Bunker Hill Monument might be built to over a mile in height without crushing the stones at its base. When bars of iron are stretched until they break, those which are the strongest increase in length less than the weaker ones. A piece of wood having a breadth and thickness of three inches and a length of four feet, if supported at its ends, would be bent one millionth of an inch by a weight of three pounds placed at its center, and a weight of one-tenth of an ounce would bend it one-seven-millionth of an inch. Prof. Norton described a machine for testing the variation of sticks of wood. The machine consists of levers and screws so contrived that the amount of weight brought to bear upon the stick can be accurately measured, and the variation of the stick from a straight line can be measured, even though it do not exceed one seven-millionth of an inch.—*Jour. of Ap. Chem.*

The subject of food, its preservation and adulteration, has attracted more attention than formerly. M. Sacc proposes to use acetate of soda for preserving meat; another substance suggested is a mixture of boracic acid and common alum, while Lanjorais has found that one per cent. of magnesia will preserve meat for several months. The passage of an adulteration act in England has directed the attention of analytical chemists there to the study of the best means of detecting adulterations. At present adulterations in tea are attracting so much attention that it is very probable that much of the worst tea in the world will seek a market in America, where no such laws exist. Attention has been frequently directed to the dangers attending the use of impure water, and we have from time to time indicated the best methods of testing potable waters, and of purifying those that require it.

TO MAKE PAPER TRANSPARENT.—The best kind of paper is the class known as wove, not laid paper. A varnished formed of Canadian balsam dissolved in turpentine supplies an excellent means of making paper transparent. The mode by which we succeeded best was to apply a pretty thin coating of this varnish to the paper, so as to permeate it thoroughly, and then give it a good coating on both sides with a much thicker sample. Keep the paper warm by performing the operation before a hot fire, and apply a third or even a fourth coating until the texture of the paper is seen to merge into a homogeneous translucency. Paper prepared in this way has come nearer than any other to an ideal of perfection in transparent paper.—*British Journal of Photography*.

NEW APPARATUS FOR REGISTERING THE DIRECTION OF CLOUDS.—M. de Parville proposes for this purpose a board some 12 inches long by eight inches broad, fixed on a suitable support. A square of unpolished glass, placed vertically, divides the plane in two equal parts. The left hand side of the latter is covered with a mirror; on the right is a sheet of paper. As the clouds pass above the horizontal glass, they are reflected; and at the same time the observer sees their images on the vertical glass projected on the paper. It is only necessary to trace their direction on the latter with a pencil. On the mirror is engraved a compass card, which is also reproduced on the paper, and a small magnetic needle is suitably arranged so as to adjust the apparatus.

PRESERVATION OF VEGETABLE POWDERS.—Mohr's method of preserving vegetable drugs consisted in placing in the drawers with them perforated tin boxes containing quick lime. Louis Cornet, pharmacist at Diest, proposes a modification of this plan, which is especially adapted to the preservation of powdered drugs. The bottles in which the drugs are kept are fitted with large hollow stoppers, which are filled with fragments of quick lime. The large opening through which the lime is introduced is secured by lying over it double thicknesses of linen and filtering paper.

REPAIRING MIRRORS.—To replace the small patches of quicksilver often found removed from the back of looking-glasses, clean the damaged spot by very careful rubbing with fine cotton until there is no trace of grease or dust; then with the point of a knife cut the size of the required piece of the silvering off another glass; a small globule of mercury (the size of a pin's head for a surface the size of the finger nail) is dropped upon the cut piece. The mercury penetrates as far as the cut, and allows the piece to be removed. It is then gently pressed on the spot with a piece of cotton.

Boiler Explosions.

The behavior of water is totally different from that of gunpowder; when a charge of powder is fired in a gun the entire energy stored previously in powder is exerted on the gun and the projectile. When a boiler explodes, a very considerable portion of the energy previously concentrated in the water is expended, not on the boiler, or building, but in converting more water into steam at atmospheric pressure, and it thus happens that although the destruction wrought by the explosion of a large boiler may be fearful, matters are never as bad as they would be but for the remarkable property possessed by water, of instantaneously utilizing its stored-up energy in the comparatively harmless way of flashing a portion of itself into low-pressure steam. All the latent energy in the boiler was not thus expended, we know. A portion was expended in doing work—very disastrous work, no doubt, but none the less real. And this brings us at once to the puzzle, or puzzles, to which we have referred. We hear of stones being flung long distances, while a flue was lifted high in the air and fell on the roof of the weaving shed. Let us take this flue as typical, and ask ourselves how it was raised? The obvious answer is "Oh, the steam carried it there." Precisely; how did the steam carry it there? When a projectile is discharged from a gun an enormous pressure is exerted on its base for a considerable portion of time; but what are we to think of the nature and mode of action of the force which lifts a flue out of its place after the containing shell has been rent to atoms, and sends it flying through the air? Literally, not more than a few pounds of steam could find access to the flue to do the work; its surface was too small. Taking the flue at 30 ft. long, and just allowing a strip of its surface 3 ft. wide as an effective basis for the action for the steam, we have only 90 ft. surface. A body of steam at 80 lbs. pressure and 1 ft. thick over this surface would weigh about 2 lbs. only. It is impossible to imagine a sufficient velocity imparted to this 2 lbs. of steam to enable it in any way to impinge on the flue and thus propel it through the air.

Nor shall we be helped if we say that the pressure beneath the flue was unbalanced the moment the shell burst, and this unbalanced pressure lifted it. The pressure must have operated for a considerable time after the flue started on its flight, otherwise no energy could have been stored in it to enable it to continue its ascent. To what then are we to look as the direct cause of the ruin which attends a boiler explosion? Where is the link between the energy stored in the water and the walls blown down at a distance, the scattered bricks of the seating and the flying boiler plates? We do not think it too much to say that these questions have never been answered, and that the effects developed are perhaps after all manifestations of the exertion of force by the aid of very minute quantities of matter, operating in a way which is not quite understood. The cause of a boiler explosion is one thing, the cause of the effects of an explosion is quite another. We hold now, as we have always held, that there is nothing occult about the reason why a steam generator bursts. Neither, perhaps, is there anything mysterious about the flying of plates and the loss of life, and the ruin of buildings; but it is quite certain that no solution yet put forward has proved capable of that accurate numerical demonstration which can alone insure its acceptance. That ruin ensues when a boiler bursts we know, but we do not know whether a flying brick flies because it has been subjected to intense pressure acting through a limited space for a short time, or whether it is carried on a blast of steam as a leaf is carried by the wind, or whether it is driven by energy transferred from a mass of water moving, and whose movement the luckless brick has checked. Nor is it quite certain—although, in deference to accepted opinion, we have spoken as though it were certain—that the first effort of energy set loose in the rent boiler is to convert more water into steam, and not to manifest itself in some other way which is apparently occult, but only so because very little is really known about the manifestations of energy, or the bond which exists between force and matter.—*Engineer*.

THE CHEMICAL CLASSIFICATION OF IRON.—M. Frémy, an eminent French chemist who has recently been studying further into the metallurgy of iron and steel, thinks that it would be of much more advantage to founders and metallurgists if commercial iron, which is still classed according to its physical properties, should be known with reference to its chemical characteristics, that is to say, in accordance with the very small quantities of carbon, sulphur, phosphorus, etc., which it may contain, and which chemical analysis would reveal. This chemical classification has for some time past been in use in Krupp's celebrated foundry where, in fact, nothing is left to chance. Chemists constantly analyze the crude materials and the fabricated products. The scientific and industrial element is intimately connected with the military. Artillery officers examine the manipulations and follow their every detail. Considerable sums are devoted to new experiments, made on the different alloys which may be suitable for cannon, and of each metal tried there is compiled a record which indicates its chemical composition, its advantages and defects. According to M. Frémy's investigations, it appears that the best metal for guns is neither iron nor steel, but some combination of both.—*Sci. American*.

Machines to Make People Honest.

Time was, when almost every stage driver in New York was known to abstract a greater or less share of all fares received, and his employer had no remedy and no sure means of detecting the rogue. But thanks to the ingenuity of the inventor, our Broadway Jehus have been transformed into honest men. They can't steal if they would. The patent money box in which the passenger drops his fare, relieves the driver from the duty of handling the money, and consequently none sticks to his fingers.

On the street railway cars, the pilfering conductor, although not rendered wholly honest, is considerably interfered with and his stealings reduced by means of the patent bell punch. He is required by the rules to punch a strip of paper for every fare received. The punch contains a bell, a dial numbering register, and a receptacle in which the punched bits of paper are received. The punch, paper and money are returned to the office by the conductor at the end of every trip. The dial pointer shows how many times the punch has been operated, and the count of holes in the paper, the punched bits within the punch, and also the money should all be found to agree. Any discrepancy is at once shown. But this device does not fully answer the purpose of detection, because the conductor may take fares and not work the punch, especially in a crowd, without being observed.

The money box plan is apparently the surest. There is a chance for some ingenious person to invent a portable box for conductors, which will be promotive of their integrity in crowded cars.

One of the latest dodges in this line comes to us from Constantinople. The driver or conductor of the car gives to every passenger a prize ticket bearing a number which is recorded on the company's books. A drawing takes place monthly, the company providing a certain number of prizes. We read of one passenger who lately drew a prize of \$100 in this way. The hope of drawing a prize makes the passenger careful to send in his tickets; and, if the money returns of the driver or conductor are not equal to the number of tickets returned, there is a showing of dishonesty, and the particular culprits may be detected by comparing the return tickets with the records of the tickets issued to the several conductors.—*Sci. American*.

FLOATS FOR SHIPS' BOATS.—The Marine Department of the London Board of Trade have been making experiments with the boats of coasters, and find that any old boat can be converted into an efficient lifeboat by using air casings outside. The Marine Department have, for this purpose, used air cylinders, which they have specially designed, fastened outside the boat by a netting; so that the boat can be used for an ordinary boat as long as wanted, and converted into a lifeboat when occasion requires it. The material used for these cylinders, and approved by the Marine Department, is a combination known as Clarkson's. It consists of a layer of cork, about a quarter of an inch thick, between two layers of strong canvas. One cubic foot of air space in these cylinders will support about 60 pounds. The cylinders of this material are the cheapest, most efficient, and most durable means yet invented for converting an old boat into a lifeboat. Mr. Clarkson has made the experimental cylinders on models furnished to him by the Marine Department, and is, we believe, prepared to supply any number demanded. Air cases, to place inside lifeboats, also made of this material, have been supplied to some of the mail steamers, and are much preferred by the Marine Department in cases of copper, iron, zinc or wood, as they are practically indestructible, are not affected by heat, and are very light.—*Nautical Magazine*.

COMPLETION OF AN IMMENSE SAFE.—Mr. Chubb, the well-known English manufacturer of safes, has recently completed, for the Government of Buenos Ayres, an iron safe of gigantic dimensions, designed to receive the title deeds and securities of the Department of Public Credit. It is a parallelopiped formed by plates of heavy iron, strongly riveted at the edges. Within this is a second box as strongly constructed as the first, and separated by an air space. In this interior safe the valuable property is placed. The interior filling is made with a composition whose character is at present a secret, but which appears to have a certain quantity of alum in it. The dimensions of the safe are: height, 11 feet six inches; length, 14 feet nine inches; depth, five feet. The plates are three-quarters of an inch in thickness, and at the corners the total thickness of the plates and braces is nearly five inches. Two doors, one and one-quarter inch thick, give access to the interior. They are made of steel and iron, and have compartments filled with non-conducting materials. The safety-locks are attached, containing each a charge of gunpowder capable of firing 14 projectiles in all directions. Each lock is of a different form. The safe, entire, weighed 15 tons. It was shipped in pieces, and is to be put together at its destination by a competent mechanic, who accompanied it for that purpose.—*Jour. of F. Ins.*

A new mitrailleuse is spoken of, which at 500 yards will distribute bullets one foot apart along a horizontal space of 22 feet. The 24 barrels are arranged in two circles, eight in the inner and sixteen in the outer, and 700 balls per minute can be discharged.

Notices of Recent Patents.

Among the patents recently granted to Pacific Coast inventors, through Dewey & Co.'s Patent Agency, the following are worthy of mention:

REIN HOLDER.—Jefferson Kindleberger, S. F., Cal. This invention consists of a metal plate, having a projecting rib extending lengthwise along one side and short standard at one end. A shaft is secured in the upper end of this standard parallel with the rib, and a concave plate is secured loosely on this shaft. The reins are slipped between the concave plate and rib and are held by the crimp thus produced and by the binding of the edge of the concave plate.

HYDRAULIC MAIN AND RETORT CONNECTIONS FOR GAS WORKS.—James R. Smedberg, S. F., Cal. Relates to an improved construction by which the flow of gas is rendered clearer and less liable to become clogged by an accumulation of tar. It also consists in the construction and union of the stand and dip pipes connecting the retort with the hydraulic main, so that the openings of both pipes are accessible for cleaning by removing one plug, and the construction is such that any luting that may fall into the pipes will be conveyed directly to the retort mouth, where it can be easily removed.

PERMANENT FAUCET FOR BEER BARRELS.—John Brizee, Alvarado, Cal. Mr. Brizee thinks that too much good beer is wasted in securing the ordinary faucet in beer barrels. He has therefore provided a neat attachment which is permanently secured to the cask or barrel so that the beer can be drawn at any time without waste. It is a neat device and will greatly reduce the trouble of brewers in keeping their faucets in good condition and will be a great convenience to consumers.

GARDEN SPRINKLER.—Nathaniel Clark, S. F., Cal. This invention is not only useful but it is ornamental. It consists of a semi-globular nozzle-head so constructed that the pressure of the water in the nozzle sends it spinning in a wonderful fashion, and as the head is perforated with numerous holes the water is thrown in a spray in ever direction. It is intended for watering lawns, grass plots, gardens, etc.

ORE STAMP FEEDER.—Thos. A. Cochran, S. F., Cal. This invention consists of a revolving table which is placed at a slight incline. The ore is fed by a hopper upon the table, and the table is rotated by suitable connections with the tappet on the stamp stem. Suitable guides direct the ore into the battery.

PROCESS AND APPARATUS FOR SUPPLYING CITIES WITH MILK.—Frederick T. Newberry, S. F., Cal. Mr. Newberry proposes to lay a pipe from some point or depot in the country where milk is plenty and cheap, and extend it to a depot in the city. He will employ a suitable pumping engine to force the milk through the pipe into the city. When the pipe is not in use conveying milk, it is kept filled with water, the water and milk being alternately forced through the pipe as required.

PACIFIC POTTERY,

Depot—No. 3 California St., San Francisco.

N. CLARK & CO.

Manufacturers of

EARTHEN AND STONEWARE,

WATER AND SEWERAGE PIPE.

Our Vitrified Iron Stone Pipe has been thoroughly tested on private estates and public works, and its merits are fully endorsed by the leading Architects of the State.

J. B. OWENS, Agent.
m9-bp-3m

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD, President Business College, San Francisco.

SANTA BARBARA COLLEGE,
SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to
226-19 ELWOOD COOPER,
President Board of Directors.

WHALE OIL SOAP,

—FOR—

Destruction of Bugs on Plants, Etc.

PHOENIX OIL WORKS.

517 Front Street, ... SAN FRANCISCO.
207-1m

The Sewing Machine

—FOR THE—

GRANGERS.

NO COMBINATION! NO MONOPOLY!



Mr. L. G. Gardner, State Agent for the California Grangers, is authorized to make liberal terms to all Grangers who purchase the FLORENCE. No combination against favoring the Grangers has ever been joined by Florence Agents.

SAMUEL HILL, General Agent.

18v7-3m



The New Wilson SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market.

G. A. NORTON, Gen. Ag't for the Pacific Coast, 337 Kearny St., S. F.

Grangers' Bank of California.

NOTICE!

The Stockholders of the

GRANGE'S BANK

Of California, are hereby notified that a meeting has been called to be held in Corinthian Hall, No. 31 Post street, San Francisco, on Thursday, May 21, A. D. 1874, at two o'clock, P. M., for the purpose of adopting the By-Laws of the Corporation, as required by law.

SPECIAL ATTENTION

Is called to the importance of the Stock being represented either in person or proxy, as it is necessary that a majority of all stock subscribed be represented in adopting the By-Laws of the Bank. By order, ALFRED F. WALCOTT, Pres't.

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.
San Francisco Office.....No. 412 California street.

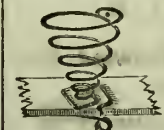
Authorized Capital Stock, \$5,000,000,
Subscribed, \$3,000,000. Paid in, \$1,500,000.
Remainder subject to call.

DIRECTORS IN LONDON—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Scholfield, Isaac Seligman, Julius Sington.

MANAGERS:

F. F. LOW and IGNATZ STEINHART, SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v27-cowbp



Self-Fastening Bed-Spring.



Double-Spiral Bed-Spring.

We manufacture all sizes of BED and FURNITURE SPRINGS, from No. 7 to the smallest Pillow Spring; also, the Double Spiral Spring, which is the most durable Bed Spring in use. It is adapted to upholstered or skeleton beds. We have the sole right in this State to make the celebrated Overmann Self-Fastening Bed Spring. Any man can make his own spring bed with them. They are particularly adapted to Farmers' and Miners' use. Send for Circulars and Price List to

WARNER & SILSBY,

14v28-cow-bp-3m

147 New Montgomery St., S. F.

FEED-CUTTER ROLLERS

Covered and made new in the best manner at usual rates, at H. ROYER'S Belt Factory, 437 Brannan St.

19v7-3m

FRANK MILLER & SON'S

MOWING MACHINE OIL, IN PATENT CANS, ALREADY FOR USE IN THE FIELD.

NO FARMER should be without it, as the season for mowing and reaping comes on. For sale by Baker & Hamilton, M. C. Hawley & Co., E. S. Whitcomb and other agricultural implement dealers. m2-1m

PURCHASERS please say advertised in Rural Press.

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

GRANGERS,

TAKE NOTICE.

WE ARE SELLING

FRENCH CHINA, GLASSWARE,

PLATED WARE, ETC.,

CHEAPER THAN ANY OTHER HOUSE

ON THE PACIFIC COAST.

O. LAWTON & CO.,

MARKET STREET,

Under the Grand Hotel, SAN FRANCISCO.

ARE YOU GOING TO PAINT?

THEN USE THE BEST.

THE AVERILL CHEMICAL PAINT WILL LAST THREE TIMES AS LONG as the best lead and oil, without CHALKING; is of any desired color. It is prepared for immediate application, requiring no Oil, Thinner or Drier, and does not spoil by standing any length of time. It is equally as good for inside as outside work; over old work as well as new; in fact, where any paint can be used the AVERILL CHEMICAL PAINT will be found superior to any other. Any one can apply it who can use a brush, which truly makes it the FARMER'S FRIEND.

IT IS JUST THE PAINT FOR THE AGE.

IT IS SOLD BY THE GALLON ONLY.

One gallon covers 20 square yards 2 coats.

For further information send for sample card and price list.

HEALY & JEWELL, Agents.

Office—Corner Fourth and Townsend streets, San Francisco. 16v7-cow-hp-3m

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,

36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7

Send P. O. Money Order with your order to W. H. Baxter, room 12, 320 California street, San Francisco. It will save Express collections and overland Express charges.

JOSEPH SEYMOUR & SON,

12v7-3m

Syracuse, N. Y.

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO.
21v2-1y

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Warner & Silsby Manufacture all kinds of Bed Springs, including the Overmann Self-Fastening Spring, and the Westly Double Spiral, 147 New Montgomery street.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

Shipping---Vessels Up.

FARMERS' LINE.

FOR LONDON DIRECT.

THE MAGNIFICENT A 1 CLIPPER SHIP,

MONETA,

621 Tons,

W. SINCLAIR.....Master.

FOR LIVERPOOL DIRECT.

The magnificent A 1 Clipper Ship,

SEA WITCH,

1283 Tons,

BAKER.....Master.

These fine vessels have nearly full cargoes engaged and will have very quick dispatch. Freight, taken in lots to suit shippers.

Will be followed by the splendid A 1 Iron Ship

GLEN GARRY,

1769 Tons,

Due here in May; or by other first-class vessels, Liberal advances made on shipments of produce consigned to our Liverpool house, Messrs. Robert Rodgers & Co. RODGERS, MEYER & CO. 19v7-3m

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The New A 1 Clipper Ship

FRIEDLANDER.....1,633 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

Apply to E. E. MORGAN'S SONS,

320 California Street, San Francisco.

POISON! POISON!

WAKELEE'S PATENTED

Granulated Squirrel Exterminator.

A NEW AND MOST DESTRUCTIVE POISON FOR THE WORST PEST OF CALIFORNIA.

For years the farmers of the Pacific Coast have been spending money in experimenting to find a safe, cheap and efficient way of ridding their grain-fields of their worst enemy, THE SQUIRRELS, which destroy Millions of Dollars' worth of grain every year; and unless a strong and combined effort is made to kill them off, they will become more numerous every year.

Wakelee's Granulated Squirrel Exterminator Is just the thing the farmers of California have been looking for. It is sure DEATH. One or two grains of it will kill a Squirrel so quick that if it is five feet from his hole it dies before it gets there. The Poison is put up dry and in granular form, and easily handled; in one pound tins, at \$1 per pound. It goes a great way, as 10 to 15 grains of it are sufficient to place at each hole. Also successfully used for killing Gophers and Rats. It has been thoroughly tested in different parts of the country, and gave universal satisfaction. It is kept and sold by druggists and dealers generally through the country. The following are some of my testimonials, viz:

SANTA CLARA, April 20th, 1874.
H. P. WAKELEE, Esq.—Your Squirrel Exterminator was used according to your directions, on my *Quito Farm* with excellent success, and in my estimation is just the thing the farmers want to kill their Squirrels.
J. R. ARQUELLO.

SAN LEANDRO, Cal., April 3d, 1874.
H. P. WAKELEE, Esq.—*Dear Sir:* I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers.
Yours,
J. M. ESTUDILLO.

DOUGHERTY STATION, Alameda Co., Cal.
MR. H. P. WAKELEE, San Francisco: I have used your Squirrel Poison and found it to be just what you claim for it. It is sure death.
Yours,
C. M. DOUGHERTY.

The Guadalupe Island Company—San

Francisco, California.
Notice is hereby given, that at a meeting of the Directors, held on the 8th day of May, 1874, an assessment of ten (10) cents per share was levied upon the capital stock of the corporation, (the Guadalupe Island Company) payable immediately to Arthur Rodgers, Treasurer of the company, at its office, 306 Pine street, San Francisco, California.

Any stock upon which this assessment shall remain unpaid on the 15th day of June, 1874, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on the 3d day of July, 1874, to pay the delinquent assessment, together with costs of advertising and expenses of sale.

ARTHUR RODGERS,
Secretary of the Guadalupe Island Company,
No. 306 Pine street, San Francisco, California. m16-4-

AGRICULTURAL NOTES.

BUTTE.

FROM NELSON.—Cor. Record, May 25: I have just returned from a trip to the canal on the west side of the San Joaquin river, and in passing through I noticed the crops. The hay crop is short all through the county. The farmers will be compelled to cut grain for hay in order to have enough. At Modesto the grain crop is pretty fair. At Turlock I saw fine crops of rye on both sides of the road, but the wheat does not look so well. At Merced city and on Bear creek the grain is good, the best that I have seen in the county; but on the plains back from Merced city the hay is all dried up. I visited Messrs. Miller & Lux's farm on the San Joaquin river. The great canal runs through the land on this side; on the lower side of the canal where the crops have been irrigated they are fine. Mr. Miller has 3,000 acres of alfalfa that will average three tons per acre; it is situated so he can irrigate every acre of it. Miller & Co. are dividing up their land into 400-acre fields and renting it out to farmers. On the other side of the canal the crops will not average five bushels per acre, while the land that is irrigated will average about thirty if not more. The farmers have been cutting hay up there and expect to have enough to do them, but not much to sell. On my way back I noted the crops at Stockton, Sacramento and Marysville. The crops are good in San Joaquin county and the farmers are in good spirits. Grain near Sacramento is good but hay is hurt. At Marysville the crops are not so good as they might have been. On Feather river and this side the water has overflowed the country so as to injure the crops. At Biggs Station the crops are as fine as could be expected. At Nelson's Station the grain will not be as good as it was last year and hay is scarce. The farmers have commenced haying in vicinity.

HIGH WATER.—The river continues to rise and much damage is done to crops growing on the lowest bottom land; as there is a large quantity of snow in the mountains, the river is likely to keep high for a month to come.

COLUSA.

THE SEASON.—Sun, May 23: It is the remark of everybody, that this spring has been the best for crops we have had for a number of years. We have had no north wind to speak of, while we have had showers enough to keep the late grain along. We had a slight rainfall yesterday. The grain all along the river is very high, and it was expected that much of it would fall down, but the farmers have been very agreeably disappointed in this respect.

CONTRA COSTA.

HAYING SEASON SHOWERS.—Gazette, May 23: We are now in the midst of the haying season, which promises good yield. As yet we have had none of the showers which usually come after hay cutting begins with us. But the indications of the past few days, and at this moment of writing, warrant a belief that they are close at hand and may drop on us at any time. Hay makers should therefore keep the cocks close up behind the mowers.

EL DORADO.

CROP PROSPECTS.—Mountain Democrat, May 23: The crops are in such condition that we may now anticipate the outcome. The reports are entirely satisfactory from all quarters, save from the lands opened to tillage this year on the Gonzales and Munras ranches, on which, as stated, that class of land known as "adobe" will yield nothing. Some say the failure is because of an excess of alkali, and others attribute it to overseeding, but, whatever the cause, those who undertook this portion, of what may be deemed an experiment, have failed. On the other lands of the ranches the prospect is good, the proportion of those failing being, as we understand, about one-third.

The prospect for an immense yield of fruit continues, and in order to save the trees from being wrecked under their immense weight, as well as to increase the value of the fruit, from one-quarter to one-half the fruit should be picked off during the next month. By doing so, that left upon the trees will grow much larger and have a superior flavor.

KERN.

CROPS.—Miner, May 23: The crops on South Fork look first-rate and the fields blossom as the rose and perfume the air for miles.

MENDOCINO.

WEATHER.—Democrat, May 23: Yesterday was warm and cloudy, with a few drops of rain, just imitative of tears when shed in limited quantity from bright eyes that felt a momentary aggravement. Our farmers say they are having a splendid growing season, and all looks lovely. After the above was in type the water came down sure enough, for a little while plentifully.

NEVADA.

THIN OUT.—Tidings, May 23: The prospect for an immense fruit crop in this county still continues. The trees are literally loaded with rapidly developing fruit and unless thinned out considerably within a month or two, such trees will be completely wrecked. Propping might save in some cases, but it is much better to thin out and thus insure larger and finer flavored fruit.

OIL FOR MOWERS AND HARVESTERS.—We would call the attention of farmers to Frank Miller & Son's machine oil, put up in patent cans. Now sold by hardware dealers on this coast, as advertised in the RURAL PRESS.

PERSONAL.—We had the pleasure this week of a visit from Mr. H. Alston, traveling correspondent for the St. Louis Republic, and agent for the Pacific Rural Press, the Grangers' organ for this State, and one of the best edited agricultural papers in the country. Mr. Alston is an agreeable and pleasant gentleman, and we hope our Grange brethren will give him a kindly reception, if for no other reason than that he is soliciting subscriptions for the Champion of the Farmers' Rights.

The above kindly notice is from the San Luis Obispo Tribune. We must remind our friends that the Grangers have no official organs.

AUCTION SALE OF THOROUGHbred STOCK.—We would call the attention of our readers to the advertisement of the sale of thoroughbred and graded horses, choice dairy stock, high grade Durham bulls, heifers and steers; farming utensils, agricultural implements, at the ranch of M. L. Brittan, Redwood city, to take place on Wednesday, June 17. A free train will be run, leaving San Jose depot at 8:40 A. M., and return immediately after the sale. Tickets can be procured upon application to Crego & Bowley, No. 9 Merchants' Exchange.

We would call the attention of managers of butter factories and large dairies, to the advertisement in another column of the new Factory Churn, made by Porter Blanchard's Sons, Concord, N. H. The well known reputation of their celebrated churns, and the fact that they have expended much time and thought in making these new sizes, are sufficient guarantees that they are just what is needed in every first-class factory or large dairy. Read their advertisement.

CHOICE STOCK.—The U. S. Live Stock Exchange, 449 Fifth street, is now supplied with a large number of unusually fine stock. Durham cattle ("Bates' blood") and Berkshire swine are here on sale. A fuller notice will appear in our columns next week.

THE END-SHAKE THRESHER.—The following letter is from Wm. P. Harkey, Esq., Sheriff of Sutter county, referring to the value of the Lanfenberg End-Shake Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.
MESSRS. TREADWELL & CO., San Francisco.—Gentlemen: In regard to the Lanfenberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I used it throughout the season on a Russell Separator, which I had run previously with a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain. I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thresher.
WM. P. HARKEY.

FARMERS and others who are in want of any skilled or unskilled labor are referred to the employment office of A. Zeehandelaar, 715 Montgomery street, formerly of California Labor Exchange.

TREADWELL & CO.

We certify that the partnership of Treadwell & Co., doing business in San Francisco, California, is composed of Leonard L. Treadwell and James F. Place, who both reside in the city and county of San Francisco, and William O. M. Berry, who resides in Oakland, Alameda county, California.

San Francisco, Cal., May 26th, 1874.
LEONARD L. TREADWELL,
JAN. F. PLACE,
WM. O. M. BERRY.

STATE OF CALIFORNIA,
CITY AND COUNTY OF SAN FRANCISCO.

On this May 27th, 1874, before me Henry C. Blake, a Notary Public, in and for said city and county, personally appeared Leonard L. Treadwell, James F. Place and William O. M. Berry, known to me to be the persons whose names are subscribed to the within instrument, and each acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

Kentucky Sales of Short-Horn Cattle for 1874.

	No. Head.
Hughes & Richardson, Lexington, July 22.....	50
Wm. Warfield & Co., Lexington, July 28.....	140
B. F. & A. Vannatter, Winchester, July 24.....	50
J. V. Grigsby, Winchester, July 25.....	50
I. O. Robinson, Winchester, July 27.....	40
Warlock & Megibben, Cynthiana, July 28.....	80
F. J. Barbee, Paris, July 29.....	60
C. M. Clay Jr., Paris, July 30.....	90
J. Scott & Co., Paris, July 31.....	70
J. Sudduth, Newtown, Aug. 1.....	40

The above sales comprise all of the most popular families of Short-Horn Cattle in America, and many imported animals.

Apply to the above addresses for their Catalogues.
m30-5w

RARE CHANCE.

Fruit Garden and Homestead for Sale.

About 30 miles from Stockton, a fine Fruit Garden of 2½ acres of land, with good house of six rooms. Garden contains about 200 Fruit Trees of choice kinds, such as Peach, Pear, Plum, Pomegranate, Blue and White Fig, Black Limes, Apples, Grapes and Orange, Almond and Black Walnut. A nice place and an abundant harvest of fruit. Good market. A rare chance to step into a good homestead and profitable business. Title perfect. Warranted deed. Price, \$1,800. For further particulars, inquire at this office.
227-5t

NOTICE.

TO THE SUBSCRIBERS TO THE CAPITAL STOCK OF THE GRANGERS' BANK OF CALIFORNIA.

Notice is hereby given, that at a meeting of the Directors of the Grangers' Bank of California, held this 23d day of May, A. D. 1874, the first instalment of ten per cent. on the capital stock was levied, payable in U. S. Gold Coin on or before the first day of July, 1874. Payable at the office of the President, 320 California street, San Francisco. By order of the Board.
m30-5t ALFRED F. WALCOTT, President.

GEO. H. TAY & CO.,

614, 616 and 618 Battery St., S. F.,

OFFER FOR SALE

IRON PIPE,
BLACK and GALVANIZED.

PUMPS—LIFT AND FORCE.

RUBBER HOSE, ETC.

STOVES and RANGES,

THE RICHMOND RANGE,

THE HENRY CLAY,

THE EMPIRE CITY,

THE ALVARADO.

THE MONITOR, wrought iron body, cast iron top and hearth, will cook for 50 to 500 men; an excellent stove for large ranches during harvesting season.

AND A GREAT VARIETY OF

COOKING STOVES and RANGES, FARMERS' BOILERS and CALDRON KETTLES.

Ralph's Patent Oneida Cheese Vats.

DAIRYMEN'S GOODS,

MILK PAILS, PANS, CHEESE HOOPS, ETC.

BARBIT METAL.

Wire for Fencing and Baling.

ALSO, METALS, HOUSE FURNISHING HARDWARE, JAPANNED GOODS, ETC., ETC.
227-3m



A. G. STONESIFER,

BREEDER OF

Pure Blooded French Merino Sheep,

Has for sale a choice lot of Rams and Ewes, on the Orestima Ranch, six miles west of Hill's Ferry, Stanislaus County, Cal.
227-3m

WEDNESDAY.

WEDNESDAY.....June 17, 1874.

AT 11 O'CLOCK A. M.,

—AT—

M. L. Brittan's Ranch, Redwood City.



WE WILL SELL,

By order of M. L. Brittan,

HORSES.

73 head of Hambletonian, Clydesdale and Graded Horses, and Thoroughbred Brood Mares.

CHOICE DAIRY STOCK.

75 head of Dairy Cows, High Grade Durham Bulls, Heifers and Steers.

The train will be run from San Jose depot, Market street, and return immediately after the sale. All persons wishing to attend the sale will apply for tickets and catalogues at our salesroom, or at the depot on the morning of the sale. Train leaves at 8:40 A. M.

CREGO & BOWLEY,

Auctioneers.

Cotswold Bucks For Sale.

About three hundred Bucks, half and three-quarter bred Cotswold, and a few Thoroughbreds, for sale at low Prices.

REFERENCES:

MOODY & FARISH, San Francisco.
SHIPPEE, McKEE & CO., Stockton.

Orders left with the latter firm will receive prompt attention.

A. VROMAN,

Jenny Lind, Calaveras Co., Cal.

FINE EWE GOATS FOR SALE

At Half Price. Apply to

SAM. MEYER,

Healdsburg, Cal.

For the very best Photographs go to BRADLEY & RULOFSON'S GALLERY, with an "Elevator" 429 Montgomery street, San Francisco.
227-6m

SEEDS!

SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER,
WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-ly16p

SAN FRANCISCO.

SEEDS.

PLANTS.

OF EVERY VARIETY.

Fresh and reliable, such as experience and care only can select.

S GRASS AND CLOVER SEEDS, KENTUCKY BLUE S
GRASS, HUNOARIAN, ORCHARD, ITALIAN S
E RYE, RED TOP, TIMOTHY, MESQUIT, E S
E SWEET VERNAL, CHOICE CALIFORNIA E
D ALFALFA, WHITE CLOVER, RED CLOVER, D
D ETC. RAMIE, JUTE AND TOBACCO SEEDS. D
S ALSO A FINE AND COMPLETE COLLEC S
STION OF TREE SEEDS, AUSTRALIAN BLUE S
Guin, Sequoia Gigantea, Sequoia Semperviva, etc.

For Sale, wholesale or retail, by

B. F. WELLINGTON,

(Successor to E. E. Moore).

425 Washington St., San Francisco.

22v7-ly

FACTORY CHURNS.

At the urgent request of some of the prominent dairymen of the country, we have designed and made two sizes of FACTORY CHURNS which we believe to be every way adapted to the wants of Butter Factories and large Dairies where power is used.

THE NEW NO. 8

Is intended to churn from 50 to 75 gallons of cream, and the No. 9 from 75 to 150 gallons at a time.

They are just the article needed, and may be obtained through any of our agents or directly from us.

Prices and details sent on application to the Sole Manufacturers,

PORTER BLANCHARD'S SONS.

m30-4t

Concord, N. H.

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.

EMDEN GESE,

58 pounds to the pair, at maturity.

Eggs for Sale Now.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGERS, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address:

M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.
17v7-2m-16p

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure Whitefaced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-tf-16p2

EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz; Buff Cochins, \$3 per doz; White Faced Black Spanish, \$4 per doz; White Leghorn, \$5 per doz. Buff Cochins and Light Brahms Fowls for sale. Address: G. A. DEAN, Pacific Straw Works, 335 Bush St., San Francisco.
12v7-3m-16p

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILLIPS,
11v7-1m 608 Clay street, S. F.

Stock Notices.



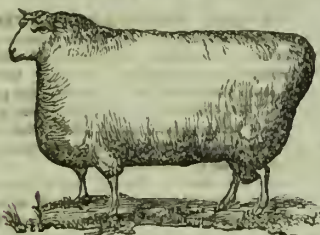
Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado county,
California.

11v6-eow

U. S. LIVE STOCK EXCHANGE, CORNER OF FIFTH AND BRYANT STREETS, S. F.

Cattle, Sheep, Milch Cows, Hogs and Horses sold on commission or bought on farm for cash.

Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State. Thoroughbred Durham Cows wanted. Address,

DAWSON & BANCROFT, 449 5th St., S. F.
Special rates to members of the Grange. m9

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Homs. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 8v7-3m

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,
San Rafael, Marin Co., Cal.

17v7-3m

FOR SALE.

25 full blooded Spanish Merino Bucks, one and two years old, from stock imported from Addison county, Vermont, in 1872. Call and see, or address,
B. F. WATKINS,
Santa Clara, Cal. m9-2m

JERSEY CATTLE.

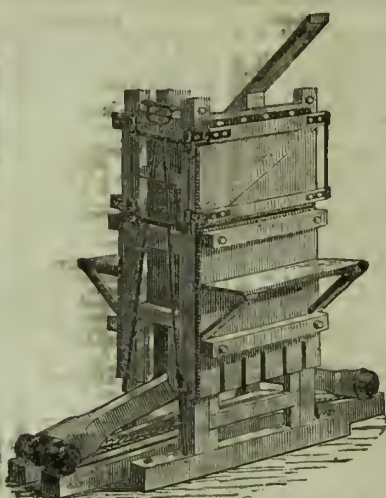
A few head of very choice Jersey Cows—Heifers and Bull Calves—for sale. Apply to
R. G. SNEATH, Menlo Park. 15v7-3m

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.
WILLIAMS & MOORE, Prop'rs.
Stockton, Cal. 3v7-3m

"THE EAGLE HAY PRESS." THE KIMBALL MANUFACTURING COMPANY, OWNERS OF THE PATENT AND SOLE MANUFACTURERS ON THE PACIFIC COAST, COR. FOURTH AND BRYANT STS., SAN FRANCISCO, CAL.



Several years were devoted by the patentee to the perfection of this powerful press. Its unprecedented sale at the East induced the Kimball Manufacturing Company to introduce them in California and the Pacific States.

During the past season a number of important improvements have been made, in order to gain all the power desired in condensing the weight and size of the bales. The wood and iron of the frame have been increased and strengthened, and it is now the most perfect and powerful press in use.

It Possesses Other Advantages:

Being cheap, simple to manage, with no intricate machinery to get out of gear, thus losing time waiting for a new piece.

All who have used these presses pronounce them superior to anything used heretofore.

The power applied by means of two levers increases in ratio to the resistance; and as the levers approach a perpendicular position, the power can be scarcely estimated.

Three men, with one horse, can bale from ten to fifteen tons per day; each bale weighing from 300 to 350 lbs., using less rope than any other press.

When a bale is pressed and fastened, the follower runs down of its own weight and the bales can be taken out on either side.

On account of its great power, it is well adapted to pressing hides, rags, cotton or moss.

The particular attention of wool growers is called to our improved Wool Press, constructed on the same principle, which was tested at the State Agricultural Hall, Sacramento, April 18th, 1871, and stood the test of a bale of wool weighing 550 pounds. Reference, Major Robert Beck.

These presses are manufactured in San Francisco by the Kimball Car and Carriage Manufacturing Co., who have a stock constantly on hand. Prices \$250.00 for Hay Presses; \$350.00 for Wool Presses. Weight of Hay Press, 2,500 lbs.; Wool Press, 3,500 lbs. Can be shipped in pieces or set up. 13v7-2m-3m



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the



THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY, Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

SEVERANCE & PEET.

Importers and Breeders of Spanish Merino Sheep.

10v7-eow

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7 6m

TIPTON & BURTT'S

MEDICINAL

SHEEP PREPARATION,

Warranted FREE FROM ALL POISON. A sure and positive cure for SCAB, TICKS and LICE, and a sure promotion of the growth of the wool. It has been used in Tehama County for the past two years, with most gratifying results, and we have the pleasure of referring to the following gentlemen as to its merits, viz.: H. A. Rawson, Jas. Gooch & Bro., J. W. Montgomery, J. Ehy, Curtiss & Brown, H. Bosauka, Jos. Cone, J. W. Gate & Sons.

It is a liquid and put up ready for use in 2½ gallon tins, four tins in a case.

WHITTIER, FULLER & CO., Sole Ag'ts,
21 Front street.....SAN FRANCISCO.
25 K street.....SACRAMENTO.
18v7-3m

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m

304 California Street.

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,

OIL Cakes and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.
Office, 3 and 5 Front street.
Works, King street, bet. Second and Third. fel5-eow

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID & ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot-Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

The STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kane's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Blueing, Harrow Soap, Thomas' Cool Water Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Colognes, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street,
16v7-3m SAN FRANCISCO, CAL.

SOMETHING NEW.

NO MORE BROKEN EGGS.
Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,
Union Box Factory, No. 114 and 116 Spear street,
Agents for the Pacific Coast. 11v7-3m

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.
PIERCE & CO., 621 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F. 14v7-3m

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO.,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,



Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with Dropper.

World Reapers, and Mowers with Dropper and Hand Rakes—side delivery.
Clipper Mowers and Reapers, with Dropper.

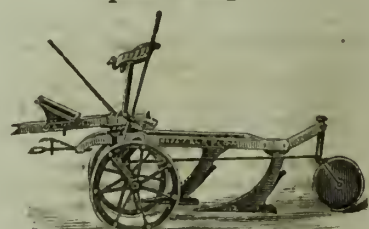
Cayuga Chief Mowers and Reapers.
Sulky Rakes—Furst & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps;
Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators,
Mortise Head Hay Rake, Scythes and Snaths.

Soule, Ketsinger & Co.'s First-Class Farming Tools,
Gold Medal Forks, Hoes and Rakes,
Batchellor's Forks.

Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,
Road Scrapers,

Canal and Garden Barrows,
Hay Cutters—Burdick's
National, Belcher & Taylor's
Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Headley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & CO., San Francisco.

MATTESSON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over crude knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m MATTESSON & WILLIAMSON, Stockton, Cal.

THE CELEBRATED MITCHELL WAGON



O. CREGO. S. O. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO.

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey;
Heifield & Jackson, Rahway, New Jersey;
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harnesses, of the most celebrated makers:

O. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, 24v5-3m San Francisco.

BYRON JACKSON,

MANUFACTURER OF

Patent Self-Feeder & Elevator Attachment

For Separators, at the Yolo Planing Mill and Machine Shop, Woodland, Yolo County, Cal.

This improvement was patented in 1867 and in 1870. For the past two years I have been introducing it to the public with great success. It is pronounced by all that have tried it to be the greatest labor saving invention of the age. No Thresher will be without it after witnessing its operation. It saves all the hard work of feeding and injury to health, and one-half the labor required to supply the grain from the stacks. It will pay for itself in less than thirty days, besides doing better work. For particulars send for circular; it gives all necessary information, besides the best plan for using the Horse Forks ever adopted. Entire satisfaction guaranteed if properly used. 21v7-3m

WATERHOUSE & LESTER.

IMPORTERS OF

WAGON AND CARRIAGE MATERIAL,

BODIES, CARRIAGE PARTS.

Wheels, Axles, Springs & Carriage Hardware

SOLE AGENTS FOR THE PACIFIC COAST FOR

Clarke's Adjustable Phaeton Sunshades.

Send for price list.

ALSO AGENTS FOR

Woolsey's Patent Wheels,

The best and handsomest Wheel made, having great strength and a fine finish. There is no other wheel that has the metallic-shouldered band; and it can be repaired as easily as the common wood wheel.

Send for illustrated circular. Address

WATERHOUSE & LESTER.

122 and 124 Market street, and } SAN FRANCISCO.

19 and 21 California street, } SACRAMENTO.

17, 19 and 21 Seventh street, } 21v7-3m

H. C. SHAW,

STOCKTON, CAL.

Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros."

General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Geared Headers.

The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW, 14v7-3m Box 95, Stockton, Cal.

WM. ZARTMAN & CO., CARRIAGE AND WAGON MAKERS,

COR. ENGLISH & HOWARD STS., PETALUMA. Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate. SPECIAL RATES TO GRANGERS. 12v7-3m

The "Planet" Double-wheel Hoe will work Onions, Roots, Garden Crops, Cuttings, Seedlings, etc., closer, better and six times faster than the hand hoe. CIRCULARS FREE. S. L. ALLEN & CO. 119 S. 4th St., Phila., Pa. A LIVE AGENT WANTED IN EVERY TOWN!

NURSERY NOTICES.

O. W. CHILDS.

Horticulturist—Los Angeles, Cal.

Has for sale as per catalogue the following varieties of trees, adapted to the climate of California.

ORANGE TREES, BUDDED AND GRAFTED;

ORANGE TREES, SEEDLINGS;

LEMON TREES,

LIME TREES,

CITRON,

SHADDOCK,

POMEGRANATE.

ITALIAN CHESTNUT—This tree is unsurpassed for beauty, and very prolific. The Chestnuts are delicate in flavor and very large, and an almost endless variety of rare, useful and ornamental trees.

Send for priced Catalogue. 24v6-6m

Ornamental and Evergreen Trees for Sale at the Old Maple Leaf Nursery.

I have now on hand the largest and best varieties of ornamental Evergreen Trees, Fruit Trees of all kinds, also a large lot of the Blue Gums, from six inches to 12 feet high, at from \$4 to \$100 per hundred. A large lot of Cypress, Vines and Junipers of every kind. Green House Plants and a large quantity of Roses, Maple and Laburnum Trees for street planting. I would call the attention of the trade to a large quantity of Australian and African Timber Seeds, and especially Cedrons Deodare, or Deodar Cedar Seeds.

L. M. NEWSOM,

East Oakland, 12th St., near Tubb's Hotel. Send for Catalogue. 14v7-3m

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, W. H. & G. B. PEPPER, Petaluma, Sonoma Co., Cal. 21v6-1y

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Tinley Peach, Georgia Freestone Seedling, the first offered in the States its flavor being richer and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

Address, BRYAN & DOMINGOS, P. O. Box 151, Sacramento, Cal. 4v7-2m

THE CELEBRATED NEW DRAW-FEED

WHEELER & WILSON

SEWING MACHINES

Are without exception the most desirable for family use. They are the LIGHTEST RUNNING Machine in the market, and sew from the thinnest to the thickest material with equal facility.

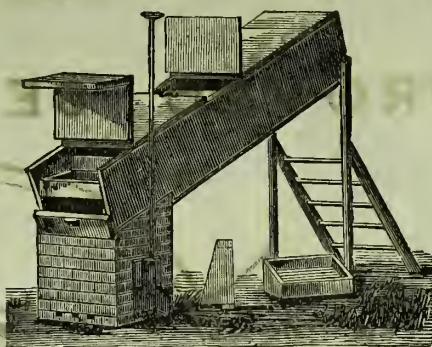
These machines have, since their invention, stood at the head of the list in public favor, and the recent improvements to them have increased their superiority still more. Buy no Sewing Machine until you have tried these.

WHEELER & WILSON MAN'G CO.

E. W. HARRAL, Agent,

20v7-4m-15p 427 Montgomery street, S. F.

Ryder's American Fruit Drier.



This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent, 306 California street, San Francisco

THE CELEBRATED SLUTHOUR PUMP.



Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING and THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from 1/4 to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.

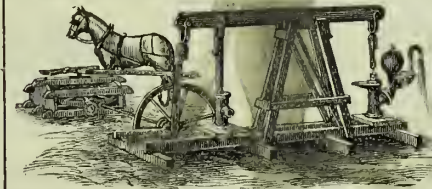
Agents for Eastern Manufacturers, 306 California street, San Francisco.

VINE AND FRUIT GROWERS,

TO RAISE LARGE CROPS

YOU MUST IRRIGATE. To irrigate successfully, you must have the power that does not give out when the wind fails.

Laufkotter Bros. & Churchman's Horse-Power,



(PATENTED FEBRUARY 13TH, 1872) Never fails to supply more water than four or five Windmills, even supposing you had all the wind you want. It is also suitable for running light machinery, such as Barley Cracks, Corn Shellers, Fanning Mills, Grain Separators, or for Sawing Wood. They are never failing, cannot get out of order, easily worked, substantial, and always give satisfaction wherever they have been used. One horse can easily work two 6-inch pumps, with a continuous flow of water. Force Pumps, from 3,000 to 10,000 gallons per hour. WINDMILLS of all kinds manufactured to order. Wells Bored, Windmills and Horse-Powers set in any part of the State, and repairing of all kinds done. Manufactured and for sale by

LAUFKOTTER BROS.,

Cor. J and 10th Sts., Sacramento.

20v7-2m-3m

THE ALDEN

Fruit Preserving Company OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.

W. M. WHERRY, Vice-President.

FRANK PYLE, Sec'y and Supt.

BANK OF CALIFORNIA, Treasurer.

11v7-6m

H. K. CUMMINGS, 1858.

H. R. BALSTON, 1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1868.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1y

LANDS & HOMES FOR SALE

FOR SALE.

A FIRST-CLASS DAIRY FARM & STOCK RANCH,

Situated in Lake county, twelve miles from the flourishing town of Lower Lake, immediately on the road from Lower Lake to Bartlett Springs; containing 880 acres of land, 400 acres of which is choice grain land, 80 acres of the best natural clover land, and the balance good pasture land, all of it under good fence and divided in seven divisions; abundance of water in every part of it, also well timbered. Title perfect—U. S. patent. This ranch is situated in the healthiest part of California, and has been used as a dairy ranch, where the celebrated Durst's Clear Lake cheese has been manufactured for a number of years, and is well adapted for that purpose, as also for grain, sheep and cattle raising. There is on the place a splendid dwelling-house, only built two years; two large barns, cheese and milk houses, other out-houses and corrals, and water very handy in abundance. Price, \$10,000; only one-third of the purchase money required to be paid down, balance can stand to suit purchaser at a reasonable rate of interest. There is also for sale 60 first-class dairy cows, all the dairy and farming implements, harness, etc., at a reasonable price. For further particulars inquire of J. DURST, on the premises; JOSH. GETZ & BROS., Lower Lake; or GETZ BROS. & CO., 513 Front St., San Francisco. m23-1m

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 33,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,

542 MARKET STREET,

N. E. Cor. Montgomery.

1p25-tf

FARM FOR SALE.

165 ACRES 1/2 mile from the town of Windsor; 1 mile from depot; 2 1/2 miles from the famous Russian river. The place is beautifully situated; and all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and outhouses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2500 cords of black oak timber; and wood brings \$3 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to JOSEPH DIMMICK, P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap18-1t

RANCH FOR SALE.

BY VIRTUE OF AN ORDER OF the Probate Court of the city and county of San Francisco, the undersigned will sell the Ranch of the Estate of H. Rush, deceased, in Solano county, consisting of about 4,000 acres of farming land, bordered by 1,200 acres of tule land, three-fourths of entire tract inclosed by Snisun Slough, having landing on same for vessels from San Francisco. Terms reasonable. For particulars inquire of H. F. CRANE, 729 Montgomery street, or D. BALLARD, 106 Davis street, San Francisco. SARAH E. RUSH, Administratrix. m9-1m

DAIRY RANCH FOR SALE,

Near San Luis Obispo, well stocked and fenced, with fine improvements. Plenty of wood and water.

Apply to T. H. HATCH & CO.,

320 Front street, San Francisco.

Or, R. M. PRESTON, Old Creek, San Luis Obispo. 20v7-3m

FOR SALE.

A splendid HOP RANCHO, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,

ap18-tf 329 Montgomery street, San Francisco.

FOR SALE.

100 Acres of Good Land.

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-tf P. H. SUMNER.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4.

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

SMALL FARM IN SONOMA FOR SALE.

A farm of 70 acres, handsomely improved, with orchard and vineyard, and 25 acres in wheat, plenty of wood and water, etc., situated within one and a half miles of the town of Sonoma, and same distance from the steamboat landing; price moderate; terms easy. Apply to BERRY & CAPP, 418 Montgomery street, Real Estate Agents. 20v7-1m

San Francisco Employment Office,

NO. 606 CLAY STREET,

Crosett & Co., Proprietors.

(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.

Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP, on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. ap18-1t

ATTENTION! GRANGERS, ATTENTION!

WEED.

THE BEST

WEED.

IMPROVED SEWING MACHINE.



SPECIAL ARRANGEMENTS WITH THE ORDER THROUGH MR. I. G. GARDNER, AGENT OF THE STATE GRANGE.

THE MANUFACTURING INTERESTS ARE IDENTICAL WITH THOSE OF THE PEOPLE.

- THE -

WEED SPEAKS FOR ITSELF.

All purchasers have the privilege of returning their machines at any time within thirty days and having their money refunded if the machine should not prove in every way as recommended, provided only that they will first notify us of any fault they may find and give us an opportunity to set them right by explaining the cause of the difficulty.

A. MEAD & CO., General Agents,

No. 152 New Montgomery Street.

SAN FRANCISCO.

PATRONIZE THOSE WHO SUSTAIN YOU.

9 9 9 9 9 9 9 9 9 9 9
GROVER & BAKER'S
IMPROVED
LOCK STITCH
SEWING MACHINE.



No. 9.

SIMPLE, DURABLE,
LIGHT RUNNING, RAPID,
EASILY OPERATED,
Accurate and Perfect
in Principle,
Beautiful in Appearance

In every respect the best and most popular
Lock Stitch Machine made.

R. G. BROWN, Agent,

116 Montgomery St., San Francisco.

25v6-1am-8a

9 9 9 9 9 9 9 9 9 9 9

PURCHASERS please say advertised in Rural Press.

CALIFORNIA DEEP-WELL PUMP.

(DOUBLE-ACTING.)

This Pump, as its name indicates, is a CALIFORNIA INVENTION, patented July 15th, 1873.

It is well known to farmers and others who use BORED WELLS, that a single-action submerged pump, the only one heretofore adapted to bored wells, when run by horse, steam or wind power, owing to the burden of the work being thrown upon one stroke, gives an uneven strain on the machinery, and causes a thumping or jerking action injurious to it. Various devices have been used to remedy this evil, but none with entire success.

WITH THE

CALIFORNIA DEEP-WELL PUMP

This difficulty does not exist; being DOUBLE-ACTING AND SUBMERGED, it fills on every stroke at any practical speed, thus keeping the strain on the machinery equal and constant; and the weight of the water raised increasing with the speed, operates as a brake and prevents the wind-mill from "running away." This pump

CAN BE USED IN ANY POSITION

In which a pump is needed, and its construction is such that its inside diameter or bore need be but one inch less than the diameter of the well casing. This pump is admirably adapted to situations exposed to freezing; for by having a small hole in the conducting pipe below the freezing point, the water will recede to this point when the pump is at rest. The pump is constructed of brass and iron, so that no corrosion can occur from contact of iron with iron.

Fig. 1, represents the pump suspended in a bored well; and Fig. 2, represents a transverse-vertical section of it.

No. 2. Inside diameter 3 inches. Conducting pipe 1 1/2 inches. Will raise 950 gallons per hour. Price, \$25.
No. 3. Inside diameter 4 inches. Conducting pipe 2 inches. Will raise 2,100 gallons per hour. Price, \$35.

BRITTAN, HOLBROOK & CO.,

111 & 113 California St., San Francisco.

15v7-1am-3to-10p

GENERAL AGENTS.

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than Poor Ones!



OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

A few trills of imported Dark Brahmas, of the celebrated Black Prince strain, for sale at \$80 per trio. Also, one trio imported Golden Pouter, at \$90. For further information send stamp for illustrated Circular, containing a full description of all the best known and most profitable fowls in the world, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco.

9v71f

W. M. BRANDON.

JACOB W. ROGERS

BRANDON & ROGERS,
California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO,

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

Or O. J. CLAYTON, Clayton, Contra Costa Co., Cal.

10v7-6m



Volume VII.]

SAN FRANCISCO, SATURDAY, JUNE 6, 1874.

[Number 23.]

Reclamation of Swamp Lands.

At a recent meeting of the California Academy of Sciences, Mr. Chas. D. Gibbs, C.E., read a paper on the "reclamation of swamp lands." Mr. Gibbs is an old resident of California and has had great experience in the tule lands of the State. The various modes by which swamp and overflowed lands may best be reclaimed and brought into a state of cultivation will, of course, depend on many circumstances of which the nature of the soil is one of the chief considerations; also the rise and fall of the tides; together with sluices of sufficient capacity and properly placed to drain the land at least 18 inches below the general level of the surface. There are essential conditions on which alone the work of reclamation can be commenced.

This subject divides itself into so many branches, each so important, that we can only give a few condensed remarks from Mr. Gibbs' paper, in the hope of their being useful to those who are reclaiming; and to show some of the errors in the present manner of draining.

Drainage.

The first thing to be examined is the difference of level between the interior of the land to be drained and the bank of the slough or river on which the dike is to be constructed, in order to know the required depth of the ditch to enable it to keep the waters down to a level of 18 or 20 inches below the surface of the interior; for unless drainage is perfect the reclamation and cultivation are hopeless.

Frequently one or more small sloughs extend into the interior, which are of great advantage, forming a natural reservoir and drain for discharging the surplus water at every low tide.

The difference in the level of the land is frequently two or three feet.

Tide.

The next thing to be considered is the tides. In each lunar day of 24h. 50m. there are generally two high and two low tides, which are unequal in height and occur at unequal intervals.

In a series of observations on the tides, taken by me last summer on the coast, in San Mateo county, the result of one day shows that, commencing at low water large, it rose to 4.1 feet to high water small, then fell 1.7 to low water small, then rose again 4.3 feet to high water large; making a total rise of 6.7 feet, then fell 7.5 to low water large.

Now for some distance above the confluence of the Sacramento and San Joaquin rivers, the greatest rise and fall of the tide is six feet; high water small would average perhaps 3½ feet above low water large; and low water small about two feet above. A flood gate at a level with the lowest water would be most of the time under water and therefore afford but a very short run in the discharge of the water.

Flood Gates.

In the attempt to reclaim our tule lands, the flood gates have been a great source of trouble and expense, from the imperfect manner in which they are constructed and secured; in many places no calculation having been made for the amount of pressure they have to sustain; they frequently give way, and the sluice box is sometimes canted with one end four or five feet lower than the other. The reason is evident.

I speak now more particularly of the large sluices at the mouths of sloughs that are dammed they have generally been made of an open box 20 or 30 feet in length, 10 or 12 feet wide, and placed at the level of low tide. The levee being five or six feet high gives a gate, say 10 feet wide, 12 feet deep and three or four inches thick. This heavy gate, equal to about one-half a ton, is placed in the center of the box; consider now what a loss of power a small body of water, perhaps only one or two feet in depth, has, to raise the gate in discharging. But this is not the only error. We come now to the

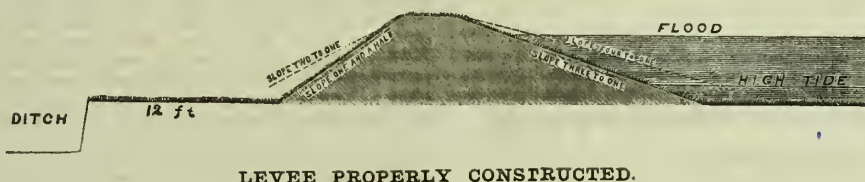
Pressure of Water.

The weight of a cubic foot of fresh water is 62½ lbs. Water standing in an enclosure presses with equal force on the bottom and the

sides of the junction, but the force on the sides will be in compound ratio of its depth. The pressure of a column of water a foot square, and six feet deep, equals 375 lbs., but the side pressure equals 1,312½ lbs.

Suppose we have an open sluice box 20 feet in length by ten feet wide with the gate in the center, 10x10 the square of the bottom outside of the gate=100 sq. feet x375 lbs.=37,500 lbs. or 18½ tons; and the pressure of each column 1,312½ lbs. x10 feet wide=13,125 lbs., or 6½ tons on the gate; width of water has no influence on side pressure.

Now, we generally find that these sluice boxes stand for some time until the water inside is reduced to the level of low tide, when, there being no resistance on the inside of the gate to counteract the enormous pressure outside, it gives way gradually day by day, until at last it is not surprising that it sinks outside and cants up inside; particularly when there is no sheet piling, only some inch or one and a half inch



boards six or seven feet long put in the mud and tacked on at each end.

The same case occurs with the dams unless made sufficiently strong to stand the pressure, which against a dam 100 feet in length is at high tide about 65½ tons.

We have been referring to quiescent water; but in considering the force of waves driven by wind, the pressure of flood tides, or the strength of a strong current against the embankment or flood gates, a large allowance must be made; it is scarcely possible, however, to reduce them to calculation, but we may safely add one fourth to the pressure. Great care should therefore be taken in selecting a site for a dam or flood-gate to avoid those spots that are exposed to any great currents or rush of tidal waters, particularly where a stream suddenly narrows, as the tide comes up very strong; and also to its exposure, with respect to the prevailing winds.

Where fresh water swamp lands are adjacent to high land, catchwater drains should be made to intercept the upland or external waters and conduct them off to a separate outlet.

Proper Level of Small Sluices.

The small sluices from the ditches or drains inside of the levee should be placed, if possible, sufficiently above the ordinary low water, to allow it to have five or six hours' run between tide and tide, beginning at half ebb and continuing to half flood tide; if placed at low water, the gate would be shut sooner by return of tide, although so long as weight of the water inside is greater, so long will it continue to run.

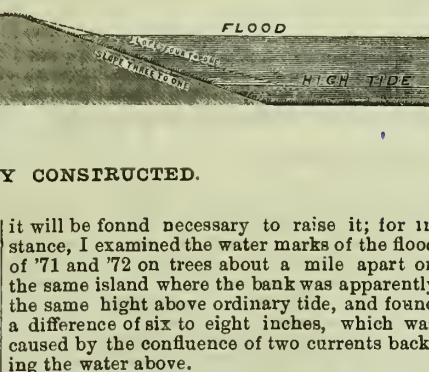
The best level therefore to afford the longest run, is probably between the mid-tide level and the lowest low water, or in fact as high as it will admit to drain the low land in the interior, 18 or 20 inches. The trunk or box sluice has been used in the rice fields of South Carolina upwards of a hundred years, and has been found to answer better than any other. A good size for our use is about six feet wide by eighteen inches deep, with self-acting tide gates; if made of redwood and put in properly, they would last a long time, stand firmer, and are not liable to be thrown out of level by the pressure of water. They should be put down while you are making the embankment, as it is useful in keeping the land drained, and so facilitate the work. It is now more than twelve years since I furnished these plans to a gentleman on the San Joaquin, who found them to work well on his place.

The trunk dock connecting the outer end of the trunk with the river, should be wider than the sluice box, so as to allow the free egress of the water, and should also be deeper than low tide. The flood gates now being in place we can proceed to build the

Levee.

The materials of which the embankment is to be constructed will govern in a great measure the other requisites to be attended to in its formation. These materials differ essentially on the San Joaquin and Sacramento rivers in different localities. On the San Joaquin we generally find a sod or turf of a peaty formation, which shrinks when dry about one-third; becomes very light and can either be burnt up or float away, while on the Sacramento it is composed of two kinds. In some places the turf has a sedimentary deposit of clay, which makes it firmer, heavier, and not so liable to burn. In other places the banks of the river are sandy, which is the most difficult material to manage, and the least to be depended on, and melts away like sugar in water.

The first consideration is to determine the height of the levee to keep out the ordinary summer freshets, but it will not answer to have the levee of the same level, for in certain places



it will be found necessary to raise it; for instance, I examined the water marks of the flood of '71 and '72 on trees about a mile apart on the same island where the bank was apparently the same height above ordinary tide, and found a difference of six to eight inches, which was caused by the confluence of two currents backing the water above.

Having determined the height that you wish to construct your levee add at least one-fifth for shrinkage and build it the proper height at once.

The distance from the ditch to the inner slope of the levee should be at least 12 or 15 feet, and from the outer margin to the river not less than 30 feet, and in some cases more; but it will depend a great deal on the formation of the bank, exposure to currents and winds.

The inner slope should be 1½ to 1; and the outer slope not less than three to one, or follow nature as far as possible, as the downward pressure of the water will assist to keep the levee in place, and the broader base will enable it to resist the inward pressure, which with a flood of five feet on the level will equal 45½ tons on every hundred feet in length, without allowing for the force of the current or wind. [The cuts on this page show the proper method of constructing levees and the improper method on which many are making them now. —EDS. PRESS.]

Whilst the levee is yet wet, sow mesquit or Bermuda grass seeds on it, either of which will form a good sod to protect and bind the levee together and prevent it from cracking; also would form a good pasture for a few sheep or Angora goats.

Care should be exercised in running ditches into the interior; first the ground should be examined that you do not cut through float land, second to ascertain the level; for I have known a contract let to Chinamen to dig a ditch three feet deep, and when completed the water ran back and flooded the low land. Unless your levees and flood gates are properly constructed it is only a waste of money to attempt reclamation.

THROUGH FREIGHT ARRANGEMENTS COMPLETED FROM THE ATLANTIC TO THE PACIFIC.—The officers of the Union Pacific and Central Pacific railroad companies and the Chicago, Burlington and Quincy railroad company for the Iowa lines have adjusted freight matters, and arranged for a direct through line between the Atlantic cities and the Pacific coast. The line will have active representatives in all the principal eastern cities, and will guarantee rates and time to take the business. Freight by this line will be delivered in California at the contract rates, and so far as possible without transfer en route.

Potato Blight.

Sad news comes to us from what is known as the "early potato district" of California. This district extends from the toll house on the ocean house road to the Half-Moon bay; embracing a country of twenty miles in length and from four to five miles in width. Not more than a week has elapsed since these fields gave every promise of a good healthy crop of potatoes; but at our present writing whole fields are completely ruined; the blackened, withered vines, looking as though their nourishment were suddenly withdrawn, or had even been subjected to fire. As yet but few of the tubers show signs of decay, but, even though the devastation comes from above the ground, and the tuber be perfectly healthy at the appearance of the blight, it cannot be expected to survive after having the vines thus removed in their growing vigor. A few of the tubers already show unmistakable indications of rot; in fact both vines and tubers are represented as being in a condition similar to those prevailing in Ireland during the potato famine there, and in the Eastern States during a period of several years' duration.

It is supposed by several that a few days of close and sultry atmosphere, in the early part of last week, produced the blight among the vines. In the morning especially this condition of atmosphere prevailed. The worst seasons of potato blight at the East were during the prevalence of just such mornings, preceded by warm, sultry nights. It will also be remembered by those acquainted with the history of the potato-rot at the East that early potatoes were the greatest sufferers by the blight; and that during some seasons, when the early potatoes were almost entirely destroyed, the late crop was comparatively good; the later the better.

The present blight has already assumed the form and dimensions of a calamity in the district where it has appeared, and the losers will have the sympathy of the whole community; but there is no occasion for a general panic. For even though the potato-rot visit us our State in its worst form, and remains with us as long as it did in Ireland, or in the Atlantic States, there will be no possibility of anything like a famine. Individual losses would, of course, be great, perhaps more ruinous here than at the East, for here it is the only or the main reliance of those who raise this crop; while there it is an item only, and other food, produced on the same farms, can supply the place of the potato.

This calamity, even though it progresses no further, is greatly to be regretted; but while anticipating its worst extremes we have abundant cause for rejoicing in the almost certainty of an ample and cheap substitute in the wheat crop.

This startling announcement will very naturally set our friends to watching the condition of their growing crops of potatoes. We hope they will inform us of the results of their observations.

The Late Hot Winds.

The stifling winds of Friday and Saturday of last week, which caused San Franciscans to pant so perceptibly, were felt in most portions of the State. A degree of anxiety was apparently felt as to the probable effect of these unusually hot winds upon the grain crop; coming as they did at a time when it was particularly susceptible to such supposed injurious influences. But we are happy to announce that from every quarter, from all portions of the State, sufficient reports have been received to warrant the belief that the grain crop is almost unexceptionally uninjured. It is evident from the tenor of these reports from the grain fields, that their owners felt a most intense degree of anxiety; but a general relief and satisfaction is now expressed.

The citizens of San Francisco declare that the two or three days alluded to above, were the nearest approach to the regular "dog days" of the Atlantic States that they have ever realized in California.

Good chance for a threshing steam power. See advertisement on page 368.

CATTLE BREEDERS.

Stock Parades at Fairs.

EDITORS PRESS:—I notice that a motion made at the meeting of the California Thoroughbred Cattle Breeders' Association to do away with the daily parade of cattle at agricultural fairs, was lost.

This question has been considerably discussed amongst our breeders, but the most decided opposition to it comes from the managers and directors of our agricultural societies. These gentlemen state that the parade is the only "paying" part of the cattle show, and that were it not held, scarcely a soul would go among the stalls, and that it would therefore be more profitable not to have a cattle department at all, unless a parade was indulged in. This argument I consider decidedly weak, and will only answer it by inquiring why the sheep and hogs are not ordered around the track, and how it is that these attract a crowd of visitors, without this most "essential" parade and advertisement? I am confident that there are a great many more people, who visit the cattle in their stalls, and there make a careful examination of them and learn something by so doing, than there are those who are satisfied with a distant and most cursory glance at them in the parade and learn nothing. Were these parades done away with, and the grounds and walks about the stalls improved, so as to admit of persons moving about without discomfort, and without the risk of coming away with a most decidedly "cowy" smell, there is little doubt in my mind but that everybody would take pleasure in doing, what at present is done by only a portion of the visitors. It is well known that the object of holding these annual fairs is to publish the advance in agricultural matters, and by means of these exhibitions to bring forward the latest and most improved specimens of everything and anything appertaining to agriculture, inducing the public to draw comparisons, and where superiority is recognized, instructing it to profit thereby and convert it to general use.

Now then, for the best means of attaining the desired purpose with regard to the cattle department, and as a secondary consideration, I will add, for "making it pay." Is it by a parade that this is to be done? Can people learn anything by being perched on the top of a grand stand and looking down on a cow's back, as she walks past, from 20 to 50 feet below and 50 to 100 feet removed from them? If it were only one animal that was being shown, the spectators might retain some recollection of her "color," but where 100 are exhibited not even that much could possibly remain in their minds. It may be a pretty sight to see so large a number of show cattle walking round a mile or half mile track, but it is at great inconvenience and considerable expense to the exhibitor that it is done; and to the risk incurred by bringing so many cattle together. There is still more added by intermingling a number of high-strung stud-horses, as is invariably the case in half mile, and frequently even in mile tracks. Add to this the fact that the parade has not added one iota towards attaining the purpose for which the fair is held, and I believe that none but an agricultural society director will deny that the "daily parade" is wholly useless. These "daily parades" are nowhere in vogue excepting in California. Are our people so simple, so ignorant, that we must make use of "pretty shows" to call their attention to what is intended for their benefit? Do the exhibitors of agricultural implements have to paint "pretty pictures" on their plows, or stow away "music boxes" in some hidden work of their threshers to call the attention of the farming public to them? If not, why should the cattle-men be put to the inconvenience of making these "pretty shows" and marching round to the dulcet strains of a brass band?

To dispense with this, I would propose to the agricultural societies that they improve the surroundings of the cattle stalls, that a good gravel walk be made behind them, and that it be kept always clean. This is surely not asking too much, when our State Agricultural Society can get an appropriation of \$15,000 from the Legislature for the purpose of building a gravel stand on the race track. Moreover, I would request such of our agricultural societies as can afford it, and those of Sacramento, San José and San Francisco can most certainly do so, to build us amphitheatres, with rings of about 200 feet diameter for the exhibition of cattle and draft horses; said exhibitions to be made by classes only, and the cattle or horses to be brought there only as often as the judges may require and kept only until decisions have been arrived at and premiums awarded. When all the prizes have been awarded, then, and not until then, have a parade of the premium animals, and let the rest remain in their stalls. A pleasant walk amongst the cattle, and the interest that will attach to the competition in the amphitheater cannot fail to attract a much larger number of visitors, than is now done by the daily parade; and, once amongst the cattle, it may be depended upon, that the innate curiosity of the visitors will lead to enquiries about the subjects under inspection, and more will be taught in one day's experience amongst the stalls and in the amphitheater, than by a hundred sights of a "cattle parade" as heretofore conducted. If throughout the Eastern and Western States, Canada and England these daily parades can be dispensed with, and a ring

found to be the best mode of exhibiting cattle, there is no reason why this course should not succeed in California. Another advantage in the ring is this: the society can publish the days and hour in which a certain class of cattle is to be judged, and those persons particularly interested in that class can be present, where as, at present managed, not even the day is known, and all classes are examined at the same time, crowding so much work into so short a space, that, as a rule, the judges, through their hasty decisions, disgust the exhibitors, and disgrace the societies and themselves.

SOLANO.

Obtaining the Weight of Cattle by Measurement.

We give below answers from two parties to recent enquiries from a subscriber on this subject:

TO FIND HOW MUCH A BEAST WILL DRESS.—EDITORS PRESS:—In answer to Mr. Laveage's inquiry I send the following from "Youatt & Burn." Find the girth behind the shoulder, and the length along the back from front of shoulder blade to rump, in feet and inches. Multiply together and you have the superficial area. In beasts less than seven and more than five feet in girth allow 23 lbs per superficial foot. If less than nine and more than seven feet in girth, 31 lbs per superficial foot will be the allowance. Under five feet only 11 lbs is computed.

EDWARD BERWICK.

TO WEIGH CATTLE BY MEASUREMENT.—EDITORS PRESS:—Measure carefully with a tape line from top of shoulder to where the tail is attached to the back, this will be the length. For girth, measure immediately behind the shoulders and forelegs. Multiply half the girth by itself in feet and the same by the length in feet, and the product will give the net weight in stones of 8 lbs each. Example—An ox or cow five feet in length and 7 feet in girth, the calculation will be as follows:

Multiply $\frac{1}{2}$ the girth by itself in feet.....	3.5
.....	3.5
.....	12.25
Multiply by length in feet.....	5
.....	61.25
Weight in stones.....	8
Pounds.....	500.00

This is the only rule by which it can be done perfectly and satisfactorily, that I am acquainted with; probably others have rules that will answer as well and meet the desired result.

J. A. ANDERSON.

El Monte, May 27.

STATE BOARD OF AGRICULTURE.—We are authorized to state that the State Board of Agriculture has not as yet held the special meeting which President Cary promised should be called to consider the resolutions passed at the meeting of the California Thoroughbred Cattle Breeders' Association. We are not even aware that the President has called said meeting; but it is to be hoped that action will not be too long deferred in the premises, as the breeders are anxious to know what they may expect in the way of premiums, etc., at the fall fairs, and whether their desires and recommendations will meet with any more consideration from said State Board than has hitherto been the case.

WE understand that Mr. A. Mechem, of Petaluma, thinks of going East this summer or fall, and returning with a herd of Ayrshires. We trust that the present intentions of this enterprising gentleman (who, in conjunction with Mr. William Hill, of the same place, imported several ear loads of Spanish Merinos from Vermont, last year), will be carried out, as a herd of this class of cattle would prove a valuable addition to the fine stock already in the State, and undoubtedly a profitable investment to the importer.

SHEEP AND WOOL.

PROLIFIC SHEEP.—The Hereford, England, Times relates the following, as showing the prolific nature of sheep when extra pains are taken to ensure this end:

Within the first fifteen months, forty-eight ewes belonging to Mr. Thomas Taylor, of Aston Rowant, Oxon, have produced 295 lambs, all of which are still living, or have been sold fat. Forty-four of the ewes have each had three pairs, and most of them in less than fourteen months (a few in only thirteen months and two weeks.) Two ewes brought seven lambs each, viz., two a few days before Christmas, 1872, two in June, 1873 and three in January, 1874. One ewe produced eight lambs within fourteen months. One (half bred) has given birth to nine lambs in fifteen months, in the following order: Two a few days before Christmas, 1872, which realized about £5 at Easter; in June she had three, two of which were sold in December for £4 16s, the other (a ewe lamb) was saved for stock, and will probably have a lamb of her own in May next. On March 11th, the same ewe had four lambs, all of which are strong and healthy, and the mother doing well and in good condition.

Twenty-one of the above are Dorset ewes, twenty-seven either Hampshire Down or half-breeds. If one may be allowed to count their chickens before they are hatched, several of these forty ewes will lamb again next June, or

early in July. The forty-eight ewes are selected in consequence of their not having lost either of their lambs, or having had less than six to live, but many other ewes lamb three times as above, which either lost some, or did not have three, four or five in the time.

PASTURING ORCHARDS WITH SHEEP.—Having a small orchard of about sixty trees, I have for three years past pastured it with six or eight sheep, for the benefit of the trees. Last year, being a non-bearing year in this State, I had more apples than all the neighboring farms together. My practice is to plow shallow, alternate years, in order to disturb the surface of the ground, and not cut the roots too deeply, which I consider to be against the longevity of the tree, and sow down to clover, to be fed one year by the sheep, the next plowed and sowed down again to clover—the sheep kept in another feeding lot till after haying, when the clover roots have gained strength and maturity, so that the close feeding of the sheep will not kill them. Why I plow so often, is because the tramping of the sheep is apt to pack the ground round the roots of the trees, preventing their bearing. The sheep eat all the blighted, wind-fall apples, which contain the germs of injurious insects, as soon as they fall from the trees; and they distribute their manure so evenly and finely over the ground that the rains soak it immediately down to the fine surface roots of the trees, causing them to bear every year. The sheep should not be kept in too late in the fall, nor put in too early in the spring, when the grass is dead, as they are apt to gnaw the bark off the small trees.—*Cor. New England Farmer.*

SHEEP ON OLD MEADOWS.—Mr. R. G. Hill, in an address before a farmers' meeting at Morrisville, Vt., on Cotswold sheep, related the following in connection with the effect of sheep on meadows:

To try the effect of sheep on my mowing land, I took a lot of about twenty acres of pretty dry ground, that had not been plowed for some fifteen years but had been occasionally top-dressed, turning them in as soon as the grass started after getting the hay off, and feeding in quite close. In the spring I turn them in pleasant days until they can go to pasture. This I have done but a few years. The grass has improved both in quality and quantity every year since thus managed. While cutting the grass the past season, the hay-makers said they should think there had been a heavy top-dressing of ashes applied, the white clover was so abundant. I am now satisfied by my own experience that these sheep are as much before cows to keep up the mowing, as they are in the pasture. To do this, we must have sheep that will stay where you put them, and that can be easily handled. I can handle my sheep as I can my cows. I can go myself alone and drive any one of my full-blooded sheep to any part of the farm.

A "RAM" IS NOT A "BUCK."—The perfect male sheep is a ram, and not a buck, as it is too often designated by thoughtless writers and talkers. It would be just as proper to call the female sheep a doe, as it is to apply the term buck to the male. So common has the mistake become, that it scarcely attracts the attention of those who know better. In fact, with the exception of four States—New York, Ohio, Illinois and California—even the boards controlling the State fairs offer premiums for the "best bucks" of the several breeds of sheep.

In several of the extreme Western States and Territories, the breeding of Angora goats is receiving attention, and unless flockmasters are a little more careful in the use of terms, considerable confusion is likely to ensue.—*Live Stock Journal.*

ONE of our correspondents asks whether fifty lambs raised to three months old, is not a good average for a flock of forty?

It certainly is above the usual average of a flock of that size. In a late number of *Land and Water* we noticed an account of a flock of sheep known as the "Dorset breed," which far exceeded the average alluded to by our correspondent. The ewes, nineteen in number, belonged to Mr. Moyes, of Cambridge, and gave birth to thirty-two lambs the first season, and forty-three the second. Both seasons one of the ewes had three lambs and raised them to a fair size. To equal this flock of nineteen, our correspondent's flock of forty would have had to produce at least ninety lambs.—*Journal of the Farm.*

WITH regard to the English liver rot (flukes), there is no cure; but it can be avoided by not grazing low meadows, and the foot rot and scab can be cured easily; but they rarely affect well cared for flocks. The greatest drawback to improvement in flocks in the United States is the habit of selling the ewe lambs, which are the fattest and best when the butcher comes round, or when the farmer himself sends a lot to market; and as early maturity and a fine, healthy frame is so desirable, it is as foolish to thus destroy the future best breeding ewes as on the other hand to attempt the cure of sickly sheep and continue to keep them in the flock.—*Rural New Yorker.*

CITIZENS of Green Co., Wis., have recently bought in Canada \$2,000 worth of Cotswold sheep, and \$7,000 worth of Shorthorns, besides seven head of Berkshire hogs, to put upon their farms.

THE DAIRY.

Whey for Milch Cows.

It is not particularly injurious to cows to practice feeding whey to them, but it is pretty sure to affect the quality of their milk and the butter or cheese made from it. Whey, as a feed for milch cows, is quite different in its effects from sour milk. In the simple fact of souring, milk acquires no new conditions, except that of acidity, which is nearly all filtered out in passing through the organism of the cow. But in the present method of cheese-making, the milk and whey are so long subjected to the action of rennet and ferments, being kept near blood heat from six to eight hours, that other changes than souring occur, giving, if not a stale, at least an undesirable flavor. If whey could be fed as soon as separated from the curd, it would be much less objectionable.

Whey promotes the secretion of milk, and makes more pounds of cheese than meat. Its best use is to feed it while new to calves or swine, using food with it that is strongly flesh-forming. A little souring is not very objectionable, but when strongly soured, alcohol forms in it so freely as to injure the stock to which it is fed, and sometimes produces drunkenness. L. B. Arnold, in *Rural Home*.

NEW WAY OF TEACHING CALVES TO DRINK.—A correspondent of the *Maryland Farmer* says: "Never let your calves suck the cows, but as soon as they are born, take them from their mothers and put them in some house or shed to themselves. Have a trough made with a scooped out bottom, so they can obtain the last drop of milk, and at intervals of one foot, tack the fingers of an old buckskin glove; pour into this trough milk obtained from the dairy, after being skimmed (at first it must be sweet and warmed a little, but they soon become fond even of sour milk mixed with a little bran); lead up the calves, and for two or three feedings insert the glove fingers in their mouths; afterwards they will come of their own free will, and all trouble ceases. The trough should be kept covered when not in use. By adopting this plan, you have the benefit of all the milk; you get rid of the disagreeable bellowing of the cows when the calves are weaned; your cows do not slacken or refuse to give down their milk, as they sometimes do, when the calves are allowed to run with them a month or six weeks, and are then taken away; and in two weeks the cows and calves can be turned in the same pasture without noticing each other in the usual way."

BUTTER VS. CHEESE.—We notice, says the *Guelph Mercury*, that many of our exchanges are commenting on the high price of butter, and we fully sympathize with them. The reason of the high price, however, is obvious, it being the direct result of the largely increasing cheese manufacture in every section of the province. It is a fact well known dairymen, that the milk required to make one pound of butter will make three pounds of cheese. Eleven cents is a fair average price for cheese the year round; so that to be equal to it, butter must realize from thirty to thirty-three cents. As the demand for cheese is practically unlimited, its manufacture will undoubtedly increase, and as farmers are not slow in finding out what pays best, we venture to predict that the price of decent butter will never again fall to so low a price as we have seen.

VALUE OF FODDER CORN.—At a meeting of the Massachusetts Cheese Factory Association, Addison H. Holland, a Barre farmer, read an essay on fodder corn. With 17 cows he experimented to see what its value was in producing milk; during the month of July he turns his cows out into a good pasture after having fed them with fodder corn, and they showed a large falling off in milk. He then, through August, soiled them in the stable, feeding fodder corn, and there was a gain in the production of milk. In September they were again turned into the mowing (full feed) and they fell off. Mr. Holland cures his corn by spreading it upon the stone walls, and regards it as a valuable feed for milch cows when well cured. He thinks fodder corn the best crop there is to bridge over a dry time with; fed 60 or 70 lbs. per cow when they were kept in a short pasture.

A PROFITABLE COW.—The *Springville Herald* says: A cow owned by J. Richardson gave during twenty-four days in November, 1873, and sent to cheese factory, 689 lbs. of milk, for which was received after paying for manufacturing, \$9.47; three-fourths of said milk was skimmed; from the cream was made 20 lbs. of butter, worth 30c per pound, making \$15.47; at the same rate for the remaining six days, \$3.87. Total for the month of November, \$19.34. A family of six used what milk and cream they needed during said month. Said cow made during fourteen days of December 23½ lbs. of butter, besides what cream and milk the family used.

MILK PAILS.—Wooden water pails to be used in the kitchen or at the stable, should receive two or three good coats of shellac, dissolved in alcohol, well laid on both inside and outside.

SINGING TO COWS.—Cows are sociable, and understand more than we appose. Many accounts are given, showing that they really have quite an ear for music.

AGRICULTURAL NOTES.

MARIN.

SWAMP LAND.—*Journal*, May 21: Mr. Bepler, of Novato, has a piece of barley that is very thick, and heading out very finely. It was seeded on the 10th of March, and greatly superior to some that was sowed ten days later. It is reclaimed marsh land, and produces as great a crop as any piece of land in the county. Mr. Bepler says the indications are that mesquit grass will do better on his land than alfalfa. He says that one acre of his reclaimed swamp land will produce more grass than ten acres of upland.

NAPA.

CUTTING HAY.—*Reporter*, May 23: Haying has commenced up the valley in certain places, Mr. Roberts, of Yountville, having his alfalfa crop all in the cock. Mr. James Hill, of Suscol, is cutting hay on his recently purchased ranch near Benicia, and Napa farmers will soon follow his example. The hay crop in this valley, and in fact, in all the adjacent counties will be large, and the prices of hay will be necessarily very reasonable, and judging from appearances of excellent quality.

SAN JOAQUIN.—The west side of the San Joaquin, the Stanislaus *Argus* to the contrary notwithstanding, will not produce much more than seed. The east side is all right, and a fair crop is almost certain. We were shown some wheat from Fresno, four and a half feet high, which was almost in the milk.

PLACER.

THROUGH THE FARMS.—*Herald*, May 23: Reports somewhat conflicting have from time to time come to us regarding the condition of the crops in western Placer and the parts of Yuba and Sutter adjoining. We have recently made a visit through these sections, and are pleased to state that, though the crops are considerably below the average, they are, as a general thing, better than we expected to see them. The yield of grain will in these parts be very small. The acreage of hay will be unusually large. But the hay is, generally speaking, thin on the ground. Owing to the heavy rains in the winter, the early sown grain is badly drowned out, and grass, cheat timothy, weeds and clover, which will make good hay, have sprung up in its stead, and notwithstanding it is thin on the ground, the large acreage will make the hay crop at least sufficient to supply home demand. Occasionally, in a favored locality, a field of average grain can be seen, but the fields that will produce an average are far apart. Near Wheatland, in Yuba county, the crops are nearly an average, but on this side of the Bear river, below Sheridan, in Sutter county, there will be scarcely any grain at all, and the hay is light. In, below and around Lincoln, the crops are pretty much as we have described above, except along Coon creek, Auburn ravine and other streams, they are what we may call fair, as they always are. Leaving the valley and coming into the foothills, we find crops better, and by the time we get as high as Auburn, we find them averaging better than they have been for many years. This is a plain, truthful statement of the crop prospects in the parts of lower Placer, Sutter and Yuba, which we visited. And after making due allowance for exaggerated reports, we think it will average fairly with most other sections north of Sacramento.

CROPS.—The papers are quoting from the *Placer Herald* a statement that the crops in the northern part of the State, with the exception of a few favored localities were never so light since the drought of 1863. So far as this county is concerned the statement is very far from true, and we are satisfied that it does not represent the state of the case in any county from Yolo north. We cannot speak for Placer, but we should judge from the nature of the soil of most of the agricultural portions of that county that the crops this season are far from good. The red clay land in Colusa county this year is not generally so good as it has been. The reason for this is that the heavy rains in the early part of the winter made the summer fallow very wet and it run together like mortar, and when it dried it pinched the grain up. On any land where there is any mixture of sand to prevent this pinching up, and where the geese have been kept off, there have never been better crops than we have the present season. There have been any number of fields destroyed by the geese, where the people are disposed to lay a want of wheat upon them to the quality of the land, when the little spots upon which there were scare crows, or even pieces of boards, the grain is good. The farming portion of Placer is mostly of this cold, clay land, and we should judge would not be looking well this season. But the spring is so nice and cool, which together with the almost entire absence of the north winds, will bring out many crops that look almost like failures. Let the *Herald* speak for its own particular section, and not publish as a fact that the grain crop of northern California is a failure.

PLUMAS.

NOTES.—*National*, May 23: Indications are favorable for a large crop of fruit this season. The trees are all "blowed out." High water is interfering with plowing and seeding by the Indian valley farmers.

SAN LUIS OBISPO.

CROP PROSPECTS.—*Tribune*, May 23: From personal observations and from information gathered from reliable sources, we feel assured that the coming harvest in this county will reach the anticipation of the most sanguine.

On every hand are to be seen waving fields of grain, mainly wheat and barley, which promise an abundant yield. Large fields have been prepared for corn and beans, or what are commonly termed summer crops. The grass is thick upon the ground, but from some unaccountable cause it did not this year reach its usual height, although the rainfall seemed to have been more than sufficient for all purposes. Still, stock owners say that they have a sufficiency of grass to carry their stock through, whether sheep or cattle. So, then, in taking a general view of the agricultural and stock-raising interests of the county, we have no reason to complain, but on the contrary, much to be thankful for. Hence, we congratulate our farmers upon their apparent good fortune.

We regret that there are still large tracts of rich valley lands in this county used exclusively for sheep pasture. It seems to us that it would be far more profitable to the owners to pasture their stock during the cropping season in the hills, which grow a variety of nutritious natural grasses to their summits, and, withal, are abundantly watered. By adopting this course they could plant their valley lands in grain, and after the removal of the crops, turn their stock upon the stubble, and thus utilize all their resources, besides adding great value to the lands, enriching the owners and also the county.

Several quicksilver mines are now being worked remuneratively, which add to the general prosperity. Indeed, we can safely assert that all the great industrial interests of this county are in a flourishing condition, namely: farming, fruit-raising, wool-growing, dairying and mining.

SANTA CLARA.

THE CROPS.—*Gilroy Advocate*, May 23: A ride into the country this week gave us an opportunity to see the condition of the growing crops. On some of the uplands the grain does not look well, but such spots are not frequent or extensive. Everywhere in the valley, and as a rule in the foothills, the crops look well. On many farms the fields are remarkably fine, and the tall, even grain, with long, full heads, give flattering promise for an increased bank account of its owner. The weather has been exceedingly propitious for the farmers, and if there are not good times in store for all this year there never will be.

SUTTER.

LOOK AHEAD.—*Banner*, May 23: There will not be any too much hay cut this season. The fair price which grain is likely to command will cause most farmers to reserve every acre which will pay for harvesting. The barley crop is in fine condition and will be large. By taking good care of the straw—seeing that it is kept from the sun—it is found to make excellent feed for horses when fed in connection with barley. In fact, good straw will do very well for cattle, and when fed with carrots or squashes will keep cattle in splendid condition. The farmer who has no vegetable land of his own, can, in this county, rent a few acres and raise squashes at a cost of about \$2 per ton, as well as growing carrots and other vegetables. There is no reason why more of our farmers do not avail themselves of these advantages, which they are now prone to neglect. However, the older the country becomes the more our farmers avail themselves of its many advantages. As a rule it is found best to dispose of our surplus grain and hay before the rainy season sets in. Those who are not forced to sell all their surplus crop will find it good policy to retain a portion of it. Always be prepared to face a drought. Now is the proper time to consider these things. In prosperity people are too apt to forget that there are in store seasons of adversity. A few years ago, encouraged by an unusually prosperous year, many went beyond their means in buying more land, etc., expecting to free themselves the next harvest; but a dry year came, and another followed, and the result was many were forced to sell out. Now friends, be cautious, and don't go too deep in debt. Don't undertake to buy more land, when you have not the means, and must mortgage for the whole or most of the amount. These mortgages are not very pleasant things to give, and if a man is not uncommonly lucky they will get the best of him. The comforts of home should not be neglected in our greed to get rich. Those children must be educated and cared for, and that toil-worn mother should be relieved of some of her cares. Perhaps she is in need of some labor-saving machine, or other necessary article. It may be you require a new house, or some improvements on the old one. You may require a new barn, or sheds for your stock and feed, and for your implements and wagons. If these comforts of home are laid aside this year, the next may find your means exhausted.

SUTTER COUNTY.

PROPER AND CHILI WHEAT.—Monday Mr. I. Mayfield, who resides nine miles north of Yuba City, brought us a couple of bundles of Chili and Proper wheat, standing nearly five feet and six inches high, being all winter sown. The Proper wheat he has the most of, being sown two weeks after the great snow. This he sowed and harrowed in as fast as the ground was plowed. His Chili wheat was sown just before the snow. The land is what is termed plains or live oak land, a rich, rather than coarse, sandy loam. We notice that the Chili and Proper wheat bears a thrifty appearance through the entire length of our plain land from the live oaks down to its termination between the Feather river and the tules—the early winter-sown as well as the summer-fallow. Club wheat is more backward, and of a slow

growth, and appears to thrive better on the Sacramento river than on the plains, as winter-sown grain in the wettest seasons. Summer-fallow Club on the plains does well. But we find many fields of winter-sown Club looking poorly on the plain land. In the latter part of April, 1862, we assisted in putting in some 20 acres of Club wheat on land from which all the soil loosened by the plow had been washed off by the overflow of the Sacramento river, and a finer field of wheat we never saw harvested.

FROM TULE.—"Old Ned" furnishes these items from Tule: All things are lovely—crops good. I think you are wrong in bragging of a barley crop of only 40 bushels to the acre. I fear people at a distance will have but a poor opinion of Sutter county from that report. Mr. Woods has 80 acres of barley which will not go less than 50 bushels to the acre. I will let you know how it threshes. I have a few acres of barley which good judges say will go 70 bushels to the acre. As a barley-producing region the tule heats the world, or for any other product.

STILL UNDER WATER.—The warm weather of the past 10 days has caused the snow to melt very freely in the mountains, keeping the Feather and Yuba rivers well up, to within two or three feet of the highest point reached during the winter. The long continuance of this high water, so late in the season, has been very damaging to orchards and clover-fields not inside the levee. John Briggs' valuable orchard has probably been damaged to the extent of \$20,000. It is a sad sight to witness the largest portion of his young trees, laden with fruit, standing in water up to their branches. Briggs' large alfalfa field is also greatly damaged, as well as other valuable places lying between the levee and the Feather. A few thousand dollars expended in leveeing would keep off this water.

TEHAMA.

LABORERS WANTED.—*Independent*, May 23: Scarcity of labor is severely felt by farmers in this county. One farmer was in town on Monday, looking for men to do haying, but was unable to obtain a single man. He says his hay is ready to cut, but he is unable to proceed on account of the lack of help. Seventy-five to one hundred men could find employment in this county for several months to come.

TRINITY.

THE FRUIT CROP.—*Journal*, May 23: From present appearances the fruit crop of this county will be one of the largest ever grown. Peaches and pears are well set and give promise of an abundant yield. If no heavy frosts set in to destroy the prospect, there will be a heavy crop of all kinds of fruit.

YOLO.

COTTONWOOD AND CAPAY.—*Mail*, May 21: We took a pleasure trip to these two places last week, making a tour of inspection among the wheat fields in order to speak from the notes concerning the progress being made by the people in the foothills, on the plains and in the valley. On Friday we visited Cottonwood, which, is slowly but surely growing. The farmers were busy cutting hay and rigging up for the coming harvest campaign. Our next point was a visit to the Orleans Vineyard. On our way to these famous hills we passed through oceans of wheat and barley, so tall and thick that it seemed as though a vehicle could ride on the top five feet from the earth, with ease and safety. The road from the town of Cottonwood to the Orleans Hills was closely hemmed in all the way to the foothills by the most splendid growth of these cereals, and but little of it was poor enough to cut for hay, although much of it will be used for that commodity, from the fact that hay is scarce and will be in demand. What care they for fields of grain that will only yield fifteen or twenty bushels to the acre, when there is enough that will bring forth fifty to seventy. We arrived at the vineyard in the afternoon about 3 o'clock. We were directed by Mr. Kuont, the foreman or overseer, and passed by the valleys through the knolls whose rolling tops and graded sides were green with vines arranged in perfect order. These hills extend for two miles up toward the mountains, and terminate in Capay Valley about three miles from its mouth, at a place called Dogtown. The varieties of grapes that are grown here are numerous, but the most successful and best adapted to the production of wine is the Orleans grape. They have 1,000 acres under cultivation, with 1,200 vines to the acre—making 120,000 settings in all. These vines are all bearing, and full of blossoms. Mr. Kuont invited us to call on the 15th of July, and he would treat us to all the luscious ripe grapes we could eat.

We again passed through the dense forest of wheat south, and stopped for the night at the house of Mr. N. Corbin. To reach his dwelling we had to pass through a field of barley which will yield—no preventing providence—seventy-five bushels per acre. The stalks were almost as high as the horses' backs, and so thickly set upon the ground that there was room for no more. Next morning we took our departure heading towards the celebrated Capay Valley, about seven miles north. The cool morning made it a very pleasant and refreshing trip, the road being through a continuous wheat field. Mr. Raymond, 4 miles above Dogtown, piloted us through an immense field of wheat, which he said was the most wonderful he ever saw. He did not doubt but that it would yield seventy bushels per acre. It did look grand. It was very tall and very heavy; but we had seen much on our way almost equal in grandeur. The impression we have is that if the crop prospects are as good in all parts of the county as in East and West Cottonwood, the general yield will be immense.

MISCELLANEOUS

EUROPEAN WAGES.—Sixty cents a day is considered good wages for workmen in any of the European countries except Great Britain, where wages are somewhat higher. In Tyrol silk regions and in Italy, they often do not get more than ten cents a day. In the country in Germany ten cents a day is the common pay. Women there often get but five cents. In Sweden men often work from four in the morning till nine in the evening, and do not get any more. During the late war many women hired to knit stockings for soldiers at five cents. The profits of the poor who keep petty shops, sell triquets in the street, or act as sutlers, do not average more than three or four per cent. Barbers in Berlin, since the raising of prices, get five cents for hair cutting and two and a half for shaving. Servants at hotels get from three to eight dollars a month. Servant girls in private families often get but ten dollars a year. Sometimes these classes cannot get work at any price.

THE WEATHER AND CROPS.—The weather during the past week has been almost quite as genial as that which we had to chronicle about the previous one. On Wednesday night there was a slight frost, which would to some extent injure the bloom of fruit trees, and check, not deleteriously, the growth of the cereal blades. The crops are everywhere looking well, and farm work very far advanced. From the north of Scotland, we are told that during several days of last week, they have had very warm weather. Frequently the temperature during the best part of the afternoon seemed more of June than of April. The evenings were generally cool, with sometimes a slight air of frost. The heat has exerted a forcing influence on vegetation, which is specially apparent in the progress made by the woodlands. Trees of all kinds are everywhere coming rapidly into full bloom. As regards the farm, the heat has greatly accelerated the growth of grass, which is now in many places fit for cattle. Young braids are also coming up thick and vigorous. —*English Farmer*, May 4th.

MAPLE SUGAR.—The last census returns show Vermont to be the banner State for maple sugar, that State producing almost ten million pounds. New York gives a somewhat larger production, but nevertheless a much smaller one in proportion to the area. The only other States which return more than one million pounds are Michigan four million, Ohio three and one-quarter million, Pennsylvania nearly three million, New Hampshire two and one-quarter million, Indiana one and one-half million, Massachusetts a few pounds more than a million. The total production is forty million pounds. The total production of maple molasses is one and a half million gallons, of which Ohio returns nearly four hundred thousand gallons, Indiana nearly three hundred thousand, Kentucky one hundred and forty thousand, and Vermont only sixteen thousand gallons.

AMERICAN AGRICULTURAL MACHINERY IN GERMANY.—According to recent reports from Germany, the English manufacturers of agricultural machinery are losing their monopoly of the German market by the competition of the American manufacturers. Importations from America commenced seven years ago, and the business has rapidly developed. Mowers and reapers, lawn mowers and pitchforks are mostly imported. In 1873, 8,000 American mowers and reapers were sold on the European continent; it is estimated 12,000 will be sold the present year. American cast iron is found to be the strongest in the world, and the German effort to copy American machines has failed to be profitable. The trade promises to extend. —*Mass. Plowman*.

A STRANGE GROWTH.—In the basement under Martin Raucich's restaurant, on K street, a few doors above Fourth street, is a peculiar and very handsome fungus on the wainscoting of one of the walls. It is the exact resemblance of a large bat or vampire. From tip to tip the wings are rather over thirty-four inches. The body of the plant is a light reddish-brown interlaced with ribs which appear like the arteries and blood vessels of a bat. Around this body is a line about an inch and a half wide, raised above the body of the plant, and is perfectly white. —*Sacramento Union*.

THE SOUTHERN FLOODS.—The latest intelligence shows that there is no abatement in the floods along the banks of the Mississippi, but that the corn and sugar lands continue to be submerged as the waters of the river pour down. It is said the negroes are beginning to believe that if they get out of work the Government is to take care of them, and great mischief is feared in consequence. The apprehension is general that the present devastation will seriously affect the prosperity of Louisiana for many years.

AFTER THE GRASSHOPPERS.—The Madelia, Minn., *Times* states that, in the grasshopper districts, a small, red insect about the size of a grain of wheat, has appeared in large numbers. This insect devotes its time to crawling patriotically into the holes made by the grasshopper and devouring the eggs in the nests. Now, if some entomologist will study the habits of this insect-blessing and tell us if it will pay to propagate, and if so, how, the bitterest opponents of "bug-ology" will be converted into its fastest friends.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

Patrons who are subscribers to the RURAL PRESS should pay their subscriptions promptly in order to secure club rates.

California District and County Councils.

ALAMEDA COUNTY COUNCIL.—JOEL RUSSELL, Hayward, Master; THOMAS HELLAR, Sec'y.
LOS ANGELES AND SAN BERNARDINO DISTRICT COUNCIL.—Officers not reported.
SACRAMENTO, EL DORADO AND PLACER DISTRICT COUNCIL.—Officers not reported.
SAN LUIS OBISPO COUNTY COUNCIL.—A. J. MOTTERHEAD, Master; J. M. MANNON, Sec'y.
SANTA CLARA COUNTY COUNCIL.—H. M. LEONARD, Master; I. J. WILCOX, Sec'y. Regular meetings every three months alternately at Santa Clara and San Jose. Next meeting at Santa Clara, June 15th.
SANTA BARBARA AND SAN LUIS OBISPO DISTRICT COUNCIL.—Officers not reported.
SOLANO COUNTY COUNCIL.—J. B. CARRINGTON, Master; J. M. JONES, Sec'y.
SOUTHERN DISTRICT COUNCIL. (Los Angeles and San Diego counties).—Officers not reported.
STANISLAUS COUNTY COUNCIL.—J. D. SPENCER, Master pro tem; VITAL E. BANOS, Sec'y.
VENTURA COUNTY COUNCIL.—Officers not reported.
WEST SAN JOAQUIN DISTRICT COUNCIL. (Merced, San Joaquin and Stanislaus counties).—W. J. MILLER, Orlinbima, Master; THOMAS A. CHAPMAN, Orlinbima, Sec'y.

California Subordinate Granges.

(This list contains the names of Masters and Secretaries, so far as reported to us, elected to serve during the year 1874. Secretaries and others will greatly oblige us by making needful corrections.)

ALAMEDA COUNTY.

CENTREVILLE GRANGE. Centerville, Alameda Co.: JAMES SHINS, Master; J. L. BEARD, Sec'y.
EDEN GRANGE. Hayward, Alameda Co.: THOS. HELLAR, Master; WM. PARCE, Sec'y. Agent, GEO. C. BAXTER.
LIVERMORE GRANGE. Livermore Valley, Alameda Co.: DANIEL INMAN, Master; F. R. FAESSETT, Sec'y.
SUNOL GRANGE. Sunol Station, Alameda Co.: E. M. CARR, Master; S. W. MILLARD, Sec'y.
THAMESDAL GRANGE. Oakland, Alameda Co.: E. S. CARR, Master; JOHN COLLINS, Sec'y.

BUTTE COUNTY.

CHICO GRANGE. Chico, Butte Co.: W. M. THORP, Master; J. W. SCOTT, Sec'y. Agent, W. M. THORP.
EVENING STAR GRANGE. Biggs Station, Butte Co.: E. W. S. WOOD, Master; C. F. BEILER, Sec'y.
NORD GRANGE. P. O. Nord, Butte Co.: G. W. COLBY, Master; PETER KERNS, Sec'y.

COLUSA COUNTY.

ANTELOPE VALLEY GRANGE. Colusa, Colusa Co.: H. A. LOGAN, Master; T. J. TAYLOR, Sec'y.
CENTRAL GRANGE. P. O. Colusa, Colusa Co.: J. P. KIMBRELL, Master; W. G. SAUNDERS, Sec'y.
COLUSA GRANGE. Colusa, Colusa Co.: W. K. ESTELL, Master; R. JONES, Sec'y.
FRESHWATER GRANGE. P. O. Colusa, Colusa Co.: I. H. DUBHAM, Master; R. C. WILSON, Sec'y.
FUNK SLOUGH GRANGE. Colusa, Colusa Co.: E. O. HUNTER, Master; J. G. WOOLFE, Sec'y.
GRAND ISLAND GRANGE. Sacramento, P. O. Colusa Co.: WM. OGDEN, Master; J. L. EMMETT, Sec'y.
NORTH VALLEY GRANGE. Colusa, Colusa Co.: B. N. SCRIBNER, Master; SULLIVAN ASHBOEN, Sec'y.
PLAZA GRANGE. Colusa, Colusa Co.: F. C. GRAVES, Master; W. F. GREEN, Sec'y.
PRINCETON GRANGE. Princeton, Colusa Co.: A. D. SEAN, Master; R. R. RESE, Sec'y.
SPRING VALLEY GRANGE. Spring Valley, Colusa Co.: D. H. ARNOLD, Master; L. T. HAYMAN, Sec'y.
UNION GRANGE. P. O. Princeton, Colusa Co.: M. DAVIS, Master; ISAAC MC DANIEL, Sec'y.
WILLOWS GRANGE. P. O. Princeton, Colusa Co.: J. W. ZEMWALT, Master; GEO. T. HICKLIN, Sec'y.

CONTRA COSTA COUNTY.

ANTIOCH GRANGE. Antioch, Contra Costa Co.: M. A. WALTON, Master; J. D. DAVIS, Sec'y.
DANVILLE GRANGE. Danville, Contra Costa Co.: CHAS. WOOD, Master; JOHN B. SYDNER, Sec'y.
POINT OF TIMBER GRANGE. Antioch, P. O. Contra Costa Co.: R. G. DEAN, Master; J. E. W. CAREY, Sec'y.
WALNUT CREEK GRANGE. Walnut Creek, Contra Costa Co.: NATHANIEL JONES, Master; WM. K. DALY, Sec'y.

EL DORADO COUNTY.

CLARKSVILLE GRANGE. Clarksville, El Dorado Co.: MORT. T. MILLA, Master; I. MALLEY, Sec'y.
EL DORADO GRANGE. El Dorado, El Dorado Co.: O. G. CARPENTER, Master; J. M. B. WEATHERWAX, Sec'y.
PILOT HILL GRANGE. Pilot Hill, El Dorado Co.: P. D. BROWN, Master; J. B. LAYLEY, Sec'y.
SUTTER MILL GRANGE. Coloma, El Dorado Co.: A. J. CHRISTIE, Master; HENRY MAHLER, Sec'y.

FRESNO COUNTY.

ADAMS GRANGE. Big Dry Creek, Fresno Co.: T. P. NELSON, Master; THOS. WYATT, Sec'y.
BORDEN GRANGE. Borden, Fresno Co.: J. W. A. WRIGHT, Master; J. S. PICKENS, Sec'y.
FRANKLIN GRANGE. Kingsport, Fresno Co.: FRANCIS WILCOX, Master; PETER A. KANAWYER, Sec'y.
FRESNO GRANGE. Fresno City: H. W. FASSETT, Master; F. DICK, Sec'y.
GARRETTSON GRANGE. King's River: W. J. HUTCHINSON, Master; W. W. PHILLIPS, Sec'y.

HUMBOLDT COUNTY.

ELK RIVER GRANGE. Eureka, Humboldt Co.: THEODORE MEYER, Master; D. A. DEMERITT, Sec'y.
FERNDALE GRANGE. Ferndale, Humboldt Co.: F. L. BOYNTON, Master; G. W. GRIFFITH, Sec'y.
KINELATTAH GRANGE. Arcata, Humboldt Co.: LEWIS R. WOOD, Master; D. D. AVERILL, Sec'y.
ROHNERTVILLE GRANGE. Rohnertville, Humboldt Co.: B. T. JAMERSON, Master; H. S. CARR, Secretary.
TABLE BLUFF GRANGE. Table Bluff, Humboldt Co.: JACKSON SAWYER, Master; B. H. O. POLLARD, Sec'y.

KERN COUNTY.

BAKERSFIELD GRANGE. Bakersfield, Kern Co.: S. JEWETT, Master; JEROME TROY, Secretary.
NEW RIVER GRANGE. P. O. Bakersfield, Kern Co.: JOHN G. DAWES, Master; J. D. DIXON, Secretary.
PANAMA GRANGE. P. O. Bakersfield, Kern Co.: P. D. ROSE, Master; J. F. GORDON, Sec'y.

LAKE COUNTY.

QUEENCO GRANGE. Queeno, Lake Co.: H. A. OLIVER, Master; THOS. H. MCGRENE, Sec'y.
KELSEYVILLE GRANGE. Kelseyville, Lake Co.: D. P. SHATTUCK, Master; T. ORNSTON, Sec'y.
LAKEPORT GRANGE. Lakeport, Lake Co.: C. OTTERMASTER, Master; N. PHILLIPS, Sec'y.
LOWER LAKE GRANGE. Lower Lake, Lake Co.: A. E. NOEL, Master; HORACE STOW, Sec'y.
UPPER LAKE GRANGE. Upper Lake, Lake Co.: D. V. THOMPSON, Master; D. Q. MCCARTY, Sec'y.

LOS ANGELES COUNTY.

ALLIANCE GRANGE. El Monte, Los Angeles Co.: S. S. REEVES, Master; J. W. MARSHALL, Sec'y.
AZUSA GRANGE. El Monte, Los Angeles Co.: W. W. MAXEY, Master; J. C. PRESTON, Sec'y.
CAMPION GRANGE. Compton, Los Angeles Co.: C. W. COLTREN, Master; J. A. WALKER, Sec'y.
EL MONTE GRANGE. Los Angeles Co.: G. C. GIRBE, Master; P. O. Los Angeles, J. H. GRAY, Sec'y; P. O., El Monte.
ENTERPRISE GRANGE. Los Angeles, Los Angeles Co.: A. M. SOUTHWORTH, Master; W. T. HENDERSON, Sec'y.
EUREKA GRANGE. Spadra, Los Angeles Co.: T. C. TANNER, Master; JOSEPH WRIGHT, Sec'y.
HARVIEW GRANGE. Anaheim, Los Angeles Co.: EDWARD EYEX, Master; J. M. GUINN, Sec'y.
FLORENCE GRANGE. Los Angeles, Los Angeles Co.: JOSEPH RUSSELL, Master; WILLIAM PORTER, Sec'y.
FRUITLAND GRANGE. Fruitland, Los Angeles Co.: N. O. STAFFORD, Master; G. L. RUSSELL, Sec'y.

LOS ANGELES GRANGE. Los Angeles Co.: T. A. GAREY, Master; T. D. HANCOCK, Sec'y.
LOS NIETOS GRANGE. Los Nietos, Los Angeles Co.: J. F. MAPQUIS, Master; P. O. Los Angeles; W. S. REAVIS, Sec'y; P. O. Anaheim.
NEW RIVER GRANGE. Los Nietos P. O., Los Angeles Co.: WILFRED GRANGE, Master; S. G. BAKKA, Sec'y.
ORANGE GRANGE. Richmond, Los Angeles Co.: JOSEPH BEACH, Master; J. W. ANDERSON, Sec'y.
SILVER GRANGE. Los Nietos, Los Angeles Co.: H. L. MONTGOMERY, Master; W. F. C. HANCOCK, Sec'y.
SPADRA GRANGE. Spadra, Los Angeles Co.: A. T. CURRIER, Master; JOE WRIGHT, Sec'y.
VINELAND GRANGE. Tustin City, Los Angeles Co.: DR. A. H. HAYWOOD, Master; L. S. ROBINSON, Sec'y.
WESTMINSTER GRANGE. Westminister, P. O. M. B. CRAIG, Master; HENRY STEPHENS, Sec'y.

MARIN COUNTY.

NICASIO GRANGE. Nicasio, Marin Co.: H. T. TAFT, Master; J. W. NOBLE, Sec'y.
POINT REYES GRANGE. Point Reyes, Marin Co.: N. H. STINSON, Master; A. H. STINSON, Sec'y.
TOMALES GRANGE. Tomales, Marin Co.: WM. VANDERBILT, Master; R. H. PRINCE, Sec'y.

MENDOCINO COUNTY.

LITTLE LAKE GRANGE. Little Lake, Mendocino Co.: B. G. MART, Master; W. A. WRIGHT, Sec'y.
MANCHESTER GRANGE. Manchester, Mendocino Co.: JOSEPH WOODEN, Master; B. F. MCCLURE, Sec'y.
POTTER VALLEY GRANGE. Potter, Mendocino Co.: J. MEYERHOF, Master; GEO. H. NICHOLS, Sec'y.
UKIAH GRANGE. Ukiah City, Mendocino Co.: W. D. WHITE, Master; A. O. CARPENTER, Sec'y.

MERCED COUNTY.

BADGER FLAT GRANGE. Krevenhagen's P. O., Merced Co.: W. GILROY, Master; W. F. PARLIN, Master; ALFRED P. MERRILL, Sec'y.
COTTONWOOD GRANGE. Hill's Ferry, Merced Co.: J. L. CRITTENDEN, Master; J. J. DOYLE, Sec'y.
HOPETON GRANGE. Hopetown, Merced Co.: JOHN RUDOLPH, Master; T. EAGLESON, Sec'y.
LOS ANOCH GRANGE. Krevenhagen's P. O., Merced Co.: W. GILROY, Master; W. M. VINEX, Master; A. MCGLEASHAN, Sec'y.
MERCED GRANGE. Merced, Merced Co.: W. E. ELLIOT, Master; F. E. TADLOCK, Jr., Sec'y. Agent, W. P. FOWLER.
PLAINSBURG GRANGE. Plainburg, Merced Co.: F. Y. WELCH, Master; J. E. WILCOX, Sec'y.
SNELLING GRANGE. Snelling, Merced Co.: DANIEL YEIZER, Master; W. L. HAMLIN, Sec'y.

MONTEREY COUNTY.

HOLLISTER GRANGE. Hollister, Monterey Co.: H. POMEROY, Master; WM. H. OLIVER, Sec'y. J. D. FOWLER, Local Agent.
MORNING STAR GRANGE. Castroville, Monterey Co.: C. E. WILLIAMS, Master; F. BLAKE, Sec'y.
RISING STAR GRANGE. Panoche Valley, Monterey Co.: C. VALPY, Master; J. W. CRAWFORD, Sec'y.
SALINAS GRANGE. Salinas, Monterey Co.: O. S. ABBOTT, Master; W. L. CARPENTER, Sec'y. Agent, W. L. CARPENTER.

NAPA COUNTY.

CALISTOGA GRANGE. Calistoga, J. N. BENNETT, Master; L. HOPKINS, Sec'y.
NAPA GRANGE. Napa City, Napa Co.: JAMES M. THOMPSON, Master; J. WALTER WARD, Sec'y.
POPE VALLEY GRANGE. Pope Valley, Napa Co.: J. A. VANARDALE, Master; O. A. BOOTH, Sec'y.
RUTHERFORD GRANGE. Yountville, Napa Co.: G. S. BURRIDGE, Master; H. W. ORRAB, Sec'y.
ST. HELENA GRANGE. St. Helena, Napa Co.: J. H. ALLISON, Master; J. L. EMMETT, Sec'y.
YOUNTVILLE GRANGE. Yountville, Napa Co.: J. M. MAYFIELD, Master; FRANK GRIFFIN, Sec'y. Agent, J. M. MAYFIELD.

PLACER COUNTY.

LINCOLN GRANGE. Lincoln, Placer Co.: M. WALDRON, Master; J. S. MARSH, Sec'y.

SACRAMENTO COUNTY.

AMERICAN RIVER GRANGE. Brighton, Sacramento Co.: E. G. MORTON, Master; CYRUS WILSON, Sec'y.
COSUMES GRANGE. Elk Grove, Sacramento Co.: JAMES A. ELDER, Master; J. H. ATKINS, Sec'y.
ELK GROVE GRANGE. Elk Grove, Sacramento Co.: OBADIAH S. FREEMAN, Master; DELOS GAGE, Sec'y.
ENTERPRISE GRANGE. Elk Grove, Sacramento Co.: J. M. BELL, Master; MORRIS TOOMEY, Sec'y.
FLORIN GRANGE. San Joaquin Township, Sacramento Co.: CALER ARNOLD, Master; WM. SCHOLEFIELD, Sec'y.
FRANKLIN GRANGE. Franklin, Sacramento Co.: AMOS ADAMS, Master; BECKLEY P. COOK, Sec'y.
GALT GRANGE. Galt, Sacramento Co.: J. C. SAWYER, Master; J. L. FIFIELD, Sec'y.
GEORGINA GRANGE. Rio Vista, Solano Co.: F. M. KITTRELL, Master; GEO. A. KNOTT, Sec'y.
REKVELLE GRANGE. Elk Grove, Sacramento Co.: A. D. NEHR, Master; I. N. NEHR, Sec'y.
SACRAMENTO GRANGE. No. 12, Sacramento, Sacramento Co.: W. S. MANLY, Master; A. S. GREENLAW, Sec'y.
SHEPHERD ISLAND GRANGE. Emmatow, Sacramento Co.: J. M. UPHAM, Master; W. M. ROBBINS, Sec'y.
WALNUT GROVE GRANGE. Courtland, Sacramento Co.: SOLOMON REYNOLDS, Master; J. V. PRATHER, Sec'y.

SAN BENITO COUNTY.

MOUNTAIN GRANGE. San Benito Co.: S. KENNEDY, Master; J. W. MATTHEWS, Sec'y.

SAN BERNARDINO COUNTY.

RIVERSIDE GRANGE. Riverside, San Bernardino Co.: E. G. BROWN, Master; W. W. KIMBALL, Sec'y.
SAN BERNARDINO GRANGE. P. O. San Bernardino, San Bernardino Co.: R. SHELTON, Master; I. BROOKHURST, Sec'y.

SAN JOAQUIN COUNTY.

ATLANTA GRANGE. Morano, San Joaquin Co.: W. J. CAMPBELL, Master; MRS. J. W. MOORE, Sec'y. P. O. Morano, San Joaquin Co.
CASTOR GRANGE. Lathrop, San Joaquin Co.: H. W. COWELL, Master; J. STRAHAN, Sec'y.
COLLEGEVILLE GRANGE. Collegeville, San Joaquin Co.: ALEX. MATHERBY, Master; J. C. MCINTOSH, Sec'y.
ELLIS GRANGE. P. O. H. COPELAND, Sec'y.
FARMINGTON GRANGE. Farmington, San Joaquin Co.: J. M. GROVES, Master; E. O. LONG, Sec'y.
GRAYSON GRANGE. Grayson, San Joaquin Co.: T. C. BRANN, Master; M. H. COPELAND, Sec'y.
LIBERTY GRANGE. Acampo, San Joaquin Co.: JUSTUS SCHOMP, Master; J. J. EMMLE, Sec'y.
LINDEN GRANGE. Linden, San Joaquin Co.: JOHN WATLEY, Master; JAMES WATLEY, Sec'y.
LOCKFORD GRANGE. Lockford, San Joaquin Co.: G. C. HOLMAN, Master; SOL. S. STEWART, Sec'y.
LODI GRANGE. Lodi, San Joaquin Co.: J. W. KEARNEY, Master; MRS. NELLIE CROUCH, Sec'y.
RUSTIC GRANGE. Lathrop, San Joaquin Co.: J. A. SEPPERT, Master; H. C. PHILLIPS, Sec'y.
STOCKTON GRANGE. Stockton, San Joaquin Co.: WM. L. OVERHISER, Master; WM. G. PHELPS, Sec'y.
WEST SAN JOAQUIN GRANGE. Ellis, San Joaquin Co.: M. LAMBERS, Master; GEO. E. MCSTAY, Sec'y.
WILLOW GRANGE. Willowood School House, San Joaquin Co.: JOS. LEIGHTON, Master; A. B. MUNSON, Sec'y.
WOODBRIDGE GRANGE. Woodbridge, San Joaquin Co.: J. L. HUTTON, Master; A. S. THOMAS, Sec'y.

SAN LUIS OBISPO COUNTY.

ARROYO GRANDE GRANGE. Arroyo Grande, San Luis Obispo Co.: W. H. NELSON, Master; D. F. NEWSON, Sec'y.
CAMBRIA GRANGE. Cambria, San Luis Obispo Co.: C. H. IVINS, Master; HERBERT OLMSTEAD, Sec'y.
MORO CITY GRANGE. Moro, San Luis Obispo Co.: A. J. MOTTERHEAD, Master; H. Y. STANLEY, Sec'y. Agent, A. J. MOTTERHEAD.
OLD CREEK GRANGE. Old Creek, San Luis Obispo Co.: ISAAC FLOOD, Master; R. M. PRESTON, Sec'y.
SAN LUIS OBISPO GRANGE. San Luis Obispo, San Luis Obispo Co.: WM. JACKSON, Master; E. L. REED, Sec'y.
SANTA MARIA GRANGE. Santa Maria, San Luis Obispo Co.: JOEL MILLER, Master; M. D. MILLER, Sec'y.

SANTA BARBARA COUNTY.

CARPENTERIA GRANGE. Carpenteria, Santa Barbara Co.: O. N. CADWELL, Master; G. E. THURMAN, Sec'y.
CONFIDENCE GRANGE. Guadalupe, Santa Barbara Co.: A. COPELAND, Master; J. T. ACETIN, Sec'y.
SANTA BARBARA GRANGE. Santa Barbara, S. B. Co.: O. L. ARBOTT, Master; G. KENNER, Sec'y.

SANTA CLARA COUNTY.

GILROY GRANGE. Gilroy, Santa Clara Co.: W. L. ANNET, Master; H. COFFIN, Sec'y.

MATFIELD GRANGE. Matfield, Santa Clara Co.: F. W. WEISSHAAR, Master; JAS. M. PITMAN, Sec'y.
SAN JOSE GRANGE. No. 10, San Jose, Santa Clara Co.: WM. ERESON (P. O. Alvia), Master; MISE JETTORA WATKINS, Sec'y.
SAN JOSE GRANGE. No. 10, San Jose, Santa Clara Co.: SAN JOSE, Master; J. W. HERNON, Sec'y.
SANTA CLARA GRANGE. Santa Clara P. O., Santa Clara Co.: H. M. LEONARD, Master; I. A. WILCOX, Sec'y.
SARATOGA GRANGE. Saratoga, Santa Clara Co.: FRANCIS DRESSER, Master; MISS JENNIE FARWELL, Sec'y.

SANTA CRUZ COUNTY.

BEN LOMOND GRANGE. Santa Cruz Co.: H. H. BUCKLES, Master; CHAS. CRAGHILL, Sec'y.
PAJARO GRANGE. P. O. Watsonville, Santa Cruz Co.: J. M. CLOUGH, Master; G. W. ROADHOUSE, Sec'y and Agent.
SANTA CRUZ GRANGE. Santa Cruz: G. O. WARDWELL, Master; J. W. MORGAN, Sec'y.
WATSONVILLE GRANGE. Watsonville. J. MCCALLAM, Master; A. F. RICHARDSON, Sec'y.

SHASTA COUNTY.

COTTONWOOD GRANGE. Cottonwood, Shasta Co.: G. U. HUBBARD, Master; JOHN BARRY, Sec'y.
REDDING GRANGE. Redding, Shasta Co.: JOSEPH F. DINSMORE, Master; SAMUEL J. R. GILBERT, Sec'y.

SOLANO COUNTY.

BINGHAMPTON GRANGE. Binghampton, Solano Co.: ALBERT BENNETT, Master; EDGAR A. BEARDLEY, Sec'y.
DENVERTON GRANGE. Denvertown, Solano Co.: J. B. CARRINGTON, Master; G. O. ARNOLD, Sec'y.
DION GRANGE. Dion, Solano Co.: J. C. MERRYFIELD, Master; JAMES C. ELLIS, Sec'y.
ELMIRA GRANGE. Vaca Station, Solano Co.: J. A. CLARK, Master; M. D. COOPER, Sec'y.
MONTEZUMA GRANGE. Collinsville, Solano Co.: THOS. T. HOOPER, Master; C. KNOX MARSHALL, Sec'y.
RIO VISTA GRANGE. Rio Vista, Solano Co.: A. B. ALSEP, Master; J. H. GARDNER, Sec'y.
ROCKVILLE GRANGE. Cordelia, Solano Co.: W. A. LATTIN, Master; J. R. MORRIS, Sec'y.
SUISUN VALLEY GRANGE. Suisun, Solano Co.: J. M. LEMMON, Master; T. H. HARRIS, Sec'y.
VACAVILLE GRANGE. Vacaville, Solano Co.: E. R. THURBER, Master; OSCAR DEBBINS, Sec'y.
VALLEJO GRANGE. Vallejo, Solano Co.: G. C. PEARSON, Master; CHAS. B. DEMING, Sec'y.

SONOMA COUNTY.

BENNETT VALLEY GRANGE. Santa Rosa, Sonoma Co.: J. D. TUCK, Master; J. H. PLANK, Sec'y.
BIRMINGHAM GRANGE. Bloomfield, Sonoma Co.: WM. H. WHITE, Master; A. B. GLOVER, Sec'y.
BODEGA GRANGE. Bodega, Sonoma Co.: J. H. HEOLER, Master; W. SMITH, Sec'y.
CLOVERDALE GRANGE. Cloverdale, Sonoma Co.: CHAS. H. COOLEY, Master; J. J. BERRY, Sec'y.
GEYSERVILLE GRANGE. Geyserville, Sonoma Co.: CALVIN M. BOSWORTH, Master; R. R. LEIGH, Sec'y.
HEADSBURG GRANGE. Headsburg, Sonoma Co.: CHARLES ALEXANDER, Master; MRS. S. A. PECK, Sec'y. Agent, P. S. PECK.
PETALUMA GRANGE. Petaluma, Sonoma Co.: L. W. WALKER, Master; D. G. HEALD, Sec'y. Agent, W. M. HILL.
SANTA ROSA GRANGE. Santa Rosa, Sonoma Co.: GEO. SEBASTOPOL GRANGE, Sebastopol, Sonoma Co.: M. C. HICKS, Master; JOSEPH PURRINGTON, Sec'y.
SONOMA GRANGE. Sonoma, P. O. Sonoma, Sonoma Co.: WM. MCP. HILL, Master; W. A. BEHR, Sec'y.
TWO ROCK GRANGE. Two Rock, Sonoma Co.: S. L. BARLOW, Master; HOWARD ANDREWS, Sec'y.
WATERFORD GRANGE. Waterford, Stanislaus Co.: R. R. WARDER, Master; W. C. COLLINS, Sec'y.
WINDSOR GRANGE. Windsor, Sonoma Co.: A. B. NALTEY, Master; J. H. MCLELLAND, Sec'y.

STANISLAUS COUNTY.

BONITA GRANGE. Crow's Landing, Stanislaus Co.: J. W. TREADWELL, Master; A. B. TROOK, Sec'y.
CERES GRANGE. Westport Precinct, Stanislaus Co.: W. B. HARR, Master; O. N. WHITMORE, Sec'y.
OAK DALE GRANGE. Oak Dale, Stanislaus Co.: A. S. ARNOLD, Master; C. H. HARRIS, Sec'y.
ORISTIMBA GRANGE. Hill's Ferry, Stanislaus Co.: W. J. MILLER, Master; THOS. A. CHAPMAN, Sec'y.
SALIDA GRANGE. No. 8, Modesto P. O., Stanislaus Co.: B. F. PARKES, Master; A. J. FLEMORE, Sec'y.
STANISLAUS GRANGE. Modesto, Stanislaus Co.: J. D. SPENCER, Master; VITAL E. BANOS, Sec'y.
TURLOCK GRANGE. Turlock, Stanislaus Co.: W. S. ROBINSON, Master; JOHN A. HENDERSON, Sec'y.

SUTTER COUNTY.

SUTTER GRANGE. Meridian, Sutter Co.: W. C. SMITH, Master; M. HUNGERFORD, Sec'y.
YUBA CITY GRANGE. Yuba City, Sutter Co.: GEO. OBLEYER, Master; S. R. CHANDLER, Sec'y.

TEHAMA COUNTY.

FARMINGTON GRANGE. Farmington, Tehama Co.: ADDISON J. LOOMIS, Master; S. H. LOOMIS, Sec'y.
NEW SALEM GRANGE. Paskett, Tehama Co.: OLIVER HARRIS, Master; J. R. WHITLOCK, Sec'y.
RED BLUFF GRANGE. Red Bluff, R. H. BLOSSOM, Master; JOHN CURTIS, Sec'y.

TULARE COUNTY.

CHRISTMAS GRANGE. P. O. Visalia, Tulare Co.: A. B. COREY, Master; W. H. STUART, Sec'y.
DEEP CREEK GRANGE. Farmersville, W. G. PENNERAKER, Master; F. G. JEFFERDS, Sec'y.
LAKE GRANGE. Kingston, M. S. BAROCK, Master; E. J. BRIDGES, Sec'y.
TULE RIVER GRANGE. Porterville, Tulare Co.: G. A. WILLIAMSON, Master; N. T. BLAIR, Sec'y.
VISALIA GRANGE. Visalia, Tulare Co.: WILEY WATSON, Master; H. G. HIGGIE, Sec'y.

VENTURA COUNTY.

OJAI GRANGE. San Buenaventura, Ventura Co.: C. E. SOULE, Master; JOSEPH HOBART, Sec'y.
PLEASANT VALLEY GRANGE. Pleasant Valley, Ventura Co.: D. RONDENBURG, Master; B. B. BOWENING, Sec'y.
SAN PEDRO GRANGE. San Buenaventura, Ventura Co.: J. V. SAVIENS, Master; D. D. DENURE, Sec'y.
SATICOY GRANGE. P. O. San Buenaventura, Ventura Co.: MILTON WASSON, Master; E. A. DUVAL, Sec'y.
SESIPE GRANGE. Ventura Co.: S. A. GUERINER, Master; J. D. MARPLE, Sec'y.
VENTURA GRANGE. San Buena Ventura, Ventura Co.: J. WILLETT, Master; CHAS. S. PERREALE, Sec'y.

YOLO COUNTY.

ANTELOPE GRANGE. W. J. OLARK, Master; O. L. N. VAUGHN, Sec'y. P. O. Antelope, Yolo Co.
BUCKEYE GRANGE. P. O. Antelope, Yolo Co.: WM. SIMS, Master; L. MOODY, Sec'y.
CACHE CREEK GRANGE. Cache Creek, Yolo Co.: D. B. HUBBERT, Master; L. D. STEPHENS, Sec'y.
CAPAY VALLEY GRANGE. Capay, Yolo Co.: R. R. DARR, Master; F. M. BASSETT, Sec'y.
DAVISVILLE GRANGE. Davisville, Yolo Co.: CHAS. E. GREEN, Master; JOHN KIMMER, Sec'y.
HUNGRY HOLLOW GRANGE. P. O. Oat Valley, Yolo Co.: G. L. PARKER, Master; T. O. PEAKINE, Sec'y.
WEST CROFTON GRANGE. P. O. Yolo Co.: A. W. MORRIS, Master; GEO. W. PARKS, Sec'y.
YOLO GRANGE. Woodland, Yolo Co.: W. M. JACKSON, Master; D. SCHINDLER, Sec'y. Agent, W. M. JACKSON.

YUBA COUNTY.

MARYSVILLE GRANGE. Marysville, Yuba Co.: O. G. BUCKLEY, Master; JAS. M. CUTTS, Sec'y.

Deputies who organize new Granges are requested to send the list of officers, and the names of all charter members, with other facts of interest, for free publication in the RURAL PRESS, as early as possible.

SOME of the Patrons of Husbandry in Minnesota have applied the principal of co-operation to a new industry—the pursuit and capture of horse thieves. Hereafter each Grange is to have "five riders," who are, on a robbery of stock being reported, to mount and follow the culprits. To this end the Grange is to furnish them with funds not less in amount than \$25, and on giving the hailing sign of the Patron, all other Granges will entertain them free of cost, turn out to aid them or lend them fresh horses.

A GRANGE BANK has been chartered in Clark county, Ind., and will soon open its doors. Its object is to cheapen the rate of interest.

The Granges and Worcester's Dictionaries.

The readers of the RURAL PRESS will perhaps remember that we advertised, a few weeks since, for something witty about the Grange. We are happy to announce as another proof of the efficiency of advertising, that this advertisement has already brought a supply. The articles offered are not, it must be confessed, up to the requisite standard; still they show an earnestness of effort which is highly commendable; and diligence in this, as in every other field of labor, will ultimately terminate in success. There will be ample time for improvement before the Grange is numbered among the things that ridicule has killed.

One of the most meritorious of these efforts is an article now "going the rounds" of the papers relating to a "blunder" committed by the Executive Committee of the National Grange at Washington. The constructor of the article alluded to, tells the world, confidentially, that a confidential circular was recently addressed by the Grange Executive Committee to 18,000 Granges throughout the country, and that among other curious things, was a paragraph informing these 18,000 Granges that members of Congress were able to supply Grangers and Granges with unlimited public documents; probably about 18,000 books to each individual member of these 18,000 Granges.

Among the specifications for books, "Worcester's Dictionary" was ordered for the use of the Granges. Here endeth the wit of the article; and the journalistic clown lays aside the motley to assume the mantle of the political economist

The Principles and Workings of the Grange.

At the Grangers' picnic at Kelseyville, to the sentiment, "The Grange—National, State and Subordinate," Worthy Master Hamilton responded as follows:

The Grange, National, State and Subordinate, is not properly the origin of the farmers' movement against the evils under which the agriculturists have long suffered, and from which they sought redress, but is more properly an outgrowth of, or a crystallization of the forces, both moral and physical, which have been brought to bear to redress these grievances, and is thus the principal factor employed in carrying this mighty movement into effect. Of but recent origin, without agriculturalists for its founders, the Grange has so exactly met the pressing wants of the times as to gain everywhere enthusiastic adherents. Farmers have derived help from it; farmers' wives and daughters have gathered new life and spirit and energy under its social and intellectual influence, and have given in return sociality to its meetings. Business and pleasure have been properly combined; the monotony of toil has been broken and relieved by conversation and song and harmless amusement. Economy, thrift and management have been taught its members. Its success proves conclusively that it has had the power of making average men and women work in unison for a common good, and accomplish what they hardly dared dream of. In the meetings of the Order all but members are excluded, and its proceedings, while conforming to rural pursuits, are designed not only to please and charm the fancy, but also to purify the heart and cultivate and enlarge the mental faculties.

The objects of the Order undoubtedly are, "combined, co-operative association for individual improvement and common benefit." To derive these advantages we must have systematic arrangement for procuring and disseminating correct information relative to crops, prices, markets and transportation between producer and consumer. We must have information in regard to demand and supply; we must have arrangements for the purchase and exchange of all desired commodities and various useful articles, whether of seed, stocks, plants or mechanical and agricultural implements; we must also have a means by which we can not only detect and expose those who may be unworthy, but also protect the farming interests from fraud and deception of every kind. All these things our organic law provides for by instituting a National Grange, to which all these are subservient, and from which alone emanate all authority, information and plans of work of any importance.

Herein we differ from agricultural societies in general; for we not only teach our members the most improved methods and how to practice agriculture, but we also protect them in their acts. We watch and detect and warn against impostors; we bring about a reduction in the cost of all needed supplies; we assist, instruct, improve and elevate all classes, both socially and morally; and while agricultural societies have no common bond of union among them, as they are separate and independent of each other, we are bound together with iron bands. The separate Granges are but so many parts of a stupendous whole, which whole is a body firmly united in substance and interest, guided by one head, striving for the achievement of one end, viz: the general good of the agriculturist at large.

The fact is self evident that every movement of great bodies of men to be effective must be organized, and every organization to be perfect must have a head to enforce its decrees, and a corps of subalterns to carry them into effect. In the language of an able writer, "The Patrons of Husbandry is simply a grand combination of societies, of which the subordinate Granges are the individual members, the State Grange the subaltern officers, and the National Grange, composed of those distinguished for merit and ability, the great head." The head can not say to the hands, "I have no need of you," nor can the hands say to the feet, "We can progress without your assistance," but we are so intimately blended that all are required to act in unison to accomplish a perfect work. It is therefore absolutely necessary for the good of the whole that the several workings be in harmony with each other and consistent with the objects of the Order. Hence to secure general harmony and consistency our organic law requires that each subordinate Grange should submit its plans of work for the approval of the State Grange, and each State Grange should also submit its plans to the National Grange before entering any field of work which might create a conflict of purposes or clash of interests, or be totally foreign to the principles of the Order.

Then let every Patron, in every act, in every thought, in every word, at all time and in all places remember that the success and prosperity of our Order depend upon a rigid adherence to our organic law; that the obligation of each Patron requires him to lay aside his individual preferences for any particular course of action he may approve, and unite in support of those measures which proper authority decides to be most conducive to the welfare of the whole body, and ever keep before them in characters of living light, the motto: "United we stand, divided we fall."

The proposition to locate a State manufactory of agricultural implements at Logansport, Ind., is being discussed by the Patrons.

Colored Men and the Granges—A False Statement Corrected.

EDITORS PRESS:—A telegram from Washington in the *Alta* of May 23, contains such remarkable and incorrect statements about the work of Granges in the South, that it seems to deserve some notice in your columns. It is asserted, on the authority of a prominent negro in Washington, from Georgia, that the Granges there, and we are left to infer in the South generally, are being turned into Ku-Klux organizations, and are taking such steps about wages and labor as tend to reduce the colored people again to a condition of servitude.

It has recently been my good fortune to meet and exchange ideas concerning our Order with the Masters of all the State Granges of the South, in the session of the National Grange at St. Louis. I also attended numerous meetings of Granges in the Southern States, and conversed freely and fully with our brotherhood there about our interests and purposes. From all I saw and learned I do not hesitate to assure you most emphatically that no charges could possibly be more absurd and untrue than those above quoted from the telegram in question. There is no foundation in fact for them whatever.

Our fellow Patrons of the South are working earnestly and hopefully with our brotherhood throughout the Union to carry out the same purposes that we have all openly declared to the world. They are striving for nothing more, nothing less. Surely our brothers everywhere know that the principles of our noble Order utterly forbid the carrying out of any such schemes as are ascribed to them in the Washington despatch, by some one who evidently knows nothing at all of the working of our fraternity.

One assertion he makes is correct: he says no colored people are admitted into the southern Granges. This is true, but it is equally true elsewhere. Diligent enquiry was made, and not an instance was found in the Middle, New England or Northern States where colored members have been admitted. This is considered a local question for each subordinate Grange to manage according to the preference of its members. There is nothing in our constitution, laws or regulations that forbids the admission of any one on the ground of race or color. This is a question left open for each Grange according to the choice of its own members.

The Grange is an eminently social organization. Within its mystic bounds farmers and their families meet on terms of the most perfect social equality. It is as complete a fraternity as a lodge of Masons or Odd Fellows. As there are separate Masonic lodges for the benefit of colored people, so there is an order similar to the Grange organization, formed exclusively for them, in which they can unite if they so desire; have a social, comfortable time among themselves, and labor to secure advantages similar to those secured by the Patrons of Husbandry.

Our colored citizens, everywhere, may rest assured that there is nothing in the principles, workings or intentions of the Granges, in any part of the Union, calculated to interfere in the slightest degree with their liberty, welfare or happiness. On the contrary, our principles tend to benefit them, as well as to advance the interests of labor and industry.

J. W. A. WRIGHT.

Borden, May 27, 1874.

CALIFORNIA FARMERS' MUTUAL FIRE INSURANCE ASSOCIATION.—An association under the above title was incorporated on the 22d ultimo; the object of which is to insure dwellings, houses, barns and other buildings; also, hay, grain and other property. The names of the incorporating directors were given last week. By reference to our advertising columns it will be seen that a meeting of the stockholders has been called at the office of the Secretary, W. H. Baxter, 320 California street, corner of Sansome, for the purpose of adopting a Code of By-Laws for the Government of the Association. It is desirable that there should be a full attendance of the stockholders on that occasion, and that Patrons, throughout the State, should unite in the establishment and support of this mutual co-operative association for insurance against fire. There is no question but that the rates of insurance have heretofore borne with undue weight upon farmers whose houses, crops, etc., are really subject to less risk than any other species of property. By uniting in a mutual association, as above, and conducting their business exclusively among themselves, by themselves, and that in an economical manner, the heretofore heavy cost of insurance to them may be greatly lightened. It is desirable that all who propose taking stock in this enterprise and insuring therein, should come forward at once, subscribe for their stock, and take a part in the final organization on the 20th inst. Applications may be made to the Secretary of the Company, W. H. Baxter, at the Grange Agency, 320 California street.

MONTHLY GRANGE DIRECTORY.—We give today our regular monthly directory, which numbers 196 Granges which have thus far been organized in California. The total number added to the list from last month is seventeen, seven of which are new this week.

GRANGES are rapidly increasing in Nebraska. There are now over 500 with a membership of more than 27,000.

Harvest Feast at Vallejo.

EDITORS RURAL PRESS.—I regret exceedingly that you were not able to be present at our Harvest Feast on Saturday last, as I think you would have been pleased and found sufficient enjoyment to have remunerated you for your time spent. We have been complimented on the success thereof by many friends who were present, and if I were an outsider, would be able perhaps to write you a very glowing description thereof; but as I am not, I shall content myself by giving you only some of the general features. We finished conferring the 4th Degree on a class of six a few minutes past one o'clock, when we opened our doors to invited guests, and soon had the pleasure of seeing the hall (Masonic) comfortably filled with the citizens of Vallejo and surrounding country, all of whom expressed themselves highly pleased with our efforts.

Our table was spread in the center of the hall in the form of the letter T, and exposed an area of about 100 superficial feet, every inch of which was covered with home-cooked meats and delicacies of every description, prepared by the sisters of our Grange; fruits and flowers of home culture, also lent their charm in decorating both the hall and the table—prominent among which and towering some three or four feet above its surroundings, at the intersection of the table stood an immense bouquet of flowers, surmounted with a fine collection of the cereals—wheat, barley, oats and grasses as emblematical of the producer and his industry, eliciting the admiration of all present, and bearing tribute to all of our worthy patronesses, Ceres, Pomona and Floras. To say the table fairly groaned under the burden of good things placed upon it hardly expresses the facts, as baskets of unpacked plenty stood beneath the table, awaiting the opportunity to take the place of that which gave way to make room for it on top thereof. Excuse me if I here repeat a remark I chanced to overhear a gentleman make to his companions surrounding him. He said, "I have traveled this State over, and been present at a great many gatherings, but the bounteous feast here provided, as well as the general good feeling and sociability prevailing, exceed anything I have seen."

We were exceedingly disappointed in not having our Worthy Master, Rev. J. M. Hamilton, present to address us, as he had given us his assurance he would do. After a blessing pronounced by the Rev. Mr. Klink, the guests were all invited to partake as brothers and sisters of the same family in their own home, which they seemed to enjoy to its fullest extent. After this, speeches being in order, our Worthy Master arose and proposed the clergy, which was responded to in a very happy strain by Rev. Klink; being followed by the singing of a Grange song, with organ accompaniment; succeeded by some remarks by the Rev. Hatch. The ladies and gents present next favored the Grange with more music, after which the Hon. C. B. Denio was called for, and responded, complimenting the Grangers and wishing them God speed in the good work they had undertaken. After a few more selections of Grange music the company began to withdraw. The surplus of good things was then carefully packed in a box and sent to the Good Templars' Orphans' Home, where I have no doubt they were fully appreciated.

Fraternally yours, etc.,

CHAS. B. DEMING, Sec'y.

Vallejo, May 26, 1874.

Resignation.

EDITORS PRESS:—At the last meeting of the Badger Flat Grange, our Worthy Master, W. W. Parlin, resigned his position, and the following resolutions were unanimously adopted by the Grange:

WHEREAS, Our esteemed Worthy Master W. W. Parlin is soon to remove from this vicinity, thus terminating his official connection with Badger Flat Grange,

Resolved, That in the removal of Bro. Parlin, our Grange loses an able and accomplished presiding officer, and a true and devoted member.

Resolved, That we extend to him our sincere thanks, for the dignified, courteous and impartial manner in which he has performed his duties, and we cordially commend him to the sympathy and esteem of all members of our Order, wherever his lot may be cast, as a man and brother Patron, worthy of their highest regard.

Resolved, That a copy of these resolutions be sent to the PACIFIC RURAL PRESS and California Granger for publication.

Los Banos, May 28th, 1874.

GRANGERS' WAREHOUSES.—Articles of incorporation of the following companies were filed in the office of the Secretary of State on Saturday last: Antioch Grangers' Warehouse and Wharf company, of Antioch, Contra Costa county; Antelope Grange Warehouse and Mercantile company, to carry on the business of warehousing in Yolo and Colusa counties; place of business, Antelope, Yolo county.

BAKERSFIELD GRANGE, KERN COUNTY.—A note from P. Tibbet, Secretary *pro tem.*, informs us that this Grange is in a prosperous condition. It enjoyed a harvest feast on the 19th ult., after advancing a class of five to the fourth degree. They have another class already under way.

WATERFORD GRANGE, at its meeting, May 23d, agreed, by a unanimous vote to incorporate; also instructed the present Trustees to subscribe for ten shares of the Stanislaus Warehouse stock.—*Stanislaus News.*

GRANGES are increasing in Ohio at about the rate of 100 per month.

New Granges.

SPADRA GRANGE, Spadra, Los Angeles Co., was organized May 23d, by Deputy Thomas A. Garey, of Los Angeles, with 27 charter members and the following list of officers: A. T. Currier, M.; T. D. Holladay, O.; T. A. Caldwell, S.; A. H. Tafts, L.; H. Freyer, A. S.; A. M. Humphries, L.; A. P. Monroe, T.; Jos. Wright, Sec'y; Wm. Cook, G. K.; Miss L. Lilley, Ceres; Mrs. Minnie Caldwell, Pomona; Miss M. Shrewsbury, Flora; Mrs. L. Caldwell, L. A. S.

Bro. Garey, in communicating the above, mentions the gratifying fact that Los Angeles county now numbers 17 Granges. That county still holds the banner.

POPE VALLEY GRANGE, Pope Valley, Napa Co., was organized, May 30th, by J. M. Hamilton, Master of the State Grange, with a full list of 30 charter members and the following list of officers: J. A. Vanarsdale, M.; T. H. O.; R. J. Davenport, C.; R. S. Hardin, L.; C. A. Booth, Sec'y; Jesse Barnett, T.; Ed. Kean, S.; J. Booth, A. S.; J. E. Williams, G. K.; Mrs. J. S. Vanarsdale, Ceres; Miss Emma Booth, Flora; Miss Ella Wallace, Pomona; Mrs. A. J. Dollarhide, L. A. S.

TULARE COUNTY COUNCIL.—A County Council was organized on the 25th ult., for Tulare county, with the following list of officers: J. M. Graves, of Visalia Grange, M.; M. S. Babcock, of Lake, O.; T. J. McQuiddy, of Christinas, C.; F. G. Jeffers, of Deep Creek, S.; H. P. Gray, of Lake, L.; J. A. Patterson, of Visalia, T.; C. T. Brown, of Tule river, S.; C. W. Hackett, of Franklin, A. S.; W. Farmer, of Christinas, G. K. Trustees: A. W. Mathewson, T. J. McQuiddy, E. H. Baker, T. Fowler and W. W. Boyd.

WALNUT GROVE GRANGE, Courtland, Sacramento county, was organized May 21st, by Deputy W. S. Manlove, with 19 charter members. Solomon Reenyon was elected Master and J. V. Prather, Sec'y.

SHEERMAN ISLAND GRANGE, Emmatown, Sacramento county, was organized May 22d, by Deputy W. S. Manlove, with 20 charter members. J. M. Upham was chosen Master and W. M. Robbins, Sec'y.

EVENING STAR GRANGE, Biggs station, Butte county, was organized May 22d, by Deputy Wm. M. Thorpe, of Chico, with 28 charter members. E. W. S. Woods was chosen Master and C. F. Butler, Sec'y.

REDDING GRANGE, Redding, Shasta county, was organized May 27th, by Deputy Wm. M. Thorpe, with 29 charter members. Joseph F. Dinsmore was chosen Master and Samuel J. R. Gilbert, Sec'y.

NEW SALEM GRANGE, Paskento, Tehama county, was organized May 23d, by Deputy Wm. M. Thorpe, with 23 charter members. Oliver Harris was chosen Master, and J. R. Whitlock, Sec'y.

Fruit Growers' Convention.

At a special meeting of Napa District Council, held at Napa, Saturday, May 23d, 1874, the following resolution was adopted:

Resolved, That the different Granges in the State, interested in fruit-growing, be requested to send one or more delegates to meet with the State Executive Committee in Convention, to be held at San Francisco, Thursday, June 18th, 1874, at the office of the State Agency, 320 California street, for the purpose of forming a Fruit Growers' Association.

We trust that the above resolution will be acted upon by the Granges generally throughout the fruit growing districts of the State, and that there will be a full representation at the time and place specified.

The following Brothers have been elected delegates from Napa Grange: James M. Thompson, W. W. Smith, with R. A. Thompson as alternate.

THE GRANGERS MOVING.—The Patrons of Yolo Grange have formed an association for the purpose of building a grain storehouse in this place and for other purposes tending to their own protection. We learn that several other Granges in the county are taking similar action. This is sensible. It will enable them to protect themselves and to obtain fair prices for their products.—*Yolo Democrat.*

THE members of a Grange in Jasper county recently took twelve teams, went to the house of George Cannon, a brother member who had been sick for some time, gathered his ten acres of corn, butchered his hogs and left everything in good shape.

THE RED BLUFF GRANGE held a harvest feast on the 21st at their hall. Dinner over, by request of the Worthy Master, R. H. Blossom, W. B. Parker read an address which had been prepared by their Worthy Lecturer, L. B. Healy.

AN Iowa Patron thinks that there is too much lawyer in our politics, and that as a nation we have gradually given up to the lawyer nearly every position of honor and trust.

THE canvassers of the Los Angeles Grange co-operative company, it is reported, are meeting with excellent success in selling the stock of the company.

THE Order is prospering in Kentucky. Warren county, without a Grange in February, now reports twelve.



Brother and Sister.

I cannot choose but think upon the time
When our two lives grew like two buds that kiss
At lightest thrill from the bee's swinging chime,
Because the one so near the other is.

He was the elder and a little man
Of forty inches, bound to show no dread.
And I the girl that puppy-like now ran,
Now lagged behind my brother's larger tread.

I held him wise, and when he talked to me
Of snakes and birds, and which God loved the best,
I thought his knowledge marked the boundary
Where men grew blind, though angels knew the rest.

If he said, "Hush!" I tried to hold my breath;
Whenever he said, "Come!" I stepped in faith.

School parted us; we never found again
That childish world where our two spirits mingled
Like scents from the varying roses that remain
One sweetness, nor can evermore be singled.

Yet the twin habit of that early time
Lingered for long about the heart and tongue;
We had been natives of one happy clime
And its dear accent to our utterance clung.

Till the dire years whose awful name is Change
Had grasped our souls still yearning in divorce,
And pitiless shaped them in two forms that range
Two elements which sever their life's course.

But were another childhood-world my share,
I would be born a little sister there.

—Geo. Elliot.

WOMAN.—Place her among flowers, foster her as a tender plant, and she is a thing of fancy, waywardness and folly—annoyed by a dewdrop, fretted by the touch of a butterfly's wing, and ready to faint, at the sound of a beetle; and she is overpowered by the perfume of a rosebud. But let real calamity come, rouse her affections, enkindle the fires of her heart, and mark her then; how her heart strengthens itself—how strong is her heart. Place her in the heat of the battle—give her a child, a bird—anything to protect—and see her in a relative instance, lifting her white arms as a shield, as her own blood crimson her upturned forehead, praying for life to protect the helpless. Transplant her in the dark places of earth, call forth her energies to action, and her breath becomes a healing, her presence a blessing. She disputes inch by inch the stride of stalking pestilence, when man, the strong and brave, pale and affrighted, shrinks away. Misfortune haunts her not; she wears away a life of silent endurance; and goes forward with less timidity than to her bridal. In prosperity she is a bud full of odors, waiting but for the winds of adversity to scatter them abroad—pure gold, valuable, but untried in the furnace. In short woman is a miracle—a mystery, the center from which radiates the great charm of existence.

NO SONGS HEARD THERE.—A recent traveler says: "What always impresses more than anything else in Egypt and Palestine has been the entire absence of cheerful and exhilarating music, especially from the children. You never hear them singing in the huts. I never heard a song that deserves the name in the streets or houses of Jerusalem. One heavy burden of voiceless sadness rests upon the forsaken land. The daughters of music have been brought low. The mirth of the tabret ceaseth, the noise of them that rejoice endeth; the joy of the harp ceaseth!"

DIDEROT once traveled from St Petersburg to Paris in his morning gown and night-cap, and in this guise promenaded the streets and public places of the town on his route. He was often taken for a madman. While composing his works he used to walk about with rapid strides, and sometimes throwing his wig in the air when he had struck out a happy idea. One day a friend found him in tears. "Good heavens! he exclaimed, 'what is the matter?' 'I am weeping,' said Diderot, 'at a story I have just composed!'

A young Boston mechanic saw an overcoat in a second-hand clothing store, which he thought he would be glad to possess at a reasonable price. "How much?" he asked. "Twenty-one dollars," was the answer. The usual haggling took place, and the mechanic started to leave the store. "How much you gift?" asked the merchant. "Three dollars." "Take it, then. I shall shun be ruin of myself. I only make two dollars on dat coat, so help me gracious."

COUNTRY PRACTITIONER (about to go up to London on business).—"I shan't be more than ten days at the furthest, Mr. Fawcetts. You'll visit the patients regularly, and take care that none of 'em slip through your fingers—or get well—during my absence."—Punch.

The Richmond Enquirer gives the world the benefit of the following recipe: To cure an ill-tempered man—Put him under another twice as bad, and let him see what a fool he has been making of himself.

Nasby's Anti-Temperance Meeting.

CONFEDERATE X ROADS
(which is in the State of Kentucky)
March 10th, 1874.

Ef Heaven's most piercin' littenins cood strike Joe Bigler and that jeerin' fiend Pollock, I shoold think more uv the economy of naecher. For till these demons is dead and berried we never shall hev pesce or quiet at the Corners. It wuz a bitter day for me, and for all uv us, when that wretched Pollock come hero from Illinois and struck hands with Bigler. Either uv them is pizen—yoonited, striknine in nothin' to 'em.

We held a meetin' in Bascom's last week Toosday, to decide upon some measures to counteract the wimmin's temperance movement which we are momentarily expectin' will strike the Corners and ravage us ez it bez the towns and villages in Ohio and Injany. Bascom called the meetin', for Bascom swears he will defend his rites till the last.

We hed the grocery tollably full uv the men of the Corners, when they shoold march in but Bigler and Pollock, who sot down on nail kegs ez sollum ez a funeral.

Various sejestions wuz made as to the best way of counteractin' the movement, when Pollock rose and askt the privilege of mskin a remsrk, which, I az chairman, cosentid to.

"I sympathize heartily with yoo," sed Pollock, "in thus standin' up and makin' head agin this fanatikle croosade, and wood sejest that you fite the devil with fire. In Ohio the wimen go out agin the traffic in likker—let our wimen here in the Corners come out and enter their protest agin any interference with the rights of their husbands, fathers and brothers. Let the wimen uv the Corners protest agin this fanaticism."

Joe Bigler riz, and I felt a presentiment that the devil hed broken his chain and wuz amongst us.

"I don't often agree with Pollock," he remarked, "but there is in this sejestion so much uv good sense that I belevee I shel second him in it. By all means let our wimmen enter their protest against this wild croosade, that the world may know that Kentucky at least stands by her landmarks. The wimmen uv Ohio howl that the trsfic is demoralizin to society and pertikularly that it is rooinin them. Now let the wimmin uv the Cross Roads meet and hist in their testimony that it is nothing uv the kind. And that this protest may be made in doo form, I sejest that the wimmin uv Confederate X Roads meet at the church to-morrow afternoon, 2 P. M., and resoloot agin this thing. Is it a go?"

"It is! It is!" "We will hev em do it!" wuz shouted from all parts uv the room.

Bascom wuz delited with the position. He said that so far ez his wife wuz concerned, she wood jine in such a protest heartily. It shoold be done by all means.

"It is all well enuff to say, 'we will' " sed Bigler, "but let us make shoer of hev em all out, that there may be no faleyoer. To make this a success the meetin must not only be enthoosiasie, but large. Pollock, take a piece of paper and put down the names uv those husbands who will pledge their wives to be present. Issaker Gavitt, will Mrs. Gavitt be shoer to come?"

Issaker blushed—which is to say his nose turned bloo—ez he answered, "probably not, unless the weather should be warmer, for my woman hezn't got no shoes."

"Mrs. Gavitt can't come to protest agin this croosade agin likker, cos she ain't got no shoes," sung out Pollock.

"But, Issaker, I bought fifty bushels uv corn uv yoo last Fall—why didn't you get your wife shoes then?"

"I hed to pay it to Bascom, on account," sed poor Issaker, blushing still more.

"All right," sed Pollock "uv course you did. Go on Josef."

"Squire Pennibacker, will your wife be present to jine this antifanaticism movement?"

"She'll oppose it," sed the squire, "coz I do; but I doubt ef she kin com out to bear her testimony agin it. She aint got no cloze that she'd like to be seen in."

"Mrs. Pennibacker aint got no cloze and can't come," sung out Pollock. "Go on, Josef."

"Deekin Pogram, your wife and your dawter Mirandy will be here, certainly?"

"Taint shoer" said the Deekin, "uv both uv em—one of em kin come, but the other cau't."

Ef my wife wears the dress, Mirandy must stay, and vicey versy, cos they aint got but one atween em."

"I hev put down one from Deekin Pogram's ez them two wimmin heve only one dress atween em. Go on Josef; we hev got to git more than these to the meetin will be a faleyoer."

"Lem'l Pettus, will you see that your wife will be present to protest agin—"

"Stop!" I yelled, secin the drift uv these wretches; "this bez gone fur enuff. I pertest—" "Easy, Parson easy," said Bigler. "We must have the wimmin out. The wimmin of Ohio persist that likker rooins—our wimmin must bear testimony that it don't. I confess that the prospekt isn't encurrin fur we havent found a sufficieny uv dresses, and shoes, and sich, among our wimmin to enable them to take part in the public demonstration, but—"

At this pint Bigler stopped, for Mrs. Bascom, G W.'s wife, opened the door by her sitting-room, and looked in. It was an unfortunit movement ez ever wuz—in fact it seems ez tho the devil alluz helped Bigler and Pollock. There stood Mrs. Bascom with a olak moire anteeek dress on, with gold rings onto her fingers and a fur concern about her shoulders, and reel gaiters

onto her feet, and a buzzum pln onto her, and everything gorgeous. Ez she drew back into her room Pollock broke out:

"Mrs. Bascom kin go and enter her protest agin this onawomonly croosade, can't she?"

"Uv course sho kin," said Bigler. "She's got shoes and cloze enuff."

"Troo, troo," said Pollock, "and singler ss it may seem, she's only the one in the Corners who bez. What shel we do about it?"

"I pertest agin this thing," shrieked I, for I seed wat it wuz leading to.

"Wait till I make my sejestion," ssid Bigler.

"I wuz a comin' to it. It strikes me that Bascom's wife hez got all the cloze that belongs to the wimmin of the Corners, and that it is likely to continyoo so jist so long ez Bascom keeps the grocery, for the reason that it takes all that the men kin get hold uv to keep in sustenance. Now woodn't it be an ekilable arrangement if the msle citizens uv the Corners shoold take turns at keeping the grocery? Let Issaker Gavitt hev it for a week, which would enable him to get Mrs. Gavitt a pair uv shoes—a week's profit would enable Pennibacker to get his wife a caliker dress, and so on around. It seems to me that it's unfair—"

Bigler didn't get no further with his incendiary harangue. Bascom biled over and throwed a bottle at him, which Bigler dodged, and he and Pollock went out a lafiu voiferously at the fix they had put us in. The bottle broke up the meeting. I thot it a pity that it shoold be wasted and went for it, and so did every man in the room, and we struggled for it on the floor like madmen. Issaker Gavitt got it and dusted out with it.

I am fearful that our efforts to stem the tide will result in a faleyoer. I can't help confessin' that there is suthin' queer in the fact that Bascom's wife is the only woman in the Corners, who bez decent clothes, but Joe Bigler and Pollock had no bizness to make the fact so cussedly apparent. If it ever gets to the ears of the wimmin it ain't impossible that they'll commence a raid on Bascom themselves. I woodnt have Pamela Gavitt, Issaker's wife, git hold uv where that fifty bushels uv corn went fur no money. It's a cold world and a hard one to git thrn with easy.

PETROLEUM V. NASBY,
(which wuz Postmaster.)

N. B.—This excitement hez delayed the ishoo uv my paper. But I shall git it out.

WILLIAM M. EVARTS, Esq., at a public dinner lately, told the following good story on himself: A few summers since, at the urgent request of his younger daughters, he sent up to his country place in Vermont, a donkey for her use. She had read about donkeys, but was not familiar with their peculiar vocalism. The animal's strange noise inspired her with the profoundest pity for his evident distress. So she wrote to her father: "Dear papa. I do wish you would come up here soon, my donkey is so lonesome."

A WORTHY woman in Rochester, N. Y., who thought her daughter rather too young to receive calls from a very attentive young gentleman, the other evening gave them a very broad hint to that effect; first, by calling the girl out of the room and sending her to bed; and second, by taking into the room a huge slice of bread and butter, with molasses attachment, and saying to the youth in her kindest manner: "There, Bubby, take this and go home; it is a long way and your mother will be snixions."

A FASHION periodical states that a "first communion dress" should consist of a Swiss muslin skirt and dress, etc.; and a "confirmation robe" should be a skirt, overskirt, blouse-waist and mantelet, etc. Now what we want to know is, what ought we to wear at the opening of Msgrue's new drinking saloon next Tuesday?—Danbury News.

It is announced as an interesting fact that for \$1,000 a man can buy a ticket that will carry him round the globe. This seems like useless extravagance, when, if he will stand still, the globe itself will carry him around the same distance in twenty-four hours for nothing.

A CLERGYMAN being annoyed by some of his audience leaving the church while he was speaking, took for his text:—"Thou art weighed in the balance and found wanting." After a few sentences, he said:—"You will please pass out as fast as you are weighed."

WHILE Prof. Watson has been fooling away fifteen years of his life in the study of astronomy, a very common fellow in Delaware has discovered that a turnip tied to a string and hung to a hook will prevent rheumatism from entering the house.

THE blood itself is now supposed to be the seat of all chemical changes in the body that develop force. Thus we come back again to the doctrine taught in the Bible, that "The blood is the life."

JOSH BILLINGS.—Trieing tew define love iz like trieing tew tell how yu kum tew brake thrne the ice—all yu know about it is, you fell in and got dicked.

A WESTERN paper says of the air, in its relation to man: "It kisses and blesses him, but will not obey him." Blob says that that description suits his wife exactly.

AN old lady advises young girls who want to remember a thing to write it down and paste it on the looking glass.

Henry Ward Beecher on Cremation.

Beecher defines his position upon the cremation question as follows:

1. We are heartily opposed to any compulsory burning. Whoever prefers to be buried should have an unrestrained liberty in the matter. If it is plessnter to decay gradually in a box five feet beneath the ground, giving to the near absorbent earth the volatile constituents of our cast-off bodies, than to be turned speedily to ashes, so let it be.

2. If there be those who, looking forward, contemplate with satisfaction an urn containing the inconsumable particles of their bodies, why should they be denied their preference? Shall one who wishes to be ashes be compelled to be dirt? If one prefers to have his urn on a shelf, should he be obliged to have a box far under ground?

3. Let every one choose. Let commissioners be appointed who shall put the question without bias to each one—will you burn or bury? And let there be no odium cast upon either side. Whether it be dust or ashes let it be esteemed orthodox. Having fallen into parties, sects, clans, all their life, and quarreled about almost every question, there should be peace at last, and man's ghost not be disturbed as to the disposition of his body. The burning sect! The burying sect! Fire or the spade! Into the ground or into the air! How unseemly would be these cries!

Finally, by the way of application: 4. It is very little matter what becomes of the body after we have done with it. It is of a great deal more importance to consider well what will befall the soul. The casket is of little value, but the jewel is priceless. Here endeth the lesson.

RELIGION.—Religion is life, rather than science, and there is a danger peculiar to the intellectual man of turning into speculation what was given to live by. The intellect, busy with ideas about God, may not only fail to bring a man nearer to the divine life, but may actually tend to withdraw him from it. For the intellect takes in but the image of truth, and leaves the vital impressions, the full power of it, unappropriated. And hence it comes that those truths which, if felt by the unlearned at all, go straight to the heart, and are taken in by the whole man, are apt in the philosopher, and the theologian, to stop at the vestibule of the understanding, and never to get farther. The trained intellect is apt to eat out the child's heart, and yet the "except ye become as little children," stands unrepealed.

THIS laconic but sensible German ought to be sent out to lecture to the people on temperance:—"I drank mine lager; den I put mine hand on mine head, and there vosh von pain. Den I put mine hand in mine pocket, and dere vas noting. So I jine de demerance. Now dere is no pain in mine head, and de pain in mine body vas all gone away. I put mine hand in mine pocket, and dere vas twenty dollars. So I stay mid de demerance."

OUT in Michigan, the other day, a cat awoke three sleepers in a burning house, by clawing at their faces, thus averting a terrible catastrophe. The feelin' animal did it on purr-puss.

It occurred to a Danbury scholar, while writing a composition, last week, to make the remarkable statement that "an ox does not taste as good as an oyster, but it can run faster."

A PARSON once prefaced his sermon with, "My friends, let us say a few words before we begin." This is about equal to the chap who took a short nap before he went to sleep.

A YOUNG man who was crossed in love attempted suicide recently by taking a dose of yeast powder. He immediately rose above his troubles like a well-bred gentleman.

As the best writers are the most osndid judges of the writings of others, so the best livers are the most charitable in the judgment they form of their neighbors.

A YANKEE wanted the Bridge of Sighs pointed out to him, and then offered to bet America had several bridges twice the size.

OUT in Iowa, fishing parties of thirty or forty couples take along a brass band to play on one side of the stream and drive the fish to the hooks on the other.

THE man who had "a will of his own" didn't get on very well at home, because his wife had a "won't of her own."

"THERE not being much coffee in the house, mum," a Connecticut Bridget pnt in "a little tay to fill up."

WHAT bankers were hardest off during the panic? Those who couldn't even pay one a little attention.

THE longest word in the English language is smiles, because there is a mile between the first and last letters.

JOSH BILLINGS says he don't care how much people talk, if they will only say it in a few words.

THE greatest men live unseen to view, while thousands are not qualified to express their influence.

WHEN the fox preaches beware of your geese.

The Faded Wrapper.

"Are you not sorry that father has gone away to stay over night, Alice?" said one of Mrs. Montgomery's children to his sister. "It rains so that no one will call; and now mother will wear that faded wrapper all day. I heard her tell Barbara she should have a good long day for sewing. She doesn't think it worth while to set even the dining room table just for us."

"Don't you wish she would spill ink on that dress, Philip?" was the answer.—"Then she wouldn't wear it any more."

"No indeed, I don't want it any worse, for she would wear it just the same rainy days and when papa is away."

Now mamma, in the next room, heard this discussion of the children, and arose to take a survey of herself in the looking-glass. It was not a very pleasing picture that the polished surface gave back to her view.

"Now Harry Warren's mother," said Philip, "is always dressed nicely, any time of day."

"She wears such pretty bows on her hair and neck," said Alice. "But she isn't half so pleasant as our mother," she added loyally, "if she does look prettier."

The mother's eyes glistened as she looked down on the old wrapper.

"To be compared to Aunt Warren," she thought, "and by my own children, too. Who would have thought they were such sharp little things? They notice every trifle."

Mrs. Montgomery's spirit was quite stirred. She would not allow such a rival, she said to herself, if she could eclipse her.

"You shall be disappointed about the old wrapper, for once, Mr. Philip," she added smiling; so she took a soft bright dress, just the thing to enliven a dull day. Then she puffed her hair in her prettiest style, and proceeded to dress herself with unusual care. The delicate lace collar was adorned with a bow of palest pink, and her hair was tied back with a ribbon to match.

It is wonderful how these simple additions to the toilet changed her whole appearance. A little taste does much for a woman's toilet, and yet how small, often, is the cost. A simple knot of violet or crimson velvet will make a dull dress look bright and even elegant. As a great painter said, "trifles make perfection, but perfection is no trifle."

Mrs. Montgomery's face wore a brighter look than usual that day, as she entered the nursery. Her dress had actually raised her spirits; but she was hardly prepared for the burst of admiration that greeted her. It is not often that compliments are sincere and heart-felt as were those of her little ones that day. But her children's tones quickly changed to one of anxiety. "Are you going away anywhere, mamma?" they asked directly.

"No, dears, I am going to sew on the machine all day; so we can have a nice time together."

Little Alice hung over her chair a minute, admiringly, and fingered her buttons, as she said, with a smile of deep content in her eye: "You look nice, mamma."

Mrs. Montgomery smiled, as she threaded the needle of her machine, while Philip added proudly:

"She looks nicer than Harry's mother, even when she has her silk dress on."

That was reward enough; she had eclipsed her rival.

"I'll remember this day's lesson," said the mother, in her own heart, and she did remember it.

The rainy day dress was doomed, and they helped to rip it up with sincere pleasure. It made excellent linings for a new one, and it often preached its old sermon over, as it hung wrong side out in the closet.

Mothers, when you allow yourselves slovenly ways among the little ones, in the seclusion of the nursery, remember there's a child there "a takin' notes." Those notes will be read even when your head lies low. Of all the bright pictures that hang on memory's wall, there is none to me so fair as a sweet loving mother, whose appearance was always neat and tasteful, even in working dress. Children may love an untidy mother, after a fashion, but they can never respect her. She cannot keep the hold on them in after years that one of the opposite habits possesses. Besides, if you are untidy yourself, they will probably grow up to imitate you. Don't neglect the details of dress, that add so much to appearance, because there will be "no one about but the children."—*Woods' Magazine*.

The subject of cream-ation, says the *Graphic*, might with propriety be discussed during the berrying season.

The favorite song among Illinois rogues is:—"We may be Joliet." The State Prison is there.

The highest rate of interest that we pay is for borrowed trouble.

In what color should a secret be kept? In violet.

MANY a man's vices have at first been nothing worse than good qualities run wild.

FIRST law of gravity—never laugh at your own jokes.

WHEN the tree is fallen every man goeth to it with his hatchet.

To a gentleman every woman is a lady, in right of her sex.

Young Folks' Column.

The Song of the Wind.

I've a great deal to do, a great deal to do,
Don't speak to me, children, I pray;
These little boys' hats must be blown off their heads,
And the little girls' bonnets away.

There's a great deal of dust to be blown in the air,
To trouble the traveler's eyes;
Those fruit-stalls and stands to be thrown to the ground,
And this tart-woman's puddings and pies.

There are bushels of apples to gather, to-day,
And oh! there's no end to the nuts;
Over many long roads I must traverse away,
And many by-lanes and short-cuts.

There are thousands of leaves lying lazily here,
That needs must be whirled round and round;
A rickety house wants to see me, I know,
In the most distant part of the town.

That rich nabob's cloak must have a good shake,
Though he does hold his head pretty high;
And I must not slight Betty, who washes so nice,
And has just hung her clothes out to dry.

Then there are signs to be creaked and doors to be slammed,
Loose window-blinds, too, to be shaken;
When you know all the business I must do to-day,
You'll see how much trouble I've taken.

I saw some ships leaving the harbor to-day,
So I'll en go and help them along,
And flap the white sails, and howl through the shrouds,
And join in the sailor boy's song.

Then I'll mount to the clouds, and away they will sail,
On their gorgeous wings through the bright sky;
I bow to no mandate, save only to Him
Who reigneth in glory on high.

MR. MONKEY AND MISS PUSSY.—A little girl at sea had two pets on board—a monkey and a cat. She gave the monkey a tin plate, and made him understand it was for his own use; and, when dinner was ready, he would bring it to the table, and hold it out to her that she might place upon it whatever she thought best suited to his taste.

As soon as served, he would carry his dinner to some quiet corner, pussy always following after with noiseless step. Placing his plate carefully on the floor, Mr. Monkey would seat himself; and, while he was occupied for a moment in arranging his tail in a graceful position, pussy would slyly seize the dainty morsel, and eat it up before he knew what she was about.

On turning round he would glance at the empty plate, then dart at pussy, and pressing her head tightly against his breast with his left hand, as if preparing to extract a tooth, with his right hand he would force her mouth open. Then, bending forward, he would look far down her throat as if to discover whether his lunch had gone that way.

This happened quite often; for Monkey seemed to forget from day to day the losses he had sustained. Yet he was not without his revenge. Every evening he took delight in surprising pussy in her promenades by springing at her, seizing her by the tail, and holding her over the ship's side, where he would swing her backward and forward until her shrieks brought some one to her rescue.

After all, pussy had the worst of it.

YOU WILL BE WANTED.—Take courage, my lad. What if you are but an humble, obscure apprentice—a poor, neglected orphan—a scoff and a bye-word for the thoughtless and gay, who despise virtue in rags, because of its tatters? Have you an intelligent mind, untutored though it be? Have you a virtuous aim, a pure desire and a honest heart? Depend upon it, some of these days you will be wanted. The time may be long deferred—you may be grown into manhood, and you may even reach your prime ere the call is made; but virtuous aims, pure desires and honest hearts are too few not to be appreciated—not to be wanted. Your virtue shall not always hide you as a mantle—obscurity shall not always veil you from the multitude. Be chivalric in your combat with circumstances. Be active, however small your sphere of action. It will surely enlarge with every moment, and you will have continued increase.

BOYS USING TOBACCO.—A strong, sensible writer says a good sharp thing, and a true one, too, for boys who use tobacco: "It has utterly spoiled and ruined thousands of boys. It tends to the softening and weakening of the bones, and it greatly injures the brain, the spinal marrow, and the whole nervous fluid. A boy who smokes early and frequently, or in any way uses large quantities of tobacco, is never known to make a man of energy, and generally lacks muscular and physical as well as mental power. We would particularly warn boys, who want to be anything in the world, to shun tobacco as a most baneful poison."

ATTENTION TO THE OLD.—A little thoughtful attention, how happy it makes the old. They have outlived most of the friends of their early youth. How lonely their hours! Often their partners in life have long filled silent graves; often their children they have followed to the tomb. They stand solitary, bending on their staff, waiting till the call shall reach them. How often they must think of absent, lamented faces; of the love which cherished them, and the tears of sympathy which fell with theirs, now all gone. Why should not the young cling around and comfort them, cheering their gloom with songs and happy smiles?

On the contrary—Riding a mule.

GOOD HEALTH.

Principles of Ventilation.

Lewis Leeds says, in the *Sanitarian*: Ventilation is based upon the movements of air at different temperatures, but we cannot get rid of foul air, or supply fresh air in the same manner as we would free a house of foul water or supply it with that which is pure by exact measures, allowing just so many cubic inches for each occupant.

The conditions are entirely different. In studying the movements of the air, if we would compare them with the movements of water, we must imagine ourselves at the bottom of the ocean with the ground underneath us heated as a fire would heat the bottom of a pot. By watching the motion of the water in a glass globe with a fire under it we can form some idea of the immense agitation of the external atmosphere.

Inaccurate, unscientific, and even repulsive as the idea may be to the mathematical mind of the architect, that we should depend in a great measure upon the mere agitation or the mixing up of the fresh and foul air, for our chances of getting pure air, I think, notwithstanding, this is just what we have to submit to. This is what nature teaches us, and although we may be to a certain extent artificial beings, and live in artificial houses, half of a lifetime spent in trying to work in a more precise and accurate manner than Old Madame Nature does, has about worn out my patience in that direction; and I confess that her hurly-burly way of mixing the oxygen, nitrogen, hydrogen and carbonic acid, and all other gases together in one grand mass, and scattering them around promiscuously, is better than any arrangement I have ever been able to devise. The more we study the subject the more evident it becomes that agitation is the natural method of ventilation—it is Nature's great purifier.

Now, if we accept agitation as the true principle of ventilation, we find ourselves far more likely to get our share of pure air by it than by the mathematical cubic-inch programme. Nature does not dole out pure air by the cubic inch, but if unrestrained, supplies every living thing abundantly. She scorches every attempt to measure it, and if we adopt her method of warming, it will be about as easy to supply a hundred cubic feet of cold invigorating air per minute to every individual, as we now find it to be to dole out a pittance of ten cubic feet per minute of warmed, debilitating, nauseating, hot air. I have spent a great deal of time and money in getting up patterns and taking out patents for warming contrivances. But I have done with them. We have been running air-heating to such extremes that I have become perfectly disgusted with it. If we inhale air at the same temperature as the blood it quickly kills us. Nature never ruins the air for breathing purposes by overheating it—she leaves such miserable business to the managers and warmers of railroad cars, asylums, hospitals, and not unfrequently, our homes.

Agreeable Emotions and Health.

Professor Tyndall while in this country last year visited the Falls of Niagara, and on reaching the Cave of the Winds by descending Biddle's stairs he conceived the idea of attempting to pass under the blue waters of Horseshoe Falls from that point. He found a guide who was willing to make the attempt with him, and together the next day they passed through the mist and foam of the roaring cataract, reached the desired point, and returned in safety. In describing his emotions at one point in his perilous journey, he remarks as follows:

Here my guide sheltered me again and desired me to look up; I did so, and could see as before, the green gleam of the mighty curve sweeping over the upper ledge, and the fitful plunge of the water as the spray between us and it alternately gathered and disappeared. An eminent friend of mine often speaks to me of the mistake of those physicians who regard man's ailments as purely chemical, to be met by chemical remedies only. He contends for the psychological element of cure. By agreeable emotions nervous currents are liberated which stimulate blood, brain and viscera. The influence rained from ladies' eyes enables my friend to thrive on dishes which would kill him if eaten alone. A sanative effect of the same order I experienced amid the spray and thunder of Niagara. Quickened by the emotions there aroused the blood sped healthily through the arteries, abolishing introspection, clearing the heart of all bitterness, and enabling one to think with tolerance, if not with tenderness, of the most relentless and unreasonable foe. Apart from its scientific value and purely as a moral agent, the play, I submit, is worth the candle.

ECONOMY OF ANIMAL HEAT.—Professors Voit, Recknagel and Peltenkoff are just now occupied in investigating the economy of animal heat, and have found that after six hours' hard work the person leaves the apparatus in a cooler condition than when he went in, or after he had been at rest in the apparatus for the same space of time. Of course the ventilation of the apparatus must work well and send per hour about 11,100 gallons, or 1,800 cubic feet of air through the chamber, else less water and less heat depart by evaporation.

The Suppressed Member Again.

Not long since we noticed some of the manual evils resulting from the customary repression of the left hand, and advocated, on physical grounds, its culture equally with that of the right hand. It seems that there are not less cogent mental reasons for developing the two sides of the body impartially.

It is coming to be well known that mental development is the result of properly directed physical training; that the brain grows in size and power by the varied exercise of the senses and the will in mechanical employments quite as rapidly as by purely intellectual efforts in study or otherwise. It is equally known to physiologists that most men are one-sided in heads as in their bodies. The two halves of the brain are rarely developed symmetrically, as may be readily seen in the "conformers" or head measures accumulated by hat-makers supplying individual customers. To some extent, the difference in the contour of the two sides of the head may be due to unequal pressure on the nurse's arm, or to the habit of lying chiefly on the one side while sleeping, thus causing a permanent displacement of the walls of the skull; but the main reason appears to be our one-sided habit in education.

Dr. Brown Séquard observes that the study of the facts relating to the brain has led him to believe that "each half of the brain—paradoxical as it may seem—is a whole brain," each lobe being normally competent to perform all the functions of both, not so vigorously, of course, as the two acting together, yet with apparent completeness. Unfortunately, however, the most of us are single brained, as we are single handed, and for the same reason. We fail to do what is really needed to give us two working brains. "There is no question," concludes this skillful observer, "that it is our habit of making use of only one side of the body that consigns to one-half of the brain—the right side—the faculty of expressing ideas by speech. If we developed both sides of our body equally, not only would there be a benefit that we would write or work with the left hand as well as with the right, but we should have two brains, instead of one, and would not be deprived of the power of speech through disease of one side of the brain."—*Scientific Am.*

Moist and Dry Air.

A comparison of the losses of heat by the respiration of an absolutely dry and absolutely saturated air at 32° and 86° F. is highly instructive. At 32° and dry we lose 1,172 caloric units; at 86° and dry we lose 1,096 caloric units—difference only 76 caloric units. At 32° and saturated we lose 1,060 caloric units; at 86° and saturated, 420 caloric units—difference as much as 640 caloric units.

The different states of dryness of the air appear thus to be of a greater moment than the difference of temperature, and this is the reason why our sensations do not always coincide with the thermometer. You readily understand how much more difficult it is to manage one's heat-household in a hot than in a cold climate. Our means of warming ourselves are better than those for carrying off our heat. Therefore the European race has had a hard fight under the equator. The working power of the body depends upon a certain amount of consumption, by which a certain amount of heat is necessarily created, which has to leave the body in a regular way. The Hindoo who has to draw the European's puukah, bears the heat better in proportion as he takes less food and creates less heat in himself, but then his working power is quite proportionate to the total of his consumption.

The European's struggle in a hot climate and his dangers of a degeneracy will remain as long as he has no better means of cooling himself by some or all of the known three routes. Houses with thick stone walls are tolerably efficacious. These walls rarely get warmer than the average temperature of the year. They cool the air which comes into the house, and act on the inmates in the way we have seen when speaking of the room which is not warmed through and through. A good means would be some contrivance by which the air in the house could be deprived of water.—*Peltenkoff*.

DYSPEPSIA REMEDY.—The following remedy for dyspepsia is said to be very effective in some cases: "Sweet cream or sweet milk, the richer the better; use as often as convenient. Whenever any burning or sour sensation at the stomach appears, drink half a pint of sweet cream or milk, and relief is evident. Make free use of it at meals. Total abstinence from the use of tobacco, coffee, strong drink, or anything very sour, must be strictly adhered to. Coffee being the worst of all things for dyspeptics must be entirely avoided." Dyspeptics should also remember that as their troubles come from over-eating, or eating irregularly, or some abuse of the stomach, the matter of a limited diet of nourishing food, taken regularly, is quite as important as anything in the shape of medicine.—*Herald of Health*.

Rest, content, peace, such words as these belong not in our vocabulary; we retain them, indeed, in our dictionaries as mentesotes of what were once the possession of our fathers on the far side of the water; but the sweet thoughts for which they stand, like some timorous bird that has wandered from its native zone, flattered and startled by our fretful turmoil, have spread their pinions and flown back to their original seats.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our Scientific Press, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line......25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 6.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, June, 6, 1874

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Reclamation of Swamp Lands; Potsto Blight; The Late Hot Winds, 353. The Elections; A Horse Wanted; Where is Our Strength? The Railroad Companies and the Centennial Exposition, 360. Capt. N. L. Allen; Smut in Wheat; The Human Frame; Matters and Things About Bloomfield, Sonoma County, 361.

ILLUSTRATIONS.—Levee Properly Constructed; Levees Now Made, 353. Capt. N. L. Allen, 361.

CATTLE BREEDERS.—Stock Parades at Fairs; Obtaining the Weight of Cattle by Measurement; State Board of Agriculture, 354.

SHEEP AND WOOL.—Prolific Sheep; Pasturing Orchards with Sheep; Sheep on Old Meadows; A "Ram is not a Buck," 354.

THE DAIRY.—Whey for Milk Cows; New Way of Teaching Calves to Drink; Butter vs. Cheese; Value of Fodder Corn; A Profitable Cow; Milk Pails; Singing Cows, 354.

AGRICULTURAL NOTES from various counties in California, 355-364.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 358-7.

HOME CIRCLE.—Brother and Sister (Poetry); Woman; No Songs Heard There; Nasby's Anti-Temperance Meeting; Henry Werd Beecher on Cremation; Religion, 358. The Faded Wrapper, 359.

YOUNG FOLKS' COLUMN.—The Song of the Wind (Poetry); Mr. Monkey and Miss Pussy; You will be Wanted; Boys Using Tobacco; Attention to the Old, 359.

GOOD HEALTH.—Principles of Ventilation; Agreeable Emotions and Health; Economy of Animal Heat; The Suppressed Member Again; Moist and Dry Air; Dyspepsia Remedy, 359.

MISCELLANEOUS.—European Wages; The Weather and Crops; Maple Sugar; American Agricultural Machinery in Germany; A Strange Growth; The Southern Floods; After the Grasshoppers, 355. Testing for Metallic Poisons; Preventing Incrustation in Boilers; A Spruce Cone; Improved Mucilage; To Determine the Height of Water Fall on a Running Stream; Hard Lime Elixirs; New Imitation Marble; Solder for Unting Brass and Steel; Imitation of Tortoise Shell; Japanese Dentistry; Improved Burglar Alarm; The Flight of Birds; Sapphires in Colorado; Remedy for Choked Cattle; Sacks, 362. San Jose Farmers' Club, 364.

The Elections.

During the week just passed the great local topic has been local option. We give below the result of the elections already held, with notice of those soon to take place:

For License—Cloverdale, Bodega and Bloomfield townships, Sonoma county; Visalia, Tulare county, Redwood, San Mateo county; Fremont, Santa Clara and Washington, Santa Clara county; Vallejo, Solano county.

Against License—Woodland, Grayson and Cache Creek townships, Yolo county; Brnciforte, Santa Cruz and Sequel townships, Santa Cruz county; Centerville township, Alameda county; Wheatland, Yuba county; Clayton, Contra Costa county; Center, Sacramento county; Arcata, Ferndale and Tible Bluff, Humboldt county; Rough and Ready, Nevada county; Santa Rosa, Healdsburg, Duncan's Mills, Ocean and Windsor, Sonoma county; Oakland, Alameda county.

Among the elections soon to be held are the following:

June 6th—Antioch, Contra Costa county; and Brooklyn (East Oakland), Alameda county.
June 8th—Timbuctoo and Smartsville, Yuba county.
June 10th—Truckee, Nevada county.
June 13th—Butte township, Sutter county.

The law is to go into effect thirty days after the people have decided in favor of prohibition.

MORE FINE BERRIES.—Our agent, Mr. Charles Bell, sends us from Santa Cruz a package of splendid strawberries. We have seen some attractive displays in this line during the present strawberry season, but nothing to equal these in size and beauty. We will also vouch for their flavor. Name not given.

ANAHEIM grapes, one year old, have attained a height of three feet, and are loaded with young grapes.

LARGE numbers of sheep are already being driven from the foot-hills into the mountains.

BARLEY fields in Napa county are beginning to turn yellow.

CALAVEAS farmers are cutting their hay.

A Horse Wanted.

If a man may be known by the horse he drives, (and we think it one of the most reliable means of taking the dimensions of character), why may not a city, a whole community, be properly judged by the same rule? In both cases the draught upon the purse, upon the judgment, and even upon the heart of the owners are precisely the same; requiring no quibbling or fanciful illustrations to place them under the same rule.

The most sensitive champion of San Francisco would certainly not object to having the city judged by the horses that it drives; for there is probably no city in America better supplied with horses, or where horses are better treated, than the city of San Francisco. The pride which is felt in the horses of our city is not founded upon the records of any particular members of this department, but upon its general merits, and the perfect reliability of each class; for besides the money, taste and experience requisite in securing this general supply of horses, sound judgment and careful selections are needed in allotting to each his proper sphere of usefulness.

The right horse in the right place is as gratifying a sight, and about as rare also, as to see the "right man" etc., but we claim that it is more frequently seen in San Francisco than in cities generally. Beginning in the heavy business portions of the city we find an abundance of heavy dray horses, among which the Canadian blood largely predominates, with an admixture of something a trifle more sprightly. These massive-shouldered, short-jointed, glossy-coated, well fed horses, are kept very busy in the lower part of the city, hauling immense loads of goods; but the teamsters do not have to make them do it—they let them do it; though nothing faster than a walking gait is required of them.

In the express business of the city we find the ruling horse still powerful, but somewhat lighter limbed, and capable of performing the short dashes of good, business speed, that are frequently required of him. Then we have the still lighter carriage or hack horse, of which little is required during the 24 hours, but that little comes at irregular intervals and sometimes demands trying efforts.

There are many fine family coach horses in San Francisco; light being apparently the first requisite; after this, spirit, and gentleness, and easy, graceful motion are looked after. In matching, color does not seem to be the principal consideration here, as at the East; if the pair are of the same height, form and movement, they are considered properly mated.

On the drives in the suburbs of the city, some splendid roadsters are met, but not often passed. It is not our purpose to notice any prodigies of speed, some of which undoubtedly might be found here; we only speak of the predominating class, whose time per mile is expected to range in the neighborhood of three minutes.

Let us speak a good word for the drivers of these various classes of good horses. Money will supply the city, or the country, with such stock; but money alone will not keep it up to its proper standard. It is only by good driving that a good horse can be kept good; and a person passing through the streets of San Francisco would judge the drivers favorably simply by the appearance of horses moving about; and were he to observe them waiting in the streets, he would see the driver looking carefully after the comfort of his team, scrutinizing the collar and other parts of the harness, to see that the pressure comes in the right place, and that no part is being chafed; examining the feet; lifting up the mane to see if there are any evidences of eruption on the neck—conveying on the whole an impression that almost any horse would be a good horse under such treatment.

Still there is a horse wanted; badly wanted. We want a new style of horse for the street cars in this, and in every other city. The car even now, it is true, go and come in their allotted time, and the public are not perceptibly discommoded; but the task is accomplished at a fearful sacrifice of horse-flesh. The destruction of horses is probably greater in city railroading than in all other departments of horse labor. No laws for the punishment of cruelty to animals will be of any avail here; for the promoters of such measures, like everybody else, will manifest more disgust at any delay on the part of the street cars, than they would at the evidence of exhaustion on the part of the horses. Still it would be much pleasanter to have this task performed as other horse-work is done, without perceptibly overtaxing the animal. It is not by any means satisfactory to know that there are enough, perhaps too many, horses in the country, and that those so rapidly worn out can be as readily replaced; for under this system the noble animal ceases to be the servant of man and becomes his victim.

We do not however expect much improvement from humanitarian considerations; but we confidently believe that by the same thorough, judicious system of breeding, by which other distinct classes of horses have been bred, a class of horses could be produced which would fully meet this demand. Thirty years ago there was no class of trotting horses known. A tolerably fast horse appeared upon the road occasionally, but was looked upon as a monstrosity. Our present scale of speed would have been declared fabulous. The im-

provement in our draught-horses within this period has been almost as remarkable, yet neither of these classes of horses are "punished" in the least by performing their present tasks. Even since the organization of our express companies still another class of horses has become recognized; and though it has no definite name is known as forming a distinct class; and we all know that the express branches, in all our cities, are amply supplied with just such horses as they want, as though they were made to order.

For a city railroad horse we do not need a very strong horse, nor a very fast horse. It is endurance under a moderate strain that is called for. Horses in doing this work have ample breathing time during the stoppages; and the strain on the breast is not so continuous as on that of the canal horse, or of even the horse before the plow; but in both these cases the work is performed at a walking gait, while the railroad horse is kept on a trot all the time while in motion. It is undoubtedly this monotonous trotting that does most in wearing them out.

We leave it for those better versed in the characteristics of the established breeds of horses to solve the problem—what kind of a cross will produce the horse that is wanted? It would be unreasonable to expect a perfect railroad horse in less than a quarter of a century; but if our breeders would turn their attention in this direction we would soon approximate the supply. There is no quarter in which the demand for horses is so rapidly increasing; and there is no class of customers better able or more willing to pay for what they want. It is to be hoped that our horsemen will consider this subject and experiment in the matter.

Where is our Strength?

Many will answer—"Why, in our churches and schools, of course." Others will declare, quite as confidently, that our strength is to be found in proper home training. Yes, but we are not at present considering the question of strength from an æsthetic point of view. It is our muscular power that we propose to examine at present, the power by which these churches, schools and homes are erected, supported and defended.

We hope the time is near at hand when Americans will give less consideration to the questions, "from whence did we come," and "whither are we tending," and look immediately about them, endeavoring to find out where we are, and what we are at the present time. We are really not so much interested in the question as to what long-haired, bare-legged barbarians we descended from; nor should we be so flurried about our probable destination; for we shall very likely be taken past the station specified, either by the carelessness of ourselves or the inattention of the conductor of the train, the incompetent social economist of the day. What we most want to know is, what are we? Are we anything?

We would like to handle this subject æsthetically, but this, we are aware, would be presumptuous, for the London Times is our bible in this matter, and we must look there to see what English tourists say of us; and learn of them what our national characteristics are, or learn whether the humorous cockney is disposed to grant us any characteristics at all. American genius, or American worth of any kind, is not allowed to pass current even in its own country, until it is endorsed by the London Times. Still we think we might, without the fear of excommunication before our eyes, claim the right to consider our physical characteristics, and ask where is our strength; our muscular strength.

While assisting an enterprising fellow-townsmen a few years since in carrying out some plans for minor improvements on his place, our attention was attracted to this question for the time. Being under the necessity of moving some dirt, for which purpose the shovels then in our hands would have been pronounced "just the thing" by the orthodox working creed, he dropped his shovel in disgust and called out "where's my hoe?" After securing this implement and accomplishing his purpose with it, he asked in a triumphant manner, "did you ever notice, my friend, how naturally a Yankee takes to his hoe; and how much he can accomplish with it?"

We never had noticed it previous to that inquiry, but have given a good deal of observation and thought to the matter since. In these observations it has been noticed that an American will use the hoe under circumstances where an Englishman, Irishman or Scotchman, would use the spade or shovel; after arousing the ridicule of these latter nationalities, by undertaking to remove with the hoe large piles of dirt. On the other hand, we have noticed that the members of the nationalities named above are more inclined to "get down to their work," with the spade, the shovel or even with their bare hands than to resort to the hoe.

But there is not a bit of mystery about it, and the cause is easily traced out. It is simply because the Yankee's strength is in his arms and shoulders; while that of the Englishman, Irishman, etc., is in the back and loins. If the former wishes to remove a piece of carrion from his presence he will slip the blade of his hoe under it, and with a dexterous fling throw it farther than the former is able to with the shovel, which he would certainly use in the emergency. The same peculiar location of

physical power enables the American to excel all others in the use of the axe, the scythe, the cradle, and the hay fork. But, if not willing to concede to his neighbors, mentioned above, superior strength in the loins and back, he is ever ready to "change works" with them when downright lifting or other "back-breaking" work is to be done. He will walk several times around anything of this kind; querying which is the best way to take hold of it, while he would unceremoniously shove his Irish or English friend aside, taking the hoe, axe, etc., out of his hand, and do the work for him.

We have observed the predominancy of these peculiar physical characteristics in the Eastern States in matters pertaining to ditching. The Yankee farmers there fully realize the necessity of ditching, and are willing to expend the requisite money upon it; and would be just as willing to expend the requisite labor, if it could be done with the plow and hoe; but the idea of heading down to digging all day, why, that's another thing; for they have not the strong back, and thick hand, needed in lifting with the spade, nor the massive leg to shove it. And when these foreign ditchers are called upon to do the much-needed ditching, seeing as they must that the Americans shirk the job, they are quite inclined to declare that the Yankees don't know enough to ditch. On the other hand, the employers of these ditchers do not hesitate to declare that they never can learn how to handle the axe or scythe rightly; or be able to do justice to a hoed crop.

The possession by these parties of the peculiar physical advantages alluded to above, must, we think, be generally conceded. It is plainly seen, and as easily accounted for. The work which each has been called upon to perform has developed the growth of the parts which are brought most in requisition, and hardened the local muscles. Consequently, they even inherit the peculiar strength and formation of body and limb which the labor of their different countries demands.

There would be no justice or propriety in drawing a comparison of merit in the matter; but we are not disposed to dismiss the subject by simply considering it as a matter of curiosity. In questions of individual usefulness, and even in the characteristics of different breeds of animals, common sense—yes, and common justice, too—teaches us to assign to certain parties different labors and different fields of operation. By the same simple and just rule we should look to the long-limbed, high-shouldered American, to "clear the way," and do the pioneering, as he always has done; while the stocky, broad-hipped foreigner should have the quite as useful task of doing the ditching, hedging, etc., that the more advanced stages of farming demand.

The Railroad Companies and the Centennial Exposition.

The Central Pacific and Southern Pacific Railroad Companies have instructed their agents to forward free such articles or samples as they may collect on this coast, for the coming Centennial Exhibition at Philadelphia, in 1876. As showing what these companies propose doing in regard to the Exhibition, we append the following circular, which has been handed to us for publication and which explains itself:

LAND OFFICE
C. P. and S. P. R. R. COMPANIES,
SAN FRANCISCO.

The Land Department of the Central and Southern Pacific Railroad Companies is preparing to place on exhibition at the Philadelphia Centennial, specimens that will illustrate the products of the railroad land and other lands on this Coast. Agents for the company are requested to forward such specimens as they can conveniently obtain.

Contributions from farmers, mine superintendents, and others will be gladly received; and due credit will be given for all articles so furnished, which are placed on exhibition. Samples of articles enumerated below will be of especial interest.

Grains of all kinds; both the kernel, and the sheaf with stalks of full length, including roots. Fruits of all kinds, fresh, preserved in alcohol, or dried. All kinds of vegetables will be required in due time, of the crop of 1876. Almonds, walnuts, etc., giving age of the tree, and kind of soil. Castor beans and olives; with specimens of the oils. Hemp, cotton, ramie, soap root and jute. Tobacco and hops. Wool, goats' hair, furs and skins. Specimens of soil; with the description of the locality from which they were taken; and remarks on their adaptability to different products.

Minerals, ores, coal, peat, clay, borax, salt, etc. Building stone, brick, cement, etc. Samples of wood of native growth, in the rough or manufactured. Wines, brandies, etc. Shells, fossils and antiquities.

All specimens should be marked with the name of the locality, and full address of the donor; and should be accompanied if possible by a short description. It would be of especial interest if with specimens of grain or other agricultural products, there be sent a description of the kind of soil where the same was grown, the mode of cultivation, the time of planting and harvesting, the yield per acre, etc.

The co-operation of all who feel interested in making a successful exhibition of this kind is respectfully requested.
B. B. REDDING, Land Agent.

Notice.—The attention of agents is called to the above circular, and their co-operation in the objects set forth is expected. They are hereby authorized to forward free such articles or samples as they may collect, consigning the same to C. P. R. R. Co., care B. B. Redding, Land Agent, San Francisco.

A. N. TOWNE, General Supt.

The following are the Mexican grants covering a large portion of the county of Ventura: Simi, 119,000 acres; Conejo, 50,000; Guadalupe, 40,000; Calegua, 10,000; Las Posas, 28,000; Santa Clara Del Norte, 15,000; San Miguel, 7,000; Sespe, 25,000; ex-Mission, 75,000; Ojai, 15,000; Santa Ana, 25,000; San Miguelito, 10,000; Canada Larga, 8,000; El Rincon, 9,000; San Francisco, 8,000, and a small tract belonging to the Temescal grant.

Capt. N. L. Allen.

Nathaniel Lynch Allen, whose portrait we here present to the readers of the RURAL PRESS, was born in February, 1828, his birth-place being Genesee county, N. Y. When he was seven years of age, his father, a physician, emigrated to Michigan, where the subject of our sketch remained until he was 12 years of age. In 1851 he came to California, by way of the Isthmus.

His cash capital amounting to \$1,000 only, he sought employment and found it in Sacramento by turning printer. The publisher of a journal there had gotten up, at great expense, the first magnificent series of illustrations of mining views and incidents. He had his forms all ready to print, but no steam-power was to be had. As a substitute, he employed young Allen and a companion to turn the crank for an eight-hour run. The "machine," however, gave out soon, and Allen and his companion had the satisfaction of counting up \$8 each, all in 25-cent pieces, for a very short experience in the printing business. This was the first money made by Capt. Allen in the new El Dorado; and we venture the assertion that he has never regretted learning the printing trade!

He soon found his way to Mud Springs, El Dorado county, where he worked at mining through the winter with fair success. His next enterprise was a general store, started at Spanish Bar, Middle Fork of American river, under the firm of Reynolds & Allen, doing a satisfactory business for one season. In November, 1853, through business connections in Sacramento, they met with heavy loss by fire in that city. They then concentrated their business at Sacramento, and flourished there until the great flood swept them out. They, however, did not stay swept out, but stuck to it, and recovered their losses. In February, 1854, Mr. Allen sold out to his partner, and went into dairying and grain-raising in Two Rock Valley, Sonoma county.

In November, 1854, Mr. Allen was married to Cornelia Louisa Gilbert, daughter of Jacob Gilbert, of Petaluma. Soon after locating in Sonoma county, difficulties arose between the settlers and grant holders. The "Blucher League" of settlers was now formed, composed of over one hundred men, and Mr. Allen was elected as president; and as leader in the somewhat celebrated "Bodega" war received unanimously the cognomen of "Captain." We have heard Captain Allen praised in the highest terms for his courage and general deportment in assisting the settlers in obtaining their just rights, which were finally conceded to them, thereby securing a perfect title to their lands.

Now carried on a farm of four hundred acres, milking seventy-five cows. In 1863 he removed to Tomales, Marin county, where he engaged in farming and dairying; and was elected president of the "Bolsa de Tomales League" which under his leadership succeeded in having the grant by that name, comprising some 2700 acres, confirmed to the Government, to the benefit of the settlers, and prevented that hardship from being endured by those who had settled on the land belonging to this grant. Government, in consideration of the difficulties which the settlers had undergone, allowed them to pre-empt the land in quantities individually possessed by them, regardless of the usual 160 acre restriction.

Captain Allen remained here, continuing his farming operations until 1873, when he removed to Salinas valley, Monterey county, where he now resides. He has this season put in 1,100 acres of wheat and is carrying on a dairy of 200 cows. Last year he raised 1,000 acres of wheat. He was one of the first to unite with the Patrons of Industry, and was elected Master of Salinas Grange, No. 24. At the organization of the Grange he was elected W. Steward, which office he still retains; and was also on the Executive Committee, and served as a prominent member in organizing and establishing the business, noting by which so much was accomplished last year. Captain Allen is agent for E. E. Myan's Sons, for Salinas valley, and was the proposer of a large share of last season's wheat crop.

The subject of our sketch, as his portrait indicates, is a solid man physically as well as otherwise, weighing 165 lbs., avoirdupois; and when it is considered that besides the labors and duties enumerated above, he is Superintendent of a narrow-gauge railroad, which he is pushing vigorously through from Salinas city to Monterey, it will be conceded that he needs a good physical constitution to sustain him. Captain Allen is as conspicuous for his activity and zeal in social matters as in business enterprises; and besides his active services in the Grange movement, is a member of both the Odd Fellow and Masonic Order.

CALIFORNIA LUXURIES IN WASHINGTON.—A large consignment of samples of some of our productions was received at Washington on May 31st, having been sent there for the purpose of giving a practical exhibition of the commercial importance of these products. The canned fruits and jellies to be exhibited will, it is believed, give the public a proper estimate of what we can do toward supplying the steadily increasing demand for these articles. Included in this stock are California figs made from tobacco grown in California, and cured by the Culp process. Wines and brandies of California production will also be on display here. The exhibition is under the management, principally, of San Francisco houses.

Smut in Wheat.

EDITORS PRESS:—In your issue of May 9th, under head of "Soaking Seed Wheat," you say: "It is possible that our Livermore Correspondent, when speaking of the roots of smut plants, has reference to the roots of smut and not to the roots of wheat-bearing smut heads." It does not satisfy me to say that, smut itself is a plant that attaches itself to and insinuates itself into the kernels of wheat, and has its own minute roots, independent of the roots of the wheat. I want more light on the subject of smut and wheat-bearing smut heads. What does the smut plant resemble? How are farmers to decide whether it is smut or something else while growing? Does the smut plant produce anything that can reproduce its kind? If so, what does it look like, and is it found with any other plants than with the varieties of grain? In wheat-bearing smut heads, how can smut be independent of the roots of the wheat and furnish sap to the same stalk that produced the wheat? To say that the smut insinuates itself into the kernel before germination, won't do. Is it not a fact that smut enters the roots of the wheat, instead of the kernel?

Supposition in this matter will not help us much. Farmers want the reason why for these things. When the real cause is once known to a certainty, a remedy may soon be obtained. I look at this question of smut in wheat as one of vital importance to the farmers of California.



CAPT. N. L. ALLEN.

There is no country in the world where smut is produced in such perfection as here. I hope you will give us all the light and information that is in your possession or that you can obtain.

San José, May 15th, 1874.

Our correspondent declares out and out, that farmers do not want "suppositions" on the subject of smut in grain; but in the present state of enlightenment in the matter he can in reality get but little else. Much that is claimed to be fact in this connection has been brought forward; but as these facts are marshaled forth to prove opposing theories, are we not justified in classing them all as suppositions?

Prof. Brewer—who is considered good authority in such matters—expresses his views in regard to the nature of smut, and its eradication, as follows:

"Corn smut is caused by a parasitic fungus long known to botanists by the name of *Ustilago Maidis*, and it has frequently been described and figured in botanical works. Its development or growth is also pretty well understood. The fungus grows from very minute spores, which are produced by millions, but exactly as to how these spores react and infest the growing corn, I can find nowhere any definite information, nor have I seen any data relative to preventives. We are left here to surmises and analogies. Smut in wheat is produced by a similar fungus, similar in its botanical characters, in its results, and the wheat-smut fungus is much better known. It is proved that this gains access to the plant through the seed. The spores are sticky and adhere to the sound grain at harvest or thrashing, and are sown with the seed wheat. As the new wheat-plant grows, the fungus develops in due time with it, ripening its spores at harvest. The spores may be killed and the crop saved by soaking seed wheat in strong brine, or in a weak solution of sulphate of copper, commonly known as blue vitriol or blue stone. (The proportions used are two to five ounces of the crystals per bushel of wheat.) It would be well to try the same remedies with corn. I have seen this recommended, but I have no information whatever as to the results. Corn-smut is rarely abundant enough to seriously affect the crop, and is principally dreaded because it is poisonous to cattle."

A few days since, we had some talk with a practical farmer on this subject; our attention being drawn to it by our friend, who declared that there were already indications of smut in his immediate neighborhood. His views coincided with those of Prof. Brewer, though he had evidently formed his conclusions from his own observations.

But the "supposition" which we at present are most disposed to favor, is that smut in grain is closely connected with vegetable Mor-

phology; that it is in reality an actual metamorphoses of grain to leaf; produced by a concurrence of abnormal influences in the atmosphere, soil, etc. This is illustrated by a fact, well known to observing gardeners, that in wet and warm springs a great many of the blossom buds of pears and apples are converted into leaf buds, by the excessive development which they undergo; breaking up the whorls of their flowers, throwing an excessive quantity of sap into the organs which had been destined for flowering purposes, and converting them into leaves. Still they are diseased leaves; as the design of nature in forming the plant has been thwarted. Now, while such is the effect produced on the flowers of a plant, by the too rapid development of their parts, a cause somewhat similar, it is claimed, acting on the seed itself would make the outer and inner cups of the seed to amalgamate, or grow together, and change the structure into that of a smut-ball, in which no inner cup is to be found; the whole seed being one mass of greenish-colored, vegetable matter.

When this change is effected in a flower, and its stamens converted into petals, the disease becomes organic, in a measure, and the plant retains its peculiarity; continuing to produce double flowers. In like manner the seed of a plant, of wheat or other grain, being thus partially changed in structure, may have a tendency impressed upon it which will make it still more smutted when grown again; for the axis from

which the seed springs being partly altered in the plant then growing, the seed of that plant may produce another plant which will be still more altered.

Whatever difference of opinion there may be as to the process by which smut is produced, there must, we think, be a general agreement as to causes, the requisite condition of the soil, atmosphere, etc., to produce this vegetable disorganization. Poorly cultivated, heavy conditioned soil, too much and too warm rain, a sultry and heavy atmosphere—these are apparently the conditions upon which the production of smut depends. Some of these conditions may be avoided; and whether the spores adhere to the soil—according to the theory of Prof. Wheeler—or an abnormal system of growth has been inaugurated, and is being transmitted through the seed, as explained above, in either case it becomes the farmer to be on his guard as to the sources from which his seed is obtained.

EARLY BLACKBERRIES.—Mr. Gideon Anghinbaugh presented us on May 27th with a fine sample of ripe blackberries. The berries were large, fully ripened and of excellent flavor. It will be borne in mind that all small fruits are unusually late this season; still the 27th of May should not be considered late for ripe blackberries. This berry is a seedling produced a year or two since by Mr. A., and is named the "Anghinbaugh blackberry." It is claimed for it, and we believe the claim is generally conceded, that it comes forward two weeks earlier than any other variety grown. Such being the case it must certainly be a very desirable acquisition among our choice fruits.

A PAYING BUSINESS.—The supposed profits derived from the sale of sewing-machines are so enormous that it is with some hesitancy that we give them; though the statements are derived from reliable sources. The *Scientific American* declares that during the year of 1872 the three firms of Wheeler & Wilson, Grover & Baker and the Singer, realized profits on their machines to the amount of \$18,723,600. Still the improbability is somewhat diminished when it is considered that the cost of making the machines is, on an average, \$11.83 each, and that their retail prices range from \$55 to \$120. These companies now ask for an extension of their patents for seven years.

The Human Frame.

We propose to give, under the above caption, a series of short articles on human and comparative anatomy; conveying in plain, practical language such facts as ought to be in the possession of everyone. No apologies are needed for these articles; the almost universal ignorance of the masses of the simplest facts and workings of their own organizations being apparent to the most casual observer. There is an unnatural horror of human dissections, and a feeling of false delicacy about the information so obtained, as if it were only fitting to be in possession of the calloused minds of medical men. This is all wrong, and the lack of this information is the source of as much misery and suffering as, perhaps, any other one cause. The painfully ludicrous conceptions of the location and functions of the liver, spleen, heart, etc.; the vague confounding of veins, arteries and nerves; the ignorance of the position and form of even the larger bones which compose the skeleton frame-work—all show how much this information is needed, especially to those who are engaged in rearing families. Of course, from a scientific standpoint, the knowledge we intend to try to convey will be very superficial; for, of all problems which our Creator has given us to solve, that of our own organization, comprising as it does, an epitome of almost all natural sciences from the silent, mysterious chemical affinities and combination, to that apparently senseless, unfathomable power—vital force—is the most difficult. Still the command, "know thyself," is ringing in our ears, and we must plod on by the feeble light we have, hoping that a brighter will dawn upon us at some future day.

Perhaps a few of the curiosities of our bodies might be relished here, as a kind of light course before the heavy details that follow. The following are a few taken at random from the shelves that line the dusty recesses of "Memory's Hall." We are composed of 206 bones, not including the teeth; to which are attached about 600 pairs of muscles, not including millions of microscopic ones, which are found in the skin and elsewhere. These muscles and bones illustrate every form of lever-power; one pair even working through as nice a pulley as a ship's carpenter could construct. The sweat-tubes that penetrate the skin in all parts of the body would, if stretched out, form a tiny aqueduct 28 miles long; the air which we take into our lungs comes into contact with about 1,400 square feet of a delicate, vascular membrane, by which means it is thoroughly oxygenated and decarbonized; while the food, which is to replace our ever-decaying tissues, after being digested by the aid of five different solvents, is greedily sucked up by over 4,000,000 hungry little mouths. Our heart is a powerful plucky little force-pump; sending the blood bounding through the arteries and receiving it again from the veins at the average rate of 100,800 strokes per day; 36,792,000 a year, and 1,471,680,000 times in a life of 40 years—more than we could count in the same time, if allowed the regular time, 8 hours per day. And these wonders could be swelled into a book of themselves, did but our space permit.

Matters and Things About Bloomfield, Sonoma County.

Mr. A. B. Glover, of Bloomfield, informs us that the past winter has been a trying one for the farmers in his neighborhood, on account of the supply of hay failing. The feeding season commenced early and continued unusually late. Many valuable cows were lost, Mr. Glover losing twenty-five milch cows. His loss of hogs was also great; numbering nearly a hundred. Everything was done that could be done by the farmers to carry their stock through; for the cows formed their main dependence, butter being the principal product of the district.

Since the grazing season opened it has been unusually good, and cows are now doing exceedingly well. This neighborhood has been quite successful in butter making, but the low prices prevailing of late have had a tendency to discourage the butter dairymen somewhat, and has caused them to look for a more remunerative field of labor. Our Bloomfield friends probably understand the points in the case better than any outsiders, but we hope that they will not be deterred from making butter their standard product, merely because the present low prices, occurring as they do in their most expensive season, render it an unremunerative product. There is scarcely any department of California agriculture in which more interest is felt at present than dairying; especially butter making.

The neighborhood of Bloomfield is noted for its fruit, and present indications, Mr. Glover assures us, are favorable for the coming crop. Apples, pears, peaches, plums and blackberries will be abundant, but a little later than in former seasons. They have a very early apple called the "May apple," usually getting into our markets in May; but we are under the painful necessity of announcing that its appearance is unavoidably postponed for two weeks in consequence of the unfavorable state of the weather.

The Lompoc rancho, being in the northern part of Santa Barbara county, and consisting of 56,000 acres of good land, is to be colonized by Germans.

MISCELLANEOUS.

Testing for Metallic Poisons.

When food, portions of the body, or the contents of the stomach, are to be analyzed for the purpose of proving the presence or absence of metallic poisons, the first and most difficult part of the operation is the destruction of the organic matter without expelling the poison. Verrynken proposes to accomplish this by oxidizing it in a combustion tube. Oxygen gas is purified by passing it through sulphuric acid and cotton or asbestos, and then conducted through the ordinary combustion tube containing the suspected substance. The tube is heated intensely throughout its whole length, except where the organic matter is placed, and the current of oxygen so regulated that the substance shall not take fire, and that no particles of matter are carried off by the gas. After burning, the tube is rinsed with boiling nitric acid, and then with boiling water. This liquid is clear and colorless, and can be used for making all the tests. Experiments made by Verrynken prove that this method is delicate and satisfactory. In using the Marsh test for arsenic and antimony, the same chemist advises the use of a three-necked bottle as a generator, one neck being provided with a delivery tube, another with a funnel tube as usual, while the third allows a current of pure hydrogen to be passed into the generator from a gasometer. The advantage of this arrangement is that it permits a flame of the desired size to be kept up uninterruptedly as long as may be necessary.—*Journal of Ap. Chemistry.*

THE immense trade in Australian canned meats, now carried on, has had the effect of causing a great accumulation of bones in Melbourne, where the putting up is done. The sale of the bones is now growing into a remunerative branch of export trade as bone-dust manure, and an Australian paper, speaking of the subject, gives an account of the manner of its exportation. It says that a recent vessel, bound for London, had on board a shipment of 100 tons of bone-dust, prepared for exportation in an altogether novel manner, and one which promises to come into extensive use. To facilitate this trade, an apparatus has been contrived for compressing bone-dust into half its original compass, reducing it at the same time into a form very convenient for shipment. By means of strong pressure the crushed bones are moulded into cakes of 6 in. square and 3 in. thick, something like flooring tiles, each cake weighing a little over 4 lb. These bone-dust tiles are just adhesive enough to admit their being handled freely—thrown about like bricks, if necessary—and are yet firm, and when required for use they can readily be crushed or melted by the application of a little hot water. A ton weight of the manure measures 26 cubic feet, and contains 252 of the cakes.

PREVENTING INCrustation in Boilers.—A patent was recently obtained by E. Field, London, England, for preventing incrustation in boilers. The first part of this invention consists in preventing or counteracting incrustation by the use or employment, within the boiler or heating vessel, of a piece or pieces of metal electro-negative to the metal of the boiler or heating vessel, such electro-negative metal being submerged or immersed in the water or liquid within the boiler or heating vessel, and connected to the metal forming the shell or body of the boiler or heating vessel by a suitable conducting wire or connection or connections, in such manner as to establish and maintain a voltaic current or currents from the shell or body of the boiler toward the submerged or immersed piece or pieces of electro-negative metal, a clean surface being maintained upon the said piece or pieces of electro-negative metal by the use in conjunction therewith of a loose or movable piece or pieces, or terminal or terminals, or cleaning device.

A SPRUCE CONE.—One of the prettiest objects I ever beheld is a spruce cone, filled with sand and grass-seed, which sprouted and grew out of the scales. It is now as large as a coconut with the husk on, and of the most vivid green color. The grass grows with a luxuriance that is remarkable. To produce this charming specimen, the cone was baked in a stove oven till the scales opened out equally. It was then carefully filled with equal parts of sand and grass-seed, a string tied to the top, and the whole suspended in the dark, in a jar, with water enough to come half way over the cone. In a week it was placed in the sunlight, when the seed sprouted rapidly, and in a month filled a gallon jar completely. It has been taken out and hung in the window exposed to the air of the room. Every morning it is thoroughly soaked in milk-warm water.—*N. Y. Tribune.*

IMPROVED MUCILAGE.—Ordinary mucilage, made from gum Arabic, does not fix paper to wood or pasteboard, or to metallic surfaces. These disadvantages are overcome by adding a solution of sulphate of aluminum, in ten times its quantity of water. Ten grains of aluminum sulphate are sufficient for 250 grains of mucilage. Prepared in this way it will not become mouldy. Again, according to Hirschberg, a few drops of strong sulphuric acid are added to the gum solution, and the precipitated sulphate of lime allowed to settle. Solutions prepared in this way a year and a half ago have neither become mouldy nor lost their adhesive power.—*Jour. of Chem.*

TO DETERMINE THE HEIGHT OF WATER FALL ON A RUNNING STREAM.—According to Craik, the best method is as follows: The method is only applicable to still water with running streams. This must be obtained by making a small temporary dam, unless natural dams exist, which give a sufficiently still surface. Take two poles of sufficient length to reach from the bottom of the water to the height of required line level. Measure these poles from the upper end down to the length intended to stand above the water, and make a plain notch or mark upon both sticks at this point, by laying both together, to insure perfect equality of height. These may be marked in feet and inches, for convenience in showing or in varying the line of level. Now point or sharpen the lower ends of the poles, and stick them down through the water into the earth at the bottom, until the notch marks are both at the level surface of the water, taking care to have them stand plumb, and in the right lines, and at a convenient distance apart; then sight across the top of these two, and set a third and fourth, or any number required to run the line of level to the desired point, ranging the tops accurately by the first two, and the tops of these poles will show a water level as many feet above that of the water from which it is taken. The author above referred to, maintains that this is a more accurate way than the use of an ordinary spirit level.

HARD LIME FLOORS.—It is said that the Mexicans make a floor on which a horse can trot without making an indentation, by the following method: A layer of broken limestone, three or four inches thick is laid evenly over the surface of the ground, and over this is spread to the thickness of two inches, a mortar composed of two parts sand to one of lime; this is allowed to stand twenty-four hours, or until the surface becomes quite dry. The floor is then thoroughly pounded all over, until it becomes as moist as when first laid, with a block of wood about a foot square and three inches thick, having a handle rising from the middle. The floor then dries, and this operation is repeated until very little moisture can be brought to the surface; a thin layer of red ochre is then sifted on. The floor is then thoroughly polished by a smooth, flat, water-worn stone. Roofs are made in the same manner, without the coloring matter, which is added merely to improve the tint, and they are unaffected by sun or rain.

NEW IMITATION MARBLE.—A new process is now employed for making slate assume the appearance of marble, for decorating interiors. After being properly cut and trimmed, it is scoured with pumice stone, then rubbed with powdered pumice stone and polished with felt. It is now ready to be transformed into marble. The slabs having been painted with the ground-work color, are ready to dip. A vat, containing water mixed with ox gall, on which the colors are floated, is at hand. A brush is dipped in the color and sprinkled on the surface, then the water is fanned with a palm leaf, and the brush drawn through several times. The mixed paint spreads on the surface of the water like veining in marble, and the slab is then lowered until it touches the surface, when the floating color adheres to it; it is then put to dry. After the application of colors, sundry bakings and polishings finish the work. This marbled slate is quite elegant, possessing sixteen times the strength of marble, and scarcely distinguishable from it.

THE continual rise of some lands, as Sweden and Norway, long since observed, has been found to extend to all the land around the north pole, and even evidences show that the rise is more rapid in proportion as we come nearer to the pole. Sir Charles Lyell found by careful gauging that while the rise is very slight in the south of Sweden, it amounts to four feet in a century in the northern parts of Norway. Further, the seal fishers testify that the sea bottom rises so much in Spitzbergen and the Polar sea of Siberia as to exclude the whale, which in their memory was abundant there in deep waters, and which now are shallowed.

A CEMENT to stop cracks in glass vessels to resist moisture and heat:—Dissolve casein in cold saturated solution of borax, and with this solution paste strips of hog's or bullock's bladder (softened in water) on the cracks of glass, and dry at a gentle heat; if the vessel is to be heated, coat the bladder on the outside, before it has become quite dry, with a paste of a rather concentrated solution of silicate of soda and quicklime or plaster of Paris.

SOLDER FOR UNITING BRASS AND STEEL.—The difficulty of finding a material suitable for permanently joining brass with steel or iron, on account of the unequal expansion of the two metals, is well known, on which account it may be of service to note that Dr. Dingler recommends the following alloy possessing the properties necessary to insure a permanent adhesion: tin, 3 parts; copper, 39½ parts; and zinc, 7½ parts.

IMITATION OF TORTOISE SHELL.—A mixture of equal quantities of glue, lime and red lead, with strong soap lyes, is used to attain here in imitation of tortoise shell. The mixture may be laid on with a brush. It requires a little skill to lay it on in such a way as to make the mottling appear natural. The operation should be repeated two or three times, each time allowing the mixture to dry before another application.—*Artisan.*

Japanese Dentistry.

An American dentist, living in Yokohama, gives the following account of the Japanese habits in regard to their teeth. He says that as the young women have very fine teeth, it is remarkable that they should keep up the practice of blacking them after marriage. The Japanese, as a race, possess good teeth, but they lose them very early in life.

Their tooth brushes consist of tough wood, pounded at one end to loosen the fibers. They resemble a paint brush, and owing to their shape, it is impossible to get one behind the teeth. As might be expected, there is an accumulation of tartar, which frequently draws the teeth of old people. The process of manufacturing false teeth is very crude. The plates are made of wood, and the teeth consist of tacks driven up from under the side. A piece of wax is heated and pressed into the roof of the mouth. It is then taken out and hardened by putting it into cold water. Another piece of heated wax is applied to the impression, and, after being pressed into shape, is hardened. A piece of wood is then roughly cut into the desired form, and the model, having been smeared with red paint, is applied to it. Where they touch each other a mark is left by the paint. This is cut away till they touch evenly all over. Shark's teeth, bits of ivory, or stones, for teeth, are set into the wood and retained in position by being strung on a thread, which is secured on each end by a peg driven into the hole where the thread makes its exit from the base. Iron or copper tacks are driven into the ridge to serve for masticating purposes, the unequal wear of the wood and metal keeping up the desired roughness. Their full sets answer admirably for the mastication of food, but, as they do not improve the looks, they are worn but little for ornament. The ordinary service of a set of teeth is about five years, but they frequently last much longer. All full upper sets are retained by atmospheric pressure. This principle is coeval with the art. In Japan dentistry exists only as a mechanical trade, and the status of those who practice it is not very high. It is, in fact, graded with carpentry—their word *hadyikfsan* meaning tooth-carpenter.

IMPROVED BURGLAR ALARM.—The object of this invention is to provide simple and convenient means for detecting burglars when entering buildings; and consists of an alarm movement and bell in combination with a wire or cord and gas burners, so arranged that, in the act of opening the door or window with which the alarm is connected, gas is turned on, a flame produced and the alarm given. A wire or cord is attached to an arm in the wall and to a second arm, which is attached to and projects from the escapement shaft of the alarm movement. The alarm movement is wound up by means of a key on the main shaft, and is held and prevented from giving the alarm by the wire. This wire is attached to the vibrating escapement shaft by a crank, so that the movement is held stationary by it. When this wire is broken or parted the alarm is given. A gas pipe is connected with the service pipe, and the burner on the end thereof is supplied with a small jet of gas, which is ignited when the alarm is set for use. When the door is opened a bar is drawn back, a gas cock is turned which admits of a flow of gas through a pipe to a second burner. The two burners are so formed and placed so near each other that the gas which escapes from the second burner is ignited by the flame from the first burner. The former gives a full flame, which envelops the wire and in a few seconds burns it off, and allows the alarm movement to vibrate the hammer and give the alarm.

A NOVEL dining table is now in use in one of the palaces of the Emperor of Russia. The table is circular, and is placed on a weighted platform. At the touch of a signal, like a rub of Aladdin's lamp, down goes the table through the floor, and a new table, loaded with fresh dishes and supplies, rises in its place. But this is not all; each plate stands on a weighted disk, the table cloth being cut with circular openings, one for each plate. If a guest desires a change of plate, he touches a signal at his side, when, presto, his plate disappears and another rises. Those mechanical dining tables render the presence of servants quite superfluous. In this country, at the Onaida Community, they employ dining tables having the central part made to revolve. Here the goblets, spoons, tea and coffee, casters, pitchers and other necessary articles of table furniture are replaced; revolving the center piece, the waiter brings before him whatever article may be desired without the intervention of a special waiter.—*Builder.*

A CORRESPONDENT of the *Scientific American* says: I have in my possession a live fish which has the body and tail of a dog fish, and the head of a cat fish. Its habits are those of a cat fish, sleeping in the day time and waking at night. I presume that it gets this habit from the head. It is clearly a hybrid of the two kinds. Here is something for the development theory.

THE FLIGHT OF BIRDS.—M. Penaud now demonstrates, first, that a bird sailing in the air falls as slowly as possible when he employs for his horizontal movement one-fourth of the work of the fall; second, a bird sailing with a uniform movement clears a given space with the least possible fall when the work of suspension is sensibly equal to the work of translation.

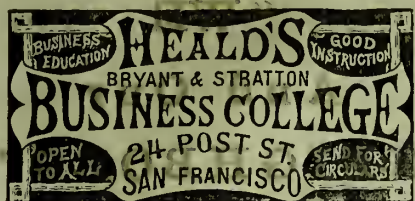
SAPPHIRES IN COLORADO.—The Denver, Col., *News*, says: "A miner, who has been engaged, some months past, working in the bars along the Platte for five or six miles above Denver, had the good fortune to find several sapphires, which he saved, without knowing anything about their value. One day last week a stranger, who was prospecting down the river (was shown the stones, when he bought the largest for two dollars. He brought it to town, and upon a test it was pronounced a sapphire, and a very fine one. It was placed in the hands of I. Haberi, lapidary, to be cut. The rough stone weighed nineteen and a half carats, and was valued at \$500. The miner was also in town yesterday, and became very much astounded upon learning the value of the pebble he had parted with for a two-dollar greenback. He left two more with Mr. Haberi, and proposes to enjoy, himself, some of the profits of their polishing. The gentleman who bought the first mentioned stone is experienced in such things, though a comparative stranger in this region. In the past week he has himself found, within two miles of Denver, an emerald, which he believes more valuable than the sapphire, and a very fine water agate, which will produce a beautiful gem of a strawberry color. He has sent the emerald East. Three diamonds have been exhibited in Denver, in the past week, that the owner said were found in Colorado, and east of the range. We cannot vouch for the truth of this report, but there is no question as to the fact that the others were all found within less than six miles of the Denver post-office."

ALL bodies get larger as they get warmer. To this rule there is no exception amongst gases, and only three or four amongst liquids and solids, and these exceptions only occur at special temperatures. A solid without any structure—that is, having neither a crystalline form nor any kind of lamination or fibrillation, or "grain," expands the same fraction of its measurement in all directions when heated. A sphere will remain a sphere, a cube a cube; the hot body will be as similar in shape to the cold one as a near body is to a far one. Thus a wire a hundred inches long and a hundredth of an inch thick, will, when heated to a certain temperature, increase a hundredth of its thickness and a hundredth in length, thus increasing one ten-thousandth of an inch in thickness and one inch in length. Instead of taking wires of enormous length in order to get appreciable elongation, we can multiply the apparent elongation by the mechanical means of levers, or optically. The examination of the expansion of liquids is more simple, because they have merely to be enclosed in flasks provided with narrow tubes, the bores of which may be made exceedingly small in comparison with the capacity of the flasks. When such vessels are heated, the glass at first expands, and forms a flask of greater capacity, so that the liquid falls in the tube. But anon as the liquid expands, and as, invariably, the expansion of a liquid is greater than that of glass for the same increase of temperature, the liquid rises in the tube.

REMEDY FOR CHOKED CATTLE.—Quaker Street, N. Y., subscriber, hands us a remedy for choked cattle, which has never failed when tried. The remedy is a teaspoonful of soft soap dissolved in a pint, or a little more, of warm water, and poured down the throat of the choked animal. As soon as administered, the apple or potato is instantly thrown up on passing the hand upon and along the throat. He allows his cattle to eat apples or potatoes without cutting, being positive that one should choke he can relieve the animal instantly. A correspondent says that cattle may be relieved when choked by being made to jump over bars left as high as the animal can make to jump. J. B. Jones says that a good way is to make a ball of tobacco, and put in the animal's mouth as far back as possible, which will cause vomiting and give speedy relief. Now as the first is a dangerous method, and the second, tobacco, may not be handy, the best thing I ever saw (and I never saw it to fail) is to take a round stick 18 inches long, and put it in the animal's mouth, where as you would a bit into a horse's mouth, having the stick as large as can be put in the mouth. It can be fastened by strings to the horns. Turn the animal loose, and it will soon throw the article out, and it will not make it sick like tobacco. I have so tried a great many times in this section.—*Country Gentleman.*

SACKS.—The directors of the Farmers' Co-operative Union have purchased and are having made 90,000 air sacks, and have given notice to the stockholders wishing sacks, to notice to the directors their pro rata on or before June 1 applications to be made to George Ohley at the office of D. E. Hamblen, Yuba City. I learn that the stockholders receive their shares at 11½ cents each. This is quite a reduction on former prices, and shows what farmers bring down the price outside of course. But those who do not belong to the union could give them credit for the good they have brought about. Cheap sacks and they have long been the great cheap for farmers. To this end they are striving and making fair progress.—*Sutter Banner.*

M. TISSANDIER, the editor of *La Nature*, is collecting a series of observations, for calculating the amount of atmospheric dust falling every day. The mean found is said to be several grains in twelve hours for a surface not larger than half a square mile.



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars.

E. P. HEALD,
24 Post Street, President Business College, San Francisco.

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.
A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to
ELWOOD COOPER,
22½-17 President Board of Directors.

PACIFIC POTTERY,

Depot—No. 3 California St., San Francisco.

N. CLARK & CO.

Manufacturers of

EARTHEN AND STONEWARE,

WATER AND SEWERAGE PIPE.

Our Vitrified Iron Stone Pipe has been thoroughly tested on private estates and public works, and its merits are fully endorsed by the leading Architects of the State.

J. B. OWENS, Agent.
m9-bp-3m

The Guadalupe Island Company—San Francisco, California.

Notice is hereby given, that at a meeting of the Directors, held on the 8th day of May, 1874, an assessment of ten (10) cents per share was levied upon the capital stock of the corporation, (the Guadalupe Island Company) payable immediately to Arthur Rodgers, Treasurer of the company, at its office, 306 Pine street, San Francisco, California.

And stock upon which this assessment shall remain unpaid on the 15th day of June, 1874, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on the 3d day of July, 1874, to pay the delinquent assessment, together with costs of advertisement and expenses of sale.

ARTHUR RODGERS,
Secretary of the Guadalupe Island Company,
No. 306 Pine street, San Francisco, California. m16-1t

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address: **W. H. & G. B. PEPPER,**
Petals, Sonoma Co., Cal.
21v6-1y

PEACH AND PLUM TREES.

15,000 IN DORMANT BUD;

SEVEN OF THE BEST VARIETIES

Of Peaches and five of Plum. The Tinley Peach, Georgia Freestone seedling, the first offered in the States its flavor being rich, and superior to the finest of the old varieties; it is the best for canning and shipping, and brings double the price of any other Peach in market. Orders promptly filled fresh from the Nursery.

FRANK DOMINGOS,
P. O. Box 157, Sacramento, Cal.
4v7-2m

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE TENT EGG CARRIER, the cheapest and best in the world.

GEORGE W. SWAN & CO.,

Union Box Factory No. 114 and 116 Spear street,
Agents for the Pacific Coast 11v7-3m

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and Kearny, SAN FRANCISCO.
21v2-1v

WHALE OIL SOAP,

—FOR—

Destruction of Bugs on Plants, Etc.

PHENIX OIL WORKS.

517 Front Street, SAN FRANCISCO.
20v7-1m

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavin, Callous Lumps and Blemishes of all kinds are speedily removed by it.

WILLIAMS & MOORE, Proprietors.
Stocks, Cal.
8v7-3m

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Landrymen, Waiters, Chinese Laborers, Farm Hands, Gardeners, Mechanics, Pottery Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts.,
11v7-3m

The Sewing Machine

—FOR THE—

GRANGERS.

NO COMBINATION! NO MONOPOLY!

The New Improved FLORENCE,

Side Feed and Back Feed.
Agency established on the Pacific Coast in 1863. The lightest running, most simple, and most easily operated Sewing Machine in the Market. Always in order and ready for work. If there is a Florence Sewing Machine within one thousand miles of San Francisco, not working well I will fix it without any expense to the owner. Samuel Hill, Agent, 19 New Montgomery Street, Grand Hotel Building, San Francisco.

Mr. I. G. Gardner, State Agent for the California Granges, is authorized to make liberal terms to all Grangers who purchase the FLORENCE. No combination against favoring the Grangers has ever been joined by Florence Agents.

SAMUEL HILL, General Agent.

18v7-3m

NOTICE TO FARMERS.

Something Entirely New.
HOME SEWING MACHINE.

This machine is manufactured after an experience of twenty years. It contains within itself every known improvement. It is the best because the simplest, easiest to understand and by far the lightest to run, and the equitable adjustment of all its parts makes it the most durable Machine in the market. Take the INTERESTED STATEMENTS OF NONE, but

EXAMINE FOR YOURSELF.
SEND FOR A CIRCULAR.

It uses a Shuttle, Straight Needle, Two Threads, and makes a stitch alike on both sides.

E. W. HAINES, Agent,
17 New Montgomery St., Grand Hotel Building, S. F.

We also continue to sell another machine, the
HOME SHUTTLE SEWING MACHINE.

Price, \$45.

Mme. Demorest's Reliable Paper Cut Patterns. Send for a Catalogue. 15v7-eow-6m



The New Wilson SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market.
G. A. NORTON, Gen. Ag't
for the Pacific Coast.
337 Kearny St., S. F.
ap25-1f

PRICE, \$50.

Grangers' Bank of California.

NOTICE:

The Stockholders of the

GRANGERS' BANK

Of California, are hereby notified that a meeting has been called to be held in Corinthian Hall, No. 31 Post street, San Francisco, on Thursday, May 21, A. D. 1874, at two o'clock, P. M., for the purpose of adopting the By-Laws of the Corporation, as required by law.

SPECIAL ATTENTION

Is called to the importance of the Stock being represented either in person or proxy, as it is necessary that a majority of all stock subscribed be represented in adopting the By-Laws of the Bank. By order,
ALFRED F. WALCOTT, Pres't.

Patrons of Husbandry.

JOSEPH SEYMOUR & SON,

Manufacturing Silversmiths and Jewelers,
36 MONTGOMERY STREET, SYRACUSE, N. Y.

We are now prepared to furnish Granges with

Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Reaping Hook and Shepherd's Crook..... 7
Send P. O. Money Order with your order to W. H. Baxter, room 12, 320 California street, San Francisco. It will save Express collections and overland Express charges.

JOSEPH SEYMOUR & SON,
12v7-3m Syracuse, N. Y.

San Francisco Employment Office,

NO. 606 CLAY STREET,

Crosett & Co., Proprietors.
(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.

Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. ap18-1f

CEO. H. TAY & CO.,

614, 616 and 618 Battery St., S. F.,

OFFER FOR SALE

IRON PIPE,

BLACK and GALVANIZED.

PUMPS—LIFT AND FORCE.

RUBBER HOSE, ETC.

STOVES and RANGES,

THE RICHMOND RANGE,

THE HENRY CLAY,

THE EMPIRE CITY,

THE ALVARADO.

THE MONITOR, wrought iron body, cast iron top and hearth, will cook for 50 to 500 men; an excellent stove for large ranches during harvesting season.

AND A GREAT VARIETY OF

COOKING STOVES AND RANGES, FARMERS' BOILERS AND CALDRON KETTLES.

Ralph's Patent Oneida Cheese Vats.

DAIRYMEN'S GOODS,

MILK PAILS, PANS, CHEESE HOOPS, ETC.

BABBIT METAL.

Wire for Fencing and Baling.

ALSO, METALS, HOUSE FURNISHING HARDWARE, JAPANNED GOODS, ETC., ETC.

22v7-3m

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-1f

FACTORY CHURNS.

At the urgent request of some of the prominent Dairyman of the country, we have designed and made two sizes of FACTORY CHURNS which we believe to be every way adapted to the wants of Butter Factories and large Dairies where power is used.

THE NEW NO. 8

Is intended to churn from 50 to 75 gallons of cream, and the No. 9 from 75 to 150 gallons at a time.

They are just the article needed, and may be obtained through any of our agents or directly from us. Prices and details sent on application to the Sole Manufacturers,

PORTER BLANCHARD'S SONS,

m30-4t Concord, N. H.

FEED-CUTTER ROLLERS

Covered and made new in the best manner at usual rates, at H. ROYER'S Belt Factory, 437 Brannan St.

19v7-3m

NOTICE.

TO THE SUBSCRIBERS TO THE CAPITAL STOCK

—OF THE—

GRANGERS' BANK OF CALIFORNIA.

Notice is hereby given, that at a meeting of the Directors of the Grangers' Bank of California, held this 23d day of May, A. D. 1874, the first instalment of ten per cent. on the capital stock was levied, payable in U. S. Gold Coin on or before the first day of July, 1874. Payable at the office of the President, 320 California street, San Francisco. By order of the Board.

m30-5t **ALFRED F. WALCOTT, President.**

Buyers' Directory.

Under this head will be found the names and address of some of our most enterprising and reliable business men.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

Shipping—Vessels Up.

FARMERS' LINE.

FOR LONDON DIRECT.

THE MAGNIFICENT A 1 CLIPPER SHIP,

MONETA,

W. SINCLAIR, Master. 621 Tons,

FOR LIVERPOOL DIRECT.

The magnificent A 1 Clipper Ship,

SEA WITCH,

BAKER, Master. 1288 Tons,

These fine vessels have nearly full cargoes engaged and will have very quick dispatch. Freight taken in lots to suit shippers.

Will be followed by the splendid A 1 Iron Ship
GLENGARRY.

1769 Tons,

Due here in May; or by other first-class vessels, Liberal advances made on shipments of produce consigned to our Liverpool house, Messrs. Robert Rodgers & Co. RODGERS, MEYER & CO. 19v7-3m

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The New A 1 Clipper Ship

FRIEDLANDER, 1,638 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

Apply to **E. E. MORGAN'S SONS,**

320 California Street,
San Francisco.

POISON! POISON!

WAKELEE'S PATENTED

Granulated Squirrel Exterminator.

A NEW AND MOST DESTRUCTIVE POISON FOR THE WORST PEST OF CALIFORNIA.

For years the farmers of the Pacific Coast have been spending money in experimenting to find a safe, cheap and efficient way of ridding their grain-fields of their worst enemy, THE SQUIRRELS, which destroy Millions of Dollars' worth of grain every year; and unless a strong and combined effort is made to kill them off, they will become more numerous every year.

Wakelee's Granulated Squirrel Exterminator is just the thing the farmers of California have been looking for. It is sure DEATH. One or two grains of it will kill a Squirrel so quick that if it is five feet from his hole it dies before it gets there. The Poison is put up day and in granular form, and easily handled; in one pound tins, at \$1 per pound. It goes a great way, as 10 to 15 grains of it are sufficient to place at each hole. Also successfully used for killing Gophers and Rats. It has been thoroughly tested in different parts of the country, and gave universal satisfaction. It is kept and sold by druggists and dealers generally through the country. The following are some of my testimonials, viz:

SANTA CLARA, April 20th, 1874.
H. P. WAKELEE, Esq.—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,
J. R. ARGUELLO.

SAN LEANDRO, Cal., April 3d, 1874.
H. P. WAKELEE, Esq.—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,
J. M. ESTUDILLO.

DOUGHERTY STATION, Alameda Co., Cal.
MR. H. P. WAKELEE, San Francisco: I have used your Squirrel Poison and found it to be just what you claim for it. It is sure death. Yours,
C. M. DOUGHERTY.

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m 304 California Street.

AGRICULTURAL NOTES.

ALAMEDA.

DEATH TO SQUIBBELS.—*Advocate*, May 30: The new squirrel poison, Car-o-nach, is playing havoc with the pestilent vermin in this neighborhood, destroying them by the thousand and bidding fair to effect a total extermination, if continued a length of time. All who have tried the poison(?) report its complete success, and all express the belief that within a short time it will effectually rid the neighborhood of these destructive torments which have heretofore defied every invention and contrivance for their extinction or abatement. Hitherto the proprietors of the Car-o-nach have been giving away large quantities in order to enable the farmers to effectually test its efficacy, but such has been its success and so great is the demand for it that they are compelled to reserve the remainder of their stock for sale, as the demand is equal to their present capacities of manufacture. This is reasonable, as they have manifested a great liberality in that respect, and have given the public the fullest opportunity to test by experience the practical value of the invention.

AMADOR.

COTTON.—*Amador Dispatch*, May 30: The cotton planted by several of our ranchers in this vicinity a short time ago, as an experiment, is coming up nicely, and looks as healthy as that grown upon any of the ordinary cotton plantations of the South. This is another credit mark in favor of the productive capacity of the foothills.

A FINE RANCH.—*Amador Ledger*, May 30: A few days ago we rambled over the hills as far as the establishment of Mr. Wm. Avala; and to look over his grounds at this particular season, is well worth a trip to his farm. Mr. Avala by his own labor has planted and brought to full bearing perhaps the finest orchard and vineyard in the county. The orchard numbers seven hundred bearing trees, embracing every variety of fruit known to this climate, and of the finest quality. His trees are literally crowded with young fruit, rapidly advancing. The vineyard contains 17,000 thrifty vines, nearly the whole of them prolific bearers, and of the most approved foreign varieties. From the number of young bunches observable on the vines, the yield will be simply enormous. The ground covered by the orchard and vineyard is kept in a fine state of cultivation, and the yield from the trees and vines will astonish persons not familiar with mountain soil. Besides the fruit and vines, there is a field of barley, that will, cut for hay, yield over two tons to the acre. Mr. Avala has forty acres which, with its orchard and vineyards, and the rich gravel deposits underlying a portion of it, may safely be set down as one of the most valuable tracts of the same extent in the county. Mr. Avala has made this ranch valuable by his own labor, unaided by any other capital than his own hands, and of the result of his foresight and untiring industry, he has every reason to feel proud.

CALAVERAS.

FROM MURPHY'S.—*Calaveras Citizen*, May 30: The crops are at present looking finely, and promise a large yield; still a shower or two more would evidently increase the present prospects. In regard to fruit, I presume the crop will be immense, not in one kind particularly, but in every kind, which certainly causes many to regret that from the fact of there being no market the fruit is allowed to go to waste.

COLUSA.

GOOD LOOK OUT.—*Colusa Independent*, May 29: Mr. N. Thurston, who owns a farm in Sutter county, has brought in a number of stocks of bearded wheat. It stands six feet high, and is beautifully developed. He states that the wheat and grain all along the river look just as well, and surpass anything he has ever seen. This wheat will be ready for cutting in about three weeks.

HAVING A LITTLE BUSINESS ACROSS THE RIVER, we were attracted by fields of wheat and barley, unsurpassed by any country in the world. They belong to Colonel Wilkins. He has one field of barley that he intends to cut for hay, which would yield at least 70 bushels per acre.

FRESNO.

BORDEN.—*Fresno Expositor*, May 30: The crops around Borden are looking very fine for the season, and there will be a good deal of hay cut, and hay will be very cheap, probably not more than \$10 per ton. Mr. Fridlander's almond orchard is looking very fine, and most of the trees will live through the summer. He has also a splendid field of alfalfa, which is about a foot high. Building is being carried on quite extensively there.

LAKE.

HAYING.—*Lake County Bee*, May 30: Haying was commenced very generally in the lower part of Lake county on Monday last. Throughout the Coyote valley a good deal of choice grain hay will be cut, which is assured of an appreciative market by the extensive teaming operations now conducted in connection with the quicksilver mines.

THE PROSPECTS OF THE GROWING CROPS IN LAKE COUNTY are excellent, up to the present writing. It is anticipated that the products of cultivated farms will be more abundant and better than those of last year.

LOS ANGELES.

FROM LOS ANGELES.—*Cor. Los Angeles Herald*, May 30: The prospects for crops were never more flattering. Harvesting is now under

headway, and from the number of headers, mowers and reapers sold there are vast amounts of grain to be cut. Nietos, Downey City, will necessarily soon be a point of interest. There is, perhaps, no spot in California that can surpass it in climate or productiveness of soil. It is well watered by ditches, is adapted to all classes of fruit that can be grown in Los Angeles county. For farming purposes it is simply unsurpassed. There are good openings for business here. Among the most important is a beet sugar factory. The beet yield is 125 tons per acre. It can be raised on the worst alkali beds and it is said greatly improves the land. The beet can be planted and gathered every month in the year. Beets sent up to some factory above were pronounced of the best quality. An abundance of pure water can be had.

FROM ANAHEIM.—Our harvest has begun. From every farm sounds the click and rattle of reapers, headers and mowers. Harvest hands are in demand. Plenty of work at good wages for all who apply. The yield of grain will far exceed our most sanguine expectations. The late rains, the fogs, and the cloudy weather have caused the kernels to fill out to unusual plumpness. The quality of grain will be superior to that produced by us in any former year, while the quantity will be at least five-fold greater. Anaheim is completely encircled by a grain-belt, varying in width from two to seven miles. South of the Santa Ana, the whole country, from the river to the San Joaquin ranch, embracing the flourishing settlements of Gospel Swamp, Santa Ana, Richland and Tustin, is almost one continuous grain field. And such grain!—rye towering up from six to nine feet in height, and barley fallen flat from the very weight of the heads. Such a harvest as we are having is enough to rejoice the heart of an anchorite, or provoke a grin upon the face of melancholy.

MENDOCINO.

FRUIT.—*Mendocino Democrat*, May 30: Everything hereabout denotes a splendid season for fruit. It was feared by some that the last few very cold nights might bring frost and injure the crop seriously, but the season is too far advanced for that and the fruit being up to a vigorous growth we suppose it's able to stand a few outside knocks better than if in feeble condition. Besides it has the protection of the foliage.

HARVEST.—From all we can hear our agriculturalists are promised a plentiful harvest: grain, grass, everything teeming with life and richness.

PREPARING FOR HARVEST.—Messrs. Faught, Biggs and others left this week for San Joaquin with a steam thrasher, to engage in harvesting the great crops of that locality.

PLACER.

HAYING.—*Herald*, May 30: The farmers in these parts have begun haying in earnest. The crop is turning out heavier than usual, and the farmers seem to be in good spirits over the prospect. It is not so in the valley. There the haying season is well advanced, and the crop has been unusually light. There will probably be sufficient cut, in all the lower parts of the county, for home use, and most of the foot-hill ranches will have some to spare. The light showers the past week have slightly checked the progress of the hay harvest, but have done no material damage.

PLUMAS.

ITEMS.—*Plumas National*, May 30: Assessor Stiner informs us that Sierra valley is looking finely, and the chances of a great hay crop are flattering in the extreme. The high water is keeping the farmers from plowing, and not over half as many acres of grain will be raised this year as last, but the difference in the season will make up for the deficiency.

A bee-free found near Butterfly valley, the other day, yielded over 100 pounds of honey.

SANTA CRUZ.

VOLUNTEER.—*Santa Cruz Enterprise*, May 29: The volunteer crop about Santa Cruz is being cut. The usual rains are giving no signs of annoyance. It is usual to have heavy spring rains about this season, and not infrequently large quantities of early hay are destroyed. Hay should be removed from the field as soon as possible, for should there be no rain this season to damage, it will be the exception rather than the rule.

SACRAMENTO.

LOOKING WELL.—*Folsom Telegraph*, May 30: The crops in this vicinity are looking splendidly. The farmers are harvesting their hay. Salisbury will have 200 tons. The Natoma vineyard, at Alder Creek, only two years old, has the appearance of being at least twice that age. They have set out a fine looking orchard of about one hundred acres.

BLOODED SHEEP FOR SALE.—We would call the attention of sheep-growers who are desirous of improving their flocks, to an advertisement in another column of a number of South Down rams, for sale by Mr. Rufus Rowe, of this city. The animals may be seen at the corner of Howard and Twentieth street.

NURSERY CHANGE.—The well-known Kelsey nursery, Telegraph road, Oakland, has recently changed hands. G. J. Nicholson and G. B. Davis have become proprietors of the establishment. The new firm took possession on the first of May.

New hay commands \$45 per ton in Placerville.

San Jose Farmers' Club.

The Club met at the usual hour and was called to order by President Casey.

Mr. Bergland wanted to know the best manner of killing gophers, especially in a garden.

Mr. Holloway—A practical man told me to take finely pulverized strychnine, then take a stick six inches long, or such a matter, and stick it in a potato; take a knife and pare the potato off to a point, not touching the potato with your hand, going no closer to it than you can help. Then touch the point of the potato in the pulverized strychnine. Clean out the gopher hole and stick in the potato. He says this will bring them every time.

Mr. Woodhams—I get rid of all mine that are in the vicinity of the water by drowning them.

Mr. Bergland—I split a carrot and put in strychnine and get a good many, but as they become civilized they don't take it.

Mr. Casey—I use just a nice mustard stalk, a tender one, put the poison in one end, or I take apples, quarter them and put in the poison. I never take any notice about touching it with my hand; onions are good also. I have taken a hard stick just to try them, and the gophers would take it all the same if it was put in the right place. When I want to do the business up strong I use phosphorus. I take a quart of wheat and soak it, and taking a pint of molasses put in a stick of phosphorus and heat it on the stove, very gently, because it is likely to take fire; then I mix in the wheat with shorts or bran and go over the ground; I can clear out 25 or 30 acres a day very easily. I don't know whether it kills them or scares them away. I have seen them, after I have put in the phosphorus, running as if they were almost dead.

Mr. Erickson—I was at Mr. Bradley Smith's place at year ago, and his plan was to dig a trench about a foot wide and a foot deep; then, at every twenty or thirty feet he inserted in the bottom of that ditch empty kerosene oil cans, with the mouth of the can at a level with the bottom of the ditch. Mr. Smith says the gopher running along the bottom of the ditch, drops into the cans and can't get out.

Mr. Casey—Mr. Ware tried that way, but it was not a success; the gophers soon learned to throw up dirt and fill the cans.

Mr. Holloway—Judge Archer, I believe, tried that last year in his orchard, but he has abandoned it.

Mr. Woodhams—Connors tried that years ago, near the county infirmary, but he has given it up.

Mr. Woodhams wanted to know if any one present had had any experience in killing the thistle?

Col. Younger—I take them up out of the ground just before they commence to make seed. I just take a hoe and dig them up. It is the only effectual way to get rid of them.

Mr. Woodhams—But I mean how can it be done on a large farm? How can it be done in a hundred acres of grain?

Col. Younger—Do you mean the hard thistle?

Mr. Woodhams—I think it is the hard thistle; these grow about so high (about 3 feet) and sprangle out.

Col. Younger—I have worked with them for four or five years, and find no sure way of killing them out effectually but by digging them up just before they make seed.

Mr. Woodhams—Some parts of my farm are very bad. I sowed rye on a portion of my ground and it is thinning them out very much; they are very thin and spindling, and some of them I don't think will go to seed at all.

Mr. Holloway—The best way I know of is to sow barley for hay.

Col. Younger—I have had the thistles all killed out on my place three or four times, but every time there is an overflow I have to go at it again.

Under the head of fifteen minutes' speech, Col. Younger proceeded to give an elaborate and judicious estimate of the value of short horn cattle; giving an accurate description of the different forms or families of this valuable class of farm stock, and closing his address as follows:

The most beautiful and encouraging sight to me is to see a herd of these noble beasts grazing quietly on our beautiful lawns, making beef and storing their capacious udders with the life-sustaining food, coming up in the evening and lowing for the milk-maid, to be relieved of their burden. These are animals that every farmer should cultivate; they feed the poor and afford luxuries for the rich.

Mr. Erickson—I would like to express my gratification at the pride Col. Younger takes in his profession. I like to see a man love his business, and if we do so in our farming business we will make better farmers.

Mr. Holloway—I hope this example that Col. Younger has set will excite emulation, that others will express their ideas on their specialties.

The question for regular debate not being agriculture in its character, we do not produce that portion of the proceedings. —*Mercury*

SAGACITY OF BIRDS.—Certain facts render it probable that birds, in some manner, become aware of cholera infection in the air. Recent European journals state that at Munich, where several cases of cholera have occurred, the rooks and crows, which flew about the steeples and through the trees of the public promenades, have all emigrated; and the same thing happened during the cholera seasons of 1836 and 1854. According to Sir Samuel W. Baker, the same phenomenon occurred at Martinis, where the martins, which exist in immense numbers the year round, wholly disappeared during the prevalence of the cholera.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., June 2, 1874.

FOR WEEK ENDING May 19, 1874.

TICKET CLASP.—Hiram N. Rucker, Plainburg, Cal.

MOLD-BOARD FOR PLOWS.—Don Carlos Matteson and Truman P. Williamson, Stockton, Cal.

RE-ISSUE.

VALVE FOR PUMPS.—Wm. D. Hooker, S. F., Cal.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

"WE

And Our NEIGHBORS"

IS THE LATEST AND RACIEST WORK BY

Harriet Beecher Stowe,

Author of "Uncle Tom's Cabin,"

"The Minister's Wooing," "My Wife and I,"

And other powerful stories, each the literary sensation of its period; and this story promises a like genuine and wholesome sensation. It bears directly on social topics of interest, embracing the romance of youthful companionships, the brightness of happy home-life, the spicy complications of neighborhood associations, and such follies and profound domestic miseries as have led to the wide-spread Temperance movement of the day.

Mrs. Stowe is now in the prime of that genius which wrote "Uncle Tom," ripened by years of study and observation. Her novels are immensely popular, "Uncle Tom's Cabin" alone out-selling by hundreds of thousands any edition of any original work ever published—save the Bible. Her book two years ago, "My Wife and I," outsold every contemporary. Such a pure and ennobling story as "We and Our Neighbors" should be read in every home. This attractive Serial is just beginning exclusively in the

WEEKLY FAMILY NEWSPAPER,

THE CHRISTIAN UNION,

Henry Ward Beecher,

EDITOR.

In religious matters this paper is Evangelical and Unsectarian; in political affairs, independent and outspoken. It contains the best articles, and both short and serial stories, from the foremost writers; it aims to maintain the highest standard in Religion, Literature, Poetry, Art, Music, Science, News, Politics, Household and Family Affairs, with Stories, Rhymes, Puzzles for the Children, etc. Nothing is spared to make it a COMPLETE Newspaper for the Family, pure, attractive, wide-awake, up with the times, and inspired with essential Christianity—a journal interesting to every one in the household, young or old. It is

A MARVEL OF CHEAPNESS

For less than one cent a day, it gives very week reading matter enough to fill an ordinary \$1.50 book of over 300 pages; and in a year 52 such volumes! i. e., sixty-five dollars' worth of matter! To each is this annually

PRESENTED

A COMPLETE LIBRARY.

The paper's form, 24 pages, large 4s, pasted and trimmed, commands it to all who are tired of the old-fashioned "blanket sheets."

The well-earned popularity of this paper is now such that of its class it has the

Largest Circulation in the World,

And has readers by hundreds of thousands.

An Illustrated Number,

Containing the opening chapters of Mrs. Stowe's admirable story, will be

SENT FREE

To every new and renewing subscriber.

If you are not already a subscriber, send at once and secure it under the now offered

LIBERAL TERMS.

The paper may be had either with or without the attractive premiums offered: viz., the

CHRISTIAN UNION,

One Year only \$3.00.

Or, with premium paper French Olographs, "Our Boys," (size 11x13 inches each, charming in design and execution, mounted, sized, varnished, ready for framing, Delivered free.....\$3.50 Or, with large premium French Oil Chromo, "The Lord is God," a beautiful Cross and Flower-piece, rich sells in art stores for \$5.00, (size, 11x16 1/2 inches, mounted, sized, varnished, ready for framing, Delivered free.....\$3.50

SPECIMEN COPY sent free by mail on receipt of ten cents. Money must be sent by postal Money Order, Check, Draft, or Registered Letter. Otherwise it is at the sender's risk. Address

J. FORD & CO., Publishers,

27 Park Place, New York.

GOD AGENTS WANTED.

The immense circulation of the Christian Union has been put up by active canvassers. No other publication compares with it for quick and profitable returns. The eagerness for Mrs. Stowe's new story, the popularity of the paper, the friendly support of thousands of old subscribers, the artistic premiums for immediate delivery, light outfit and complete "instructions" make delivery, assure repeated success to agents, and to active, intelligent persons unusual chances to get money. All who want a safe, independent business, write at once for terms, or send \$2 for chromo, to J. FORD & CO., New York, Boston, Chicago, Cincinnati, or San Francisco.

S. F. MARKET REPORT.

At wholesale when not otherwise indicated.

Weekly Market Review.

(By our own Reporter.)

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, June 3, 1874.

The season is one of great changes in kinds of articles received, and with regard to the more important staples is one of anticipation rather than actual trade. Preparations are being made for handling an unusual bulk of Cereals. The wheat crop of 1874, it is estimated, will amount to 21,000,000 bushels. This will require six hundred vessels, and will stimulate the activity of the port. At present very little shipping business is being done, most of the old crops having been disposed of before this.

Reports from all sections continue extremely favorable.

Barley.

Brewing is less called for and has declined. Feed is in a comparatively better state.

Beans.

The stocks held in this city are getting rather low, but no movement has taken place.

Broom Corn.

Sales, if any, are on private terms.

Corn.

Corn rules very firm. The constant price is 2c per pound.

Dairy Produce.

As a rather remarkable thing, it is noted that for a whole week this line of Produce has remained steady. Prices are hardly high enough to satisfy dairymen.

Eggs.

Eggs are firm at the advance.

Feed.

Feed of all kinds is very buoyant at present. The short supplies of Hay in the country have aided to put up prices throughout the list. Bran and Middlings have advanced another dollar each per ton. Corn Meal held firmly at \$42.43.

Flour.

Flour is very quiet. What trade there is seems to be altogether of a jobbing character. Our quotations give the very extreme top prices, which are seldom touched.

Fresh Meat.

Meats are more plenty.

Game.

Not much variety, and little demand.

Hops.

The market is very dull. Receipts are small, but stocks are pretty well filled up, and there is little inducement at present rates to ship East.

Oats.

Oats have again declined, the recent spurt not having been sustained.

Onions.

The new crop is coming forward plentifully and sells low. Old are scarce, and not much wanted.

Potatoes.

New are becoming quite plenty. The Potato disease already so disastrous at the Mission, makes quite a sensation, but has not effected prices perceptibly.

Poultry.

Turkey Hens are firmer. There is little call for Gobblers at this season. Chickens are very dull. Ducks have also declined.

Provisions.

Provisions are moderately active. Quotations are stiff.

Seeds.

No change has taken place in Seeds. Business is slack.

Wheat.

We are compelled again to mark down quotations. Even as they are, the top of the market means a pretty tough climb. The wheat trade is now lighter than it has yet been. Liverpool rates are: Average California, 12s 7d@12s 10d; Clnb, 12s 9d@13s cental.

Wool.

Over 10,000 bales above last spring's receipts are reported. Wool is in good demand and moves freely. Rates now ruling are favorable to the seller. Eastern markets are telegraphed strong.

METALS.

WEDNESDAY M., June 3, 1874.

Quicksilver is held very firmly at \$1.35. Metals dull, except a fair jobbing trade in Tin Plate.

Scotch Pig Iron, per ton..... \$33.00 @ 40.00
White Pig, per ton..... @ 40.00
Refined Bar, bad assortment, per lb..... @ 3 1/2
Refined Bar, good assortment, per lb..... @ 4
Boiler, No. 1 to 4..... @ 18
Plate, No. 5 to 9..... @ 5 1/2
Sheet, No. 10 to 13..... @ 5 1/2
Sheet, No. 14 to 20..... @ 5 1/2
Sheet, No. 24 to 27..... @ 5 1/2
Horse Shoes, per pair..... 7.50 @ 8.00
Nail Rod..... 9 1/2 @ 10
Norway Iron..... 8 @ 9
Rolled Iron..... 6 @ 7
Copper Irons for Blacksmiths, Miners, etc..... @ 4 1/2

COPPER.
Copper, per lb..... @ 34
Copper, per lb..... @ 34
O. N. P. Pat., per lb..... @ 25
Sheeting, Yellow, per lb..... @ 25
Sheeting, Old Yellow, per lb..... @ 10 1/2
Composition Nails..... @ 25
Composition Bolts..... @ 25
TIN PLATES.
Plates, Old, per lb..... @ 16.00
Plates, New, per lb..... @ 14.00
Roofing Plates..... @ 13.00
Banco Tin, Slabs, per lb..... @ 34
BANKS—English Oats, per lb..... @ 25
Anderson & Woods' American Cast..... @ 18
Drill Bar..... @ 22
Flat Bar..... @ 18
Plough Points..... @ 17
ZINC.
Zinc, Sheet, per lb..... 9 1/2 @ 10
Zinc, Assorted sizes..... 5 1/2 @ 8
LEAD.
Pig, per lb..... 5 1/2 @ 6
Bar, per lb..... 6 1/2 @ 7
Sheet, per lb..... 6 @ 7
Pipe, per lb..... 6 @ 7
QUICKSILVER, per lb..... 1 35

DOMESTIC PRODUCE.

WEDNESDAY M., June 3, 1874.

Beans, sm'l wh. b. 5 1/2 @ 5 1/2
do, butter, 6 @ 7
do, large, do, 6 @ 7
do, bayo, 2 1/2 @ 2 1/2
do, pink, 2 1/2 @ 2 1/2
do, pea, 5 1/2 @ 5 1/2
do, Lima, 6 @ 7
BROOM CORN.
Per ton, \$50 @ 200
BUTTER, CAL CHOICE.
do, good, 27 @ 30
do, inferior, 20 @ 22 1/2
do, Irish, 25 @ 27 1/2
do, pickled, 2 1/2 @ 2 1/2
do, ex Pt. Reyes, 30 @ 32 1/2
Cheese, Cal. new, 13 @ 16
do, Eastern, 14 @ 17
EGGS.
Eggs, Cal. fresh, 22 @ 24
do, Oregon, 22 @ 24
do, Eastern, 19 @ 21
FEED.
Bran, per ton, 15.00 @ 17.00
Middlings, 10.00 @ 12.00
Hay, 8.00 @ 10.00
Straw, 8.00 @ 10.00
do, oale, 9.00 @ 1.00
Oil cake meal, 42.00 @ 43.00
Corn Meal, 42.00 @ 43.00
FLOUR—Superfine & Extra.
Alvies Mills, bbl 50 @ 60.00
California, 4.50 @ 5.00
City Mills, 4.50 @ 5.00
Commer'l Mills, 4.50 @ 5.00
Golden Gate, 4.50 @ 5.00
Golden Age, 4.50 @ 5.00
National Mills, 4.50 @ 5.00
Santa Clara Mills, 4.50 @ 5.00
Genesee Mills, 4.50 @ 5.00
Oregon, 4.50 @ 5.00
Valley Star, 4.50 @ 5.00
Venus, Oakland, 4.50 @ 5.00
Stockton City, 4.50 @ 5.00
Lambard, Nev., 4.50 @ 5.00
FRESH MEAT.
Beef, 1st quality, 10 @ 12 1/2
do, second, 8 @ 10
do, third, 6 @ 8
Veal, 4 @ 6
Mutton, 7 @ 10
Lamb, 6 @ 8
Pork, dressed, 6 1/2 @ 7
do, dressed, 6 1/2 @ 7
GRAIN, ETC.
Wheat, Cal. et. cl., 1.70 @ 1.80
do, shipping, 1.75 @ 1.85
do, milling, 1.75 @ 1.85
Barley, Feed, 1.55 @ 1.65
do, Brewing, 1.75 @ 1.80
Oats, good to choice, 1.50 @ 1.60
do, common, 1.45 @ 1.50
Corn, White, 1.20 @ 1.30
do, Yellow, 1.20 @ 1.30
Buckwheat, 1.25 @ 1.30
Rye, 1.50 @ 1.60
HOPS.
California, 1873, 35 @ 37 1/2
East'n, 7c choice, 45 @ 47
do New York, 45 @ 47
MISCELLANEOUS.
Beeswax, per lb., 27 1/2 @ 30
Honey, choice, 15 @ 20
Northern, 15 @ 20
do Dark, 8 @ 10
do Strained, 8 @ 12 1/2
Pulu, 8 @ 9 1/2
Onions, 1.00 @ 1.25
CALIFORNIA BUTTER.
Cal. Walnuts, 12 @ 15
Peanuts per lb., 12 @ 15
Peanut Oil, 12 @ 15
Pecan nuts, 16 @ 18

Hickory do..... 9 @
Brazil do..... 15 @
Coc'nuts, 100, 7.00 @
Alm'ds h'd shell 10 @
do, soft, 22 1/2 @
Filberts, 25 @
POTATOES.
Sweet, per 100 lbs, @
Cuffee Cove, @
H. M. Bay, 1.50 @ 1.62 1/2
Pecan Pt., Humboldt, @
Petaluma, @
Mission, @
Salinas, @
Bodega, @
Milestar, @
Old Potatoes, 50 @ 62 1/2
Corn, pickled, 2 @ 3
POULTRY & GAME.
Live Turkeys, @
Hens per doz., 18 @ 20
do Gobblers, 15 @ 18
Hens, per doz., 6.50 @ 7.50
Roosters, young, @
large, 7.00 @ 8.00
Broilers, 3.00 @ 4.00
Ducks, tame, doz, 6.00 @ 7.00
Geese, per pair, 1.50 @ 2.00
Mallards, 2.00 @ 3.00
Snipe, Eng. doz, 1.00 @ 3.00
Quail, per doz., @
Mallard Ducks, @
do small, @
Wild Geese, gray, @
do white, @
Doves, per dozen, 50 @ 75
PRAIRIE CHICKENS.
Grouse, @
Rabbits, 1.00 @ 1.50
Millet, 10 @ 12
Venison, per lb., @
CALIFORNIA LIGHT.
do Medium, @ 13 1/2
do Heavy, @ 12 1/2
do Eastern, 11 @ 13 1/2
Cal. Hams, 12 1/2 @ 13 1/2
do Whittaker, @ 15
do Duffield, ch, @ 14 1/2
do Plunkton, @ 14
do Harbin, @ 15
do Eastern, 20 @ 25
do New Hams, @ 10
Oal. Smoked Beef, 10 @ 11
Lard, Cal., 13 @ 13 1/2
do Eastern, 14 @ 15 1/2
SEEDS.
Alfalfa, 13 @ 15
Canary, 5 @ 6
Flaxseed, 5 @ 6
Ky. Blue Grass, 40 @ 50
do, milking, 10 @ 12
Mustard, 2 @ 3
do, Brown, 3 @ 4
Italian Rye, 25 @ 30
Perennial do, 30 @ 35
Timothy, 15 @ 20
Sweet V. Grass, 10 @ 15
Orchard do, 30 @ 35
Red Top do, 30 @ 40
Hungarian do, 12 1/2 @ 15
Lawn do, 50 @ 60
Clover, 20 @ 25
do White, 60 @ 75
Alsike, @
Esparto Grass, 1.00 @
Packets, @
WOOL, ETC.
Wool, No. 1, 22 @ 24
do choice No. 2, 24 @ 26
Medium grades, 18 @ 22
Fall clip, @
Burry, 10 @ 17 1/2
Hides, dry, 18 @ 20
do wet, 15 @ 18
Tallow, Orde., 8 @ 9
do Refined, 8 @ 9

Wool, No. 1, 22 @ 24
do choice No. 2, 24 @ 26
Medium grades, 18 @ 22
Fall clip, @
Burry, 10 @ 17 1/2
Hides, dry, 18 @ 20
do wet, 15 @ 18
Tallow, Orde., 8 @ 9
do Refined, 8 @ 9

Wool, No. 1, 22 @ 24
do choice No. 2, 24 @ 26
Medium grades, 18 @ 22
Fall clip, @
Burry, 10 @ 17 1/2
Hides, dry, 18 @ 20
do wet, 15 @ 18
Tallow, Orde., 8 @ 9
do Refined, 8 @ 9

Wool, No. 1, 22 @ 24
do choice No. 2, 24 @ 26
Medium grades, 18 @ 22
Fall clip, @
Burry, 10 @ 17 1/2
Hides, dry, 18 @ 20
do wet, 15 @ 18
Tallow, Orde., 8 @ 9
do Refined, 8 @ 9

Wool, No. 1, 22 @ 24
do choice No. 2, 24 @ 26
Medium grades, 18 @ 22
Fall clip, @
Burry, 10 @ 17 1/2
Hides, dry, 18 @ 20
do wet, 15 @ 18
Tallow, Orde., 8 @ 9
do Refined, 8 @ 9

FRUITS AND VEGETABLES.

WEDNESDAY M., June 3, 1874.

Oranges are becoming scarcer. We see no Lorita or Messins in market. Australian are in town, selling at \$50 per M. The boxes are smaller than Coast Orange boxes. No Bananas in first hands. Strawberries are higher. Gooseberries a drug in the market. Currants have fallen to reasonable prices. Apricots are coming in, and sell at 1s@25c per lb.

In Dried Fruits we note an advance of 1c in Peas.

Asparagus has advanced 3c. Cauliflower are cheaper. New Celery in market. Garlic has gone down again. Green Peas have fallen very low. Summer Squash have declined 1c. Artichokes are 10c lower. Green Pepper are just appearing. Cucumbers are more plenty.

FRUIT MARKET.

Tahiti, Or. M. 35 @ 40.00
Lorita, do..... @
Cel. do..... 30 @ 50.00
Limes, do..... @ 15.00
Cal. Lemons, M. 10 @ 30.00
Australian do, 50 @ 60
do per box, 7.00 @ 8.00
Bananas, per bunch, @
Cocoanuts, 100.6 @ 1.00
Pineapples, doz 6 @ 12.00
do Muscat, @
do Common, @
Cherries, 8 @ 10
do choice, 15 @ 25
Blackberries, 7 @ 10
Strawberries, doz 2 1/2 @ 5
Gooseberries, 2 1/2 @ 5
Raspberries, 7 @ 8
Currants, 7 @ 8
Apricots, 15 @ 25
Plums, 15 @ 25
Peaches, 15 @ 25
Pears, Eating, @
do Cooking, @
do Bartlett, @
Nectarines, @
Walnuts, 100 @ 100
Cantelo, 100 @ 100
Pomegranates, doz @
Figs, 10 @ 15
Grapes, Blk Hg, @
do Muscat, @
do Malaga, @
do Sweet W., @
do Mission, @
do Rose of Peru, @
do Tokay, @
do Morococco, @

DRIED FRUIT.

Apples, per lb., 6 1/2 @ 8 1/2
Pears, per lb., 10 @ 12 1/2
Peaches, per lb., 11 @ 12 1/2
Apricots, per lb., @
Pitted, per lb., 8 @ 10
do Extra, per lb., @
Raisins, per lb., 5 1/2 @ 12 1/2
Black Figs, per lb., 8 @ 10
White, do..... 10 @ 15
Pines, per lb., @
do German, 12 1/2 @ 15
VEGETABLES.
Asparagus, 5 @ 7
Beets, 7 @ 10
Cabbages, 2 @ 2.00
Carrots, 100 @ 1.00 @ 1.25
Cauliflower, doz., @ 25
Celery, doz., 50 @ 65
Garlic, doz., @ 15
Green Peas, 1 1/2 @ 2
Green Corn, 15 @ 20
Sum's Squash, 4 @ 5
Marro'lat Squash, 15 @ 25
Artichokes, per lb., 15 @ 25
String Beans, per lb., @ 5
Corn, 15 @ 20
Parsnips, 12 1/2 @ 15
Shell Beans, Windsor, 3 @ 4
Peppers, per lb., 7 1/2 @ 10
Okra, per lb., 25 @ 40
Cucumbers, 15 @ 20
Tomatoes, 15 @ 20
Egg Plant, per lb., @ 15
Rhubarb, 2 1/2 @ 3
Lettuce, 12 1/2 @ 20

FRUITS, ETC., PRESERVED BY THE ALDEN PROCESS.

We give below a table of prices for Fruit, etc., prepared by this process, as reported by Messrs. Littlefields Webb & Co., the agents of the San Lorenzo establishment at whose warehouse, Nos. 316 and 318 Washington street, the articles may be seen, and from whom any quantities may be obtained. The preparations are put up in bulk, in boxes, containing from 30 to 50 lbs., and also in 1 lb. caddies, in cases of 2 dozen each. We add, parenthetically, that 1 lb. of Pared Apricots equals 9 lbs. of the fresh fruit; 1 lb. of unpared equals 1 lb. of fresh. This represents the average contraction of bulk. Tomatoes show the greatest reduction, 1 lb. of the preserved vegetable equaling 25 lbs. of the fresh; while the lowest degree of compactness is in Beef, Currants and Sweet Potatoes, in which the proportion is 1 lb. to 5 lbs.

Apricots, pared, per lb., 40
do unpared, per lb., 32
Peaches, doz, per lb., 22 1/2
do pared, extra, 18
do do, 25
Bartlett Pears, pared, 50
Pears, pared (eliced), 20
do do (ring), 18
Pears, 10-lb boxes, family use, extra, 22 1/2
Seckel Pears, unpared, 12 1/2
Currants, stemmed, 40
do unstemmed, 32 1/2
Royal Ann Cherries, pitted, 25
do, 25
Kentish Cherries, pitted, 55

Apples, pared (ring) do, 12 1/2
do whole, 12 1/2
Apples, 10-lb boxes, family use, extra, 18
Plums, pitted, 25
do do, 25
Rhubarb, 25
do (ring), 35
Beans, 60
Potatoes, 14
Sweet Potatoes, 15
Onions, 40
Beef, 40
Pork, 40
Pickets, fancy, pitted, 20
Shingles, 25
In caddies, tin bulk, 20

GENERAL MERCHANDISE.

WEDNESDAY M., June 3, 1874.

Bags and Bagging are becoming more active as the Wheat season approaches. Some large sales have recently been made. Sugar does not change, and the inference is that present prices cannot be losing ones, at least, to the manufacturers.

Eng. stand, Wh. 12 @ 13 1/2
Cal. Machine, 12 @ 13 1/2
Gilroy E., 12 @ 13 1/2
do, 22x36, do W, 12 @ 14
do, 22x40, do, 14 1/2 @ 15
do, 24x40, 15 @ 16
Flour Sacks, 11 1/2 @ 13 1/2
Stand, Gannies, 7 @ 8
Wool Sacks, 65 @ 67 1/2
Hessian 15-in. gds, 10 @ 11
do 60, 15 @ 16
Burlape, yard, 10 @ 10 1/2
Ass'd B. Frs, 2 1/2 @ 3
do Table do, 2 1/2 @ 3
Jams & Jellies, 3 1/2 @ 4 1/2
Pickles, 3 1/2 @ 4 1/2
do lat boxes, 3 1/2 @ 4 1/2
Ane tralian, 11 @ 12
Coole Bay, 10 @ 11
Bellington Bay, 10 @ 11
Cumberl's, 22 @ 23
do bulk, 15 @ 20
Mt. Diablo, 6 25 @ 25 1/2
Lehigh, 20 @ 22
West Hartley, 11 @ 12
Scotch, 15 @ 16
Scranton, 15 @ 17
Vancouver's Isl., 11 @ 12
Charcoal, 75 @ 80
Coke, 60 @ 65
Sandwich Island, 22 @ 24
Costa Rica, 23 1/2 @ 24
Gnatemala, 23 @ 24
Java, 23 @ 24
Ground in os., 30 @ 32
Chicory, 10 @ 11
Pao, Dry Oak, new, 5 @ 6
do bones, 6 @ 7
Eastern Oak, 6 @ 7
Salmon in bble, 8 50 @ 9 00
do 2 1/2 bles, 50 @ 50
do 2 1/2 cans, 25 @ 25
do 1B cans, 20 @ 25
Do Ool. R. & B., @
Pick, Ool, bbls, 22 @ 20
do 1/2 bbls, 10 @ 10
Boat Sm't, 40 @ 50
Mack's No. 1, 40 @ 50
Extra, 12 @ 15
in kits, 2 1/2 @ 2 1/2
Ex mees, 3 50 @ 4 00
Ex mees, 4 50 @ 5 00
Sm't Herr's, 50 @ 55
Assorted size, 6 1/2 @ 7 1/2
Pacific Glue Co., @
Neat F't No. 1, @
Pure, 1 25 @ 1 25
Castor Oil, No. 1, @ 85
do No. 2, @ 65
Cocoanut, 60 @ 65
Olive Plagniol, 5 00 @
Poseel, 4 75 @
Palm, 3 00 @
do Bagicalapi, @
Linseed, raw, 10 @ 10
do boiled, 12 1/2 @
China nut in cs., @ 85
Sperm, crude, 70 @ 72
do bleached, @ 72
Coast Whales, 40 @ 45
Purified, 40 @ 45
Sperm, 1.40 @ 1.50
Lard, 95 @ 100
Coal, refined Pet, 37 1/2 @ 40
Oleophene, @ 34
Devole's Bril't, 27 @ 29
Long Island, @ 34
Enreks, 37 1/2 @ 40
Devole's Petro, 34 @ 36
Barrel kerosene, @ 26
Olive, 4.00 @ 5.00
Downer Kerosene, @ 45
Gas Light Oil, @ 34

Eng. stand, Wh. 12 @ 13 1/2
Cal. Machine, 12 @ 13 1/2
Gilroy E., 12 @ 13 1/2
do, 22x36, do W, 12 @ 14
do, 22x40, do, 14 1/2 @ 15
do, 24x40, 15 @ 16
Flour Sacks, 11 1/2 @ 13 1/2
Stand, Gannies, 7 @ 8
Wool Sacks, 65 @ 67 1/2
Hessian 15-in. gds, 10 @ 11
do 60, 15 @ 16
Burlape, yard, 10 @ 10 1/2
Ass'd B. Frs, 2 1/2 @ 3
do Table do, 2 1/2 @ 3
Jams & Jellies, 3 1/2 @ 4 1/2
Pickles, 3 1/2 @ 4 1/2
do lat boxes, 3 1/2 @ 4 1/2
Ane tralian, 11 @ 12
Coole Bay, 10 @ 11
Bellington Bay, 10 @ 11
Cumberl's, 22 @ 23
do bulk, 15 @ 20
Mt. Diablo, 6 25 @ 25 1/2
Lehigh, 20 @ 22
West Hartley, 11 @ 12
Scotch, 15 @ 16
Scranton, 15 @ 17
Vancouver's Isl., 11 @ 12
Charcoal, 75 @ 80
Coke, 60 @ 65
Sandwich Island, 22 @ 24
Costa Rica, 23 1/2 @ 24
Gnatemala, 23 @ 24
Java, 23 @ 24
Ground in os., 30 @ 32
Chicory, 10 @ 11
Pao, Dry Oak, new, 5 @ 6
do bones, 6 @ 7
Eastern Oak, 6 @ 7
Salmon in bble, 8 50 @ 9 00
do 2 1/2 bles, 50 @ 50
do 2 1/2 cans, 25 @ 25
do 1B cans, 20 @ 25
Do Ool. R. & B., @
Pick, Ool, bbls, 22 @ 20
do 1/2 bbls, 10 @ 10
Boat Sm't, 40 @ 50
Mack's No. 1, 40 @ 50
Extra, 12 @ 15
in kits, 2 1/2 @ 2 1/2
Ex mees, 3 50 @ 4 00
Ex mees, 4 50 @ 5 00
Sm't Herr's, 50 @ 55
Assorted size, 6 1/2 @ 7 1/2
Pacific Glue Co., @
Neat F't No. 1, @
Pure, 1 25 @ 1 25
Castor Oil, No. 1, @ 85
do No. 2, @ 65
Cocoanut, 60 @ 65
Olive Plagniol, 5 00 @
Poseel, 4 75 @
Palm, 3 00 @
do Bagicalapi, @
Linseed, raw, 10 @ 10
do boiled, 12 1/2 @
China nut in cs., @ 85
Sperm, crude, 70 @ 72
do bleached, @ 72
Coast Whales, 40 @ 45
Purified, 40 @ 45
Sperm, 1.40 @ 1.50
Lard, 95 @ 100
Coal, refined Pet, 37 1/2 @ 40
Oleophene, @ 34
Devole's Bril't, 27 @ 29
Long Island, @ 34
Enreks, 37 1/2 @ 40
Devole's Petro, 34 @ 36
Barrel kerosene, @ 26
Olive, 4.00 @ 5.00
Downer Kerosene, @ 45
Gas Light Oil, @ 34

Eng. stand, Wh. 12 @ 13 1/2
Cal. Machine, 12 @ 13 1/2
Gilroy E., 12 @ 13 1/2
do, 22x36, do W, 12 @ 14
do, 22x40, do, 14 1/2 @ 15
do, 24x40, 15 @ 16
Flour Sacks, 11 1/2 @ 13 1/2
Stand, Gannies, 7 @ 8
Wool Sacks, 65 @ 67 1/2
Hessian 15-in. gds, 10 @ 11
do 60, 15 @ 16
Burlape, yard, 10 @ 10 1/2
Ass'd B. Frs, 2 1/2 @ 3
do Table do, 2 1/2 @ 3
Jams & Jellies, 3 1/2 @ 4 1/2
Pickles, 3 1/2 @ 4 1/2
do lat boxes, 3 1/2 @ 4 1/2
Ane tralian, 11 @ 12
Coole Bay, 10 @ 11
Bellington Bay, 10 @ 11
Cumberl's, 22 @ 23
do bulk, 15 @ 20
Mt. Diablo, 6 25 @ 25 1/2
Lehigh, 20 @ 22
West Hartley, 11 @ 12
Scotch, 15 @ 16
Scranton, 15 @ 17
Vancouver's Isl., 11 @ 12
Charcoal, 75 @ 80
Coke, 60 @ 65
Sandwich Island, 22 @ 24
Costa Rica, 23 1/2 @ 24
Gnatemala, 23 @ 24
Java, 23 @ 24
Ground in os., 30 @ 32
Chicory, 10 @ 11
Pao, Dry Oak, new, 5 @ 6
do bones, 6 @ 7
Eastern Oak, 6 @ 7
Salmon in bble, 8 50 @ 9 00
do 2 1/2 bles, 50 @ 50
do 2 1/2 cans, 25 @ 25
do 1B cans, 20 @ 25
Do Ool. R. & B., @
Pick, Ool, bbls, 22 @ 20
do 1/2 bbls, 10 @ 10
Boat Sm't, 40 @ 50
Mack's No. 1, 40 @ 50
Extra, 12 @ 15
in kits, 2 1/2 @ 2 1/2
Ex mees, 3 50 @ 4 00
Ex mees, 4 50 @ 5 00
Sm't Herr's, 50 @ 55
Assorted size, 6 1/2 @ 7 1/2
Pacific Glue Co., @
Neat F't No. 1, @
Pure, 1 25 @ 1 25
Castor Oil, No. 1, @ 85
do No. 2, @ 65
Cocoanut, 60 @ 65
Olive Plagniol, 5 00 @
Poseel, 4 75 @
Palm, 3 00 @
do Bagicalapi, @
Linseed, raw, 10 @ 10
do boiled, 12 1/2 @
China nut in cs., @ 85
Sperm, crude, 70 @ 72
do bleached, @ 72
Coast Whales, 40 @ 45
Purified, 40 @ 45
Sperm, 1.40 @ 1.50
Lard, 95 @ 100
Coal, refined Pet, 37 1/2 @ 40
Oleophene, @ 34
Devole's Bril't, 27 @ 29
Long Island, @ 34
Enreks, 37 1/2 @ 40
Devole's Petro, 34 @ 36
Barrel kerosene, @ 26
Olive, 4.00 @ 5.00
Downer Kerosene, @ 45
Gas Light Oil, @ 34

Eng. stand, Wh. 12 @ 13 1/2
Cal. Machine, 12 @ 13 1/2
Gilroy E., 12 @ 13 1/2
do, 22x36, do W, 12 @ 14
do, 22x40, do, 14 1/2

Stock Notices.

N. GILMORE
IMPORTER
AND BREEDER



SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.
Address N. GILMORE,
El Dorado, El Dorado County, Cal.

Dr. E. J. FRASER, Homoeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No 305 Kearny street, northwest corner of Bush. 6v7-3m



A. G. STONESIFER,
BREEDER OF

Pure Blooded French Merino Sheep,

Has for sale a choice lot of Rame and Ewes, on the Orlintha Ranch, six miles west of Hill's Ferry, Stanislaus County, Cal. 22v7-3m



We respectfully invite the attention of wool growers to our fine stock of Cotswold Sheep and Angora Goats. We have 200 head of Pure Breed Angora to select from; we have some of the finest Goats in America; we guarantee everything we sell to be as represented; our prices are as low as any in America for the same grade of stock. Call and see, or address,

LANDRUM & RODGERS,
Watsonville, Cal.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Nile Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.
Also a few well-bred young Bulls of the Durham blood. 12v5-3m

Cotswold Bucks For Sale.

About three hundred Bucks, half and three-quarter bred Cotswold, and a few Thoroughbreds, for sale at Low Prices.

REFERENCES:

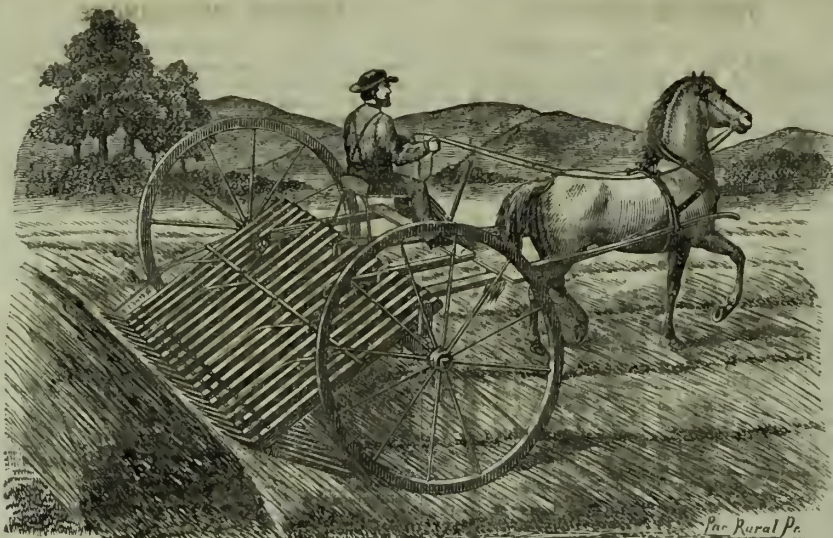
MOODY & FARISH, San Francisco.
SHIPPEE, McKEE & CO., Stockton.

Orders left with the latter firm will receive prompt attention.

A. VROMAN,

22v7-41

Jenny Lind, Calaveras Co., Cal.



BONNEY'S PATENT EXTENSION TOOTHED HAY RAKE.

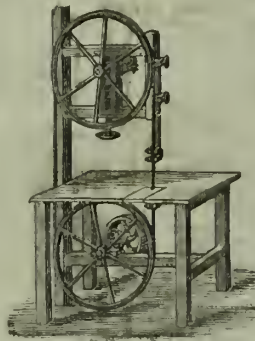
The only rake that gathers all the hay upon rough as well as smooth ground, free from dirt and dust, and does not roll or wad it together. The teeth can be used any length, and replaced without delay when worn out.

PATENT IMPROVED BAND SAWING MACHINE.

EQUAL TO THE BEST EASTERN, FOR LESS THAN HALF THE COST.

PATENT ADJUSTABLE GRAIN LIFTER.

The best in use, light, strong and durable. Can be run at any inclination to the ground, as seen at D in cut. Parties can save additional the cost of a set in one day's run of Header.



Also, HEADER APRONS, GRAIN BELTS and FARMING IMPLEMENTS Generally

O. BONNEY, Jr., Manufacturer,

No. 221 Mission Street,

14v7-1am-3m

SAN FRANCISCO.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.

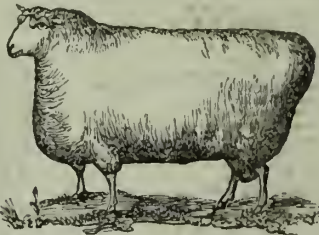


A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

WEDNESDAY.

WEDNESDAY.....June 17, 1874.

AT 11 O'CLOCK A. M.,

—AT—

M. L. Brittan's Ranch, Redwood City.



WE WILL SELL,

By order of M. L. Brittan,



HORSES.

73 head of Hambletonian, Clydesdale and Graded Horses, and Thoroughbred Brood Mare.

CHOICE DAIRY STOCK.

75 head of Dairy Cows, High Grade Durham Bulls, Heifers and Steers.

The train will be run from San Jose Depot, Market street, and return immediately after the sale. All persons wishing to attend the sale will apply for tickets and catalogues at our salesroom, or at the depot on the morning of the sale. Train leaves at 8:40 A. M.

CREGO & BOWLEY,

m30-3t

Auctioneers.

Kentucky Sales of Short-Horn Cattle for 1874.

	No. Head.
Hughes & Richardson, Lexington, July 22.....	50
Wm. Warfield & Co., Lexington, July 28.....	140
B. F. & A. Vannmeter, Winchester, July 24.....	80
J. V. Grigsby, Winchester, July 25.....	50
L. O. Robinson & Co., Winchester, July 27.....	40
Warnock & Megibben, Cynthiana, July 28.....	80
F. J. Barbec, Paris, July 29.....	60
C. M. Clay Jr., Paris, July 30.....	90
J. Scott & Co., Paris, July 31.....	70
J. Snodgrass, Newtown, Aug. 1.....	40

The above sales comprise all of the most popular families of Short-Horn Cattle in America, and many imported animals.

Apply to the above addressees for their Catalogues. m30-5w

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms. WILLIAM L. OVERHISER, Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,

San Rafael, Marin Co., Cal.



FOR SALE.

25 full blooded Spanish Merino Bucks, one and two years old, from stock imported from Addison county, Vermont, in 1872. Call and see, or address, B. F. WATKINS, Santa Clara, Cal. m2-2m

JERSEY CATTLE.

A few head of very choice Jersey Cows—Heifers and Bull Calves—for sale. Apply to R. G. SNEATH, Menlo Park. 15v7-3m

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO.,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers,

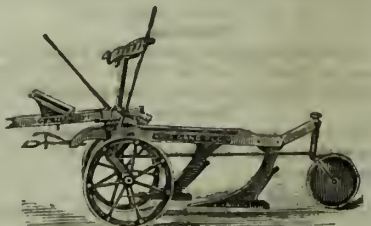


Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with Dropper.
World Reapers, and Mowers with Dropper and Hand Rakes—side delivery.
Clipper Mowers and Reapers, with Dropper.
Cayuga Chief Mowers and Reapers.
Sulky Rakes—Furst & Bradley's, and Bay State.
Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps; Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators,
Mortise Head Hay Rake, Scythes and Snaths,
Soule, Ketsinger & Co.'s First-Class Farming Tools,
Gold Medal Forks, Hoes and Rakes,
Batchellor's Forks,
Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,
Road Scrapers,
Canal and Garden Barrows,
Hay Cutters—Burdick's
National, Belcher & Taylor's
Self-Sharpener and Hide Roller.
Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.

THE ORIGINAL & RELIABLE DOUBLE MOTION



ETNA

MOWING & REAPING MACHINES

MADE FOR

TREADWELL & CO. SAN FRANCISCO

Sole Proprietors

for the Pacific Coast

Hoadley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our illustrated Price List, to TREADWELL & Co., San Francisco.

MATTESON & WILLIAMSON'S

AMERICAN CHIEF



GANG PLOW.

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m **MATTESON & WILLIAMSON,** Stockton, Cal.

THE CELEBRATED MITCHELL WAGON



SOLD BY

MILLS & EVANS

508 MARKET ST.

15v7-3m

O. CREGO. S. O. BOWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffey, Camden, New Jersey; Helfield & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harnesses, of the most celebrated makers:

C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, San Francisco.

BYRON JACKSON,

MANUFACTURER OF

Patent Self-Feeder & Elevator Attachment

For Separators, at the Yolo Planing Mill and Machine Shop, Woodland, Yolo County, Cal.

This improvement was patented in 1867 and in 1870. For the past two years I have been introducing it to the public with great success. It is pronounced by all that have tried it to be the greatest labor saving invention of the age. No Thresher will be without it after witnessing its operation. It saves all the hard work of feeding and injury to health, and one-half the labor required to supply the grain from the stacks. It will pay for itself in less than thirty days, besides doing better work. For particulars send for circular; it gives all necessary information, besides the best plan for using the Horse Forks ever adopted. Entire satisfaction guaranteed if properly used.

21v7-3m

WATERHOUSE & LESTER,

IMPORTERS OF

WAGON AND CARRIAGE MATERIAL,

BODIES, CARRIAGE PARTS,

Wheels, Axles, Springs & Carriage Hardware

SOLE AGENTS FOR THE PACIFIC COAST FOR

Clarke's Adjustable Phaeton Sunshades.

Send for price list.

ALSO AGENTS FOR

Woolsey's Patent Wheels,

The best and handsomest Wheel made, having great strength and a fine finish. There is no other wheel that has the metallic-shouldered band; and it can be repaired as easily as the common wood wheel.

Send for illustrated circular. Address

WATERHOUSE & LESTER,

122 and 124 Market street, and } SAN FRANCISCO.
19 and 21 California street, }
17, 19 and 21 Seventh street, } SACRAMENTO.
21v7-3m

H. C. SHAW,

STOCKTON, CAL.

Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros." General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Geared Headers.

The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW, 14v7-3m Box 95, Stockton, Cal.

WM. ZARTMAN & CO.,

CARRIAGE AND WAGON MAKERS,

COR. ENGLISH & HOWARD STS., PETALUMA.

Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate.

SPECIAL RATES TO GRANGERS. 12v7-3m

The "Planet" Double-wheel Hoe will

work Onions, Roots, Garden Crops, Cuttings, Seedlings, &c., faster, better and six times faster than the hand hoe. Circulars Free. S. L. ALLEN & CO. 119 S. 4th St., Phila., Pa. A LIVE AGENT WANTED IN EVERY TOWN!

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID & ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot-Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

The STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kane's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Blueing, Harness Soap, Thomas' Cool, Water Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Colognes, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street,

16v7-3m SAN FRANCISCO, CAL.

TIPTON & BURTT'S

MEDICINAL

SHEEP PREPARATION,

Warranted FREE FROM ALL POISON. A sure and positive cure for SCAB, TICKS and LICE, and a sure promotion of the growth of the wool. It has been used in Tehama County for the past two years, with most gratifying results, and we have the pleasure of referring to the following gentlemen as to its merits, viz.: H. A. Rayson, Jas. Gooch & Bro., J. W. Montgomery, J. Eby, Curtiss & Brown, H. Bosauka, Jos. Cone, J. W. Gate & Sons.

It is a liquid and put up ready for use in 2½ gallon tins, four tins in a case.

WHITTIER, FULLER & CO., Sole Ag'ts,

21 Front street.....SAN FRANCISCO.
28 K street.....SACRAMENTO.
18v7-3m

THE CELEBRATED NEW DRAW-FEED

WHEELER & WILSON

SEWING MACHINES

Are without exception the most desirable for family use. They are the LIGHTS' RUNNING Machine in the market, and sew from the thinnest to the thickest material with equal facility.

These machines have, since their invention, stood at the head of the list in public favor, and the recent improvements to them have increased their superiority still more. Buy no Sewing Machine until you have tried these.

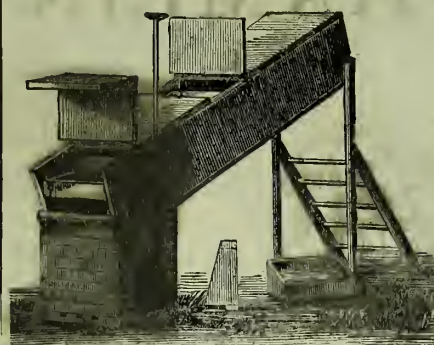
WHEELER & WILSON MAN'G CO.

E. W. HARRAL, Agent,

20v7-4m-15p 427 Montgomery street, S. F.

PURCHASERS please say advertised in Rural Press.

Ryder's American Fruit Drier.



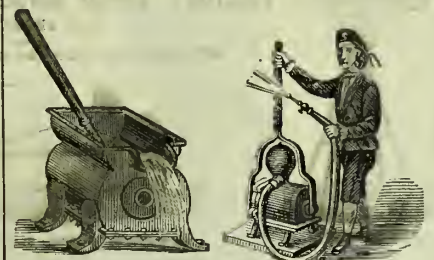
This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent,

306 California street, San Francisco

THE CELEBRATED

SLUTHOUR PUMP,



Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING AND THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from ¼ to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.

Agents for Eastern Manufacturers, 306 California street, San Francisco.

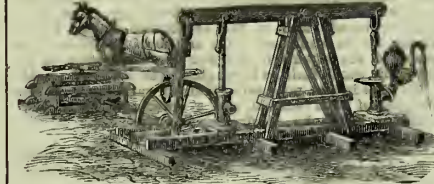
VINE AND FRUIT GROWERS,

TO RAISE LARGE CROPS

YOU MUST IRRIGATE.

To irrigate successfully, you must have the power that does not give out when the wind fails.

Laufkotter Bros. & Churchman's Horse-Power,



(PATENTED FEBRUARY 13TH, 1872.)

Never fails to supply more water than four or five Windmills, even supposing you had all the wind you want. It is also suitable for running light machinery, such as Barley Crackers, Corn Shellers, Fanning Mills, Grain Separators, or for Sawing Wood. They are never failing, cannot get out of order, easily worked, substantial, and always give satisfaction wherever they have been used. One horse can easily work two 6-inch pumps with a continuous flow of water. Force Pumps, from 3,000 to 10,000 gallons per hour.

WINDMILLS of all kinds manufactured to order. Wells Bored, Windmills and Horse-Powers set in any part of the State, and repairing of all kinds done.

Manufactured and for sale by

LAUFKOTTER BROS.,

20v7-2m-3m Cor. J and 10th Sts., Sacramento.

THE ALDEN

Fruit Preserving Company

OF CALIFORNIA.

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.

W. M. WHERRY, Vice-President.

FRANK PYLE, Sec'y and Sup't.

BANK OF CALIFORNIA, Treasurer.

11v7-6m

H. K. CUMMINGS,

1858.

H. H. RALSTON,

1878.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have interests that will conflict with those of the producer.

4v23-1y

LANDS & HOMES FOR SALE

FOR SALE.

A FIRST-CLASS DAIRY FARM & STOCK RANCH,

Situated in Lake county, twelve miles from the flourishing town of Lower Lake, immediately on the road from Lower Lake to Bartlett Springs; containing 880 acres of land, 400 acres of which is choice grain land, 80 acres of the best natural clover land, and the balance good pasture land, all of it under good fence and divided in seven divisions; abundance of water in every part of it, also well timbered. Title perfect—U. S. patent. This ranch is situated in the healthiest part of California, and has been used as a dairy ranch, where the celebrated Durst's Clear Lake cheese has been manufactured for a number of years, and is well adapted for that purpose, as also for grain, sheep and cattle raising. There is on the place a splendid dwelling-house, only built two years; two large barns, cheese and milk houses, other out-houses and corrals, and water very handy in abundance. Price, \$10,000; only one-third of the purchase money required to be paid down, balance can stand to suit purchaser at a reasonable rate of interest. There is also for sale 60 first-class dairy cows, all the dairy and farming implements, harness, etc., at a reasonable price. For further particulars inquire of J. DURST, on the premises; JOS. GETZ & BROS., Lower Lake; or GETZ BROS. & CO., 513 Front St., San Francisco. m23-1m

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,

542 MARKET STREET,

N. E. Cor. Montgomery.

ap25-tf

RANCH FOR SALE.

BY VIRTUE OF AN ORDER OF the Probate Court of the city and county of San Francisco, the undersigned will sell the Ranch of the Estate of H. Rush, deceased, in Solano county, consisting of about 4,000 acres of farming land, bordered by 1,200 acres of tule land, three-fourths of entire tract inclosed by Suisun Slough, having landing on same for vessels from San Francisco. Terms reasonable. For particulars inquire of H. F. CRANE, 729 Montgomery street, or D. BALLARD, 106 Davis street, San Francisco. SARAH E. RUSH, Administratrix. m9-1m

RARE CHANCE.

Fruit Garden and Homestead for Sale.

About 30 miles from Stockton, a fine Fruit Garden of 2½ acres of land, with good house of six rooms. Garden contains about 200 Fruit Trees of choice kinds, such as Peach, Pear, Plum, Pomegranate, Blue and White Fig, Black Limes, Apples, Grapes and Orange, Almond and Black Walnut. A nice place and an abundant harvest of fruit. Good market. A rare chance to step into a good homestead and profitable business. Title perfect. Warrantee deed. Price, \$1,800. For further particulars, inquire at this office. 22v7-5t

FARM FOR SALE.

3165 Acres ¼ mile from the town of Windsor; 1 mile from depot; 2½ miles from the famous Russian river. The place is beautifully situated; and all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and out-houses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2500 cords of black oak timber; and wood brings \$3 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States Patent. For particulars apply to JOSEPH DIMMICK, P. O. Box 22 Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap14-tf

DAIRY RANCH FOR SALE,

Near San Luis Obispo, well stocked and fenced, with fine improvements. Plenty of wood and water.

Apply to **T. H. HATCH & CO.,**

320 Front street, San Francisco.

Or, R. M. PRESTON, Old Creek, San Luis Obispo.

20v7-3m

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,

ap18-tf 329 Montgomery street, San Francisco.

FOR SALE.

100 Acres of Good Land,

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-tf

P. H. SUMNER.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islals Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

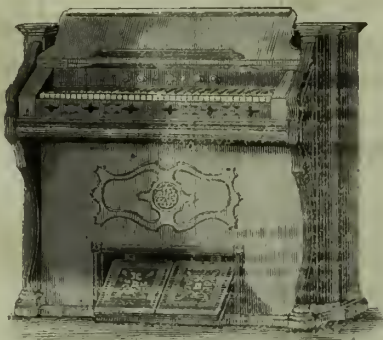
SMALL FARM IN SONOMA FOR SALE.—A farm of 70 acres, handsomely improved, with orchard and vineyard, and 25 acres in wheat, plenty of wood and water, etc., situated within one and a half miles of the town of Sonoma, and same distance from the steamboat landing; price moderate; terms easy. Apply to BERRY & OAPP, 418 Montgomery street, Real Estate Agents. 20v7-1m

MASON & HAMLIN ORGAN COMPANY,

RECEIVED TWO MEDALS AND
DIPLOMA OF HONOR

—AT—
VIENNA.

NO OTHER American Organ
deemed worthy of even a diploma.



SEND FOR CATALOGUE

NEW STYLE.

PRICES FROM \$65 TO \$750.

Being 25 to 50 per cent. lower than
prices asked for any other Organ
in the country.

KOHLER, CHASE & CO., General Agents,

633 and 635 Clay Street,

SAN FRANCISCO.

19v7-1am-3m-16p

DEWEY & CO.,

American and Foreign

Patent Agents.

No. 338 Montgomery St.
SAN FRANCISCO.

Patents Obtained Promptly.
Caveats Filed Expeditionly.
Patent Reissues Taken Out.
Patents Secured in Foreign Lands.
Assignments Made and Recorded in Legal Form.
Copies of Patents and Assignments Procured.
Examinations of Patents made here and at
Washington.
Examinations made of Assignments Recorded
in Washington.
Examinations Ordered and Reported by TELE-
GRAPH.
Interferences Prosecuted.
Opinions Rendered regarding the Validity of
Patents and Assignments.
Rejected Cases taken up and Patents Obtained.
Every Legitimate Branch of Patent Agency Busi-
ness promptly and thoroughly conducted.
SEND FOR CIRCULAR.

THE END-SHAKE THRESHER.—The following letter is
from Wm. P. Harkney, Esq., Sheriff of Sutter county,
referring to the value of the Lanfberg End-Shake
Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.
MESSRS. TREADWELL & CO., San Francisco.—Gentlemen:
In regard to the Lanfberg End-Shake Shoe, which I
bought of you last season, I will say I have given it a
thorough trial, and if I could not get another I would
not take One Thousand Dollars for it. I used it
throughout the season on a Russell Separator, which I
had run previously with a side-shake, and it saved me
a great deal of trouble and much loss. It saves all the
grain. I consider it the best and most valuable im-
provement on the threshing machine yet brought out.
It is absolutely indispensable to the economical working
of a good thrasher. Wm. P. HARKNEY.

13v7-3m

IT MAY be that the principle of some other churns is
as good as the "Blanchard," but it is certain that no
other is made of as good material or as faithfully.
"Get the Best." They are made only by Porter Blis-
chard's Sons, Concord, N. H.

TREADWELL & CO.

We certify that the partnership of Treadwell & Co.,
doing business in San Francisco, California, is composed
of Leonard L. Treadwell and James F. Place, who both
reside in the city and county of San Francisco, and
William O. M. Berry, who resides in Oakland, Alameda
county, California.

San Francisco, Cal., May 26th, 1874.
LEONARD L. TREADWELL,
JAS. F. PLACE,
WM. O. M. BERRY.

STATE OF CALIFORNIA,
CITY AND COUNTY OF SAN FRANCISCO.

On this May 27th, 1874, before me Henry C. Blake, a
Notary Public, in and for said city and county, personally
appeared Leonard L. Treadwell, James F. Place and
William O. M. Berry, known to me to be the per-
sons whose names are subscribed to the within instru-
ment, and acknowledged to me that they executed the
same.

In witness whereof, I have hereunto set my hand
and affixed my official seal, the day and year in this
certificate first above written.

HENRY C. BLAKE, Notary Public.

California Farmers' Mutual Fire Insurance Association.

A meeting of the stockholders of the California Farm-
ers' Mutual Fire Insurance Association will be held
at the office of the Secretary, at 320 California street,
room 12, on Saturday, June 20, at 2 o'clock p. m., to
adopt a code of By-Laws for the government of said
association. By order of the acting President,
J. D. BLANCHARD.

FARMERS WANTING TO HIRE AN
Engine and Engineer for the season, for threshing, can
hear of one by calling at, or addressing,
J. W. RILEY,
No. 54 Third street, San Francisco.

For the very best Photographs go to BRAD-
LEY & RULOFSON'S GALLERY, with an "Elevator"
429 Montgomery street, San Francisco. 2v7-6m

Patent, First Premium Windmills & Horse Powers,

W. I. TUSTIN, Patentee.

Pioneer and Largest Manufacturer of Machinery (in this
line) on the Pacific Coast.

FACTORY, Corner Market and Beale Streets,
SAN FRANCISCO.

Send for Circular and Price List.



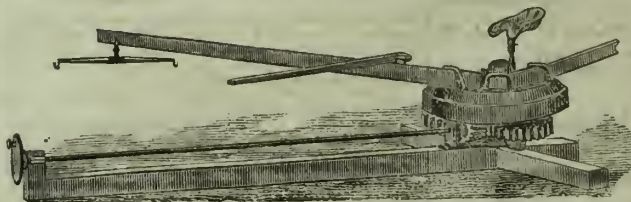
ECONOMY.



ECONOMY-For One or Two Horses.



EUREKA.



EAGLE-For One or Two Horses.

coast, and are in general use along their line, giving perfect satisfaction, which can be proved by reference.

U. S. LIVE STOCK EXCHANGE,
Cor. 5th and Bryant Sts., S. F.

For Sale, a number of very choice thoroughbred
DURHAM COWS, HEIFERS AND BULLS, raised in
California. Also the largest number of the best and
most valuable thoroughbred Durham Bulls ever brought
to this State, just received from Kentucky. Are all of
English breeds and of the celebrated Bates' blood,
which, for its combined milk and beef qualities, has
attracted the attention and won the admiration of re-
spectable Stock Raisers throughout the civilized world.
We have in our possession printed catalogues of the
pedigree of each animal, and a certificate from Gov.
Leslie of Kentucky, confirming the correctness of said
pedigree.

Also a large number of Berkshire Pigs from Kentucky.
For farmers and stockraisers this is a rare oppor-
tunity. Address,
DAWSON & BANCROFT,
449 5th street, S. F.

SEEDS. PLANTS.

OF EVERY VARIETY.

Fresh and reliable, such as experience and care only
can select.

GRASS AND CLOVER SEEDS, KENTUCKY BLUE
GRASS, HUNGARIAN, ORCHARD, ITALIAN RYE,
RED TOP, TIMOTHY, MESQUIT, SWEET VERNAL,
CHOICE CALIFORNIA ALFALFA, WHITE CLOVER,
RED CLOVER, ETC.

Also, RAMIE, JUTE AND TOBACCO SEEDS; to-
gether with a fine and complete collection of TREE
SEEDS, AUSTRALIAN BLUE GUM, SEQUOIA GIGAN-
TEA, PINUS INSIGNIS, ETC.

For Sale, wholesale or retail, by

B. F. WELLINGTON,

(Successor to E. E. Moore).

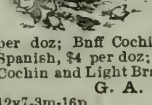
425 Washington St., San Francisco.

22v7-1y

EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.



Light and Dark Brahmas, \$3
per doz; Buff Cochins, \$3 per doz; White Faced Black
Spanish, \$4 per doz; White Leghorns, \$5 per doz. Buff
Cochin and Light Brahma Fowls for sale. Address:
G. A. DEAN, Pacific Straw Works,
335 Bush St., San Francisco.
12v7-3m-16p

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas
and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.;
Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs
carefully packed and warranted fresh. Chickens for
sale. No Eggs sent C. O. D. P. J. PHILIPS,
11v7-1m 608 Clay street, S. F.

W. L. CHURCH, OUR FORMER AGENT,
is requested to call at our office, or send his P. O. ad-
dress, immediately.
DEWEY & CO.,
338 Montgomery street.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock;
one of the oldest and best yards of pure
bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure White-faced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California
ALSO, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-1f-16p2



BRONZE TURKEYS,

Largest and Finest Collection
on the Pacific Coast.

EMDEN GEES.

58 pounds to the pair, at maturity.

Eggs for Sale Now.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS,
COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best.
Subscription \$1.00 a year. Send stamp for copy. Agents
wanted.

Address: M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by
rail or stage. 17v7-2m-16p

SOUTH DOWN RAMS FOR SALE.

The subscriber offers for sale in this city Six FULL
BLOODED SOUTH DOWN RAMS, lambing in February
and March last. Weight of oldest not less than 150 lbs.
Will be sold at a bargain, and may be seen at the cor-
ner of Howard and Twentieth streets, directly opposite
my residence.

RUFUS ROWE.

San Francisco, June 2d, 1874.

U. S. LIVE STOCK EXCHANGE,

CORNER OF FIFTH AND BRYANT STREETS, S. F.

Cattle, Sheep, Milch Cows, Hogs and Horses sold on
commission or bought on farm for cash.

Our accommodations for Live Stock are the most con-
venient, complete and extensive in the city or State.
Thoroughbred Durham Cows wanted. Address,
DAWSON & BANCROFT, 449 5th St., S. F.

Special rates to members of the Grange. m9

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,
Agricultural,
and Flower Seeds.
Containing all the BEST varieties, and selected with
great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER,
WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.
GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p SAN FRANCISCO.

IMPROVE YOUR POULTRY,

It Costs No More to Keep Good Fowls than
Poor Ones!



OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

A few trios of imported Dark Brahmas, of the cele-
brated Black Prince strain, for sale at \$30 per trio.
Also, one trio imported Golden Polish, at \$30.
For further information send stamp for Illustrated
Circular, containing a full description of all the best
known and most profitable Fowls in the world, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco.

9v7-1f

W. M. BRANDON. JACOB W. ROGERS

BRANDON & ROGERS,

California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO,

Buy and sell unimproved lands, farms and city property
throughout the State of California. Farms to exchange
for city property and city property for farms. Eastern
property to exchange for California property. Tracts
of land for sale. Money invested for other parties
on advantageous terms. Long experience in the business
and extensive acquaintance in California and the Eastern
States, enable us to effect speedy and satisfactory sales and
exchanges. 20v6-1y-16p

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of
wine this year. Climate mild. Situated at the northern
base of Mount Diablo. Good Brandy Distillery; Wine
Barrels; Wine Press; Large Concrete Wine Cellar. Good
Spring of living water handy. Good reasons given for
selling. Age of Vines from eight to ten years. A choice
variety of Vines. A large quantity of fine grape land
can be bought adjoining the above. The whole to be
sold at a great bargain. Apply to
B. F. CLAYTON, San Jose.

Or C. J. CLAYTON,

Clayton, Contra Costa Co., Cal.

10v7-6m

PACIFIC RURAL PRESS

Volume VII.]

SAN FRANCISCO, SATURDAY, JUNE 13, 1874.

[Number 24.]

Discontent in the Country.

One of the greatest blunders that social economists (American especially) commit, is their determined endeavor to trace all the incentives to action, and the cause of all the uneasiness and desire for change, to the root of all evil—money. Those who indulge in this sweeping conclusion, and resort to this short cut to the varied knowledge needed in doing justice to this subject, betray a species of the sordidness which they so deplore, and an inability to fathom the desires and impulses of the public heart, which we may safely gauge by the beatings of our own.

But although gold lies near the surface here, great injustice is done to human nature by supposing that it gives a tinge to all that is found. And even where the desire of money is the ruling passion, there is often—very often—a pure motive that prompts the wish, and a worthy object for which the money is intended, all of which is left out of sight by those who manifest as great an anxiety to find gold, and nothing but gold, in the human heart, as society in general is supposed to exhibit in its search after the metal itself. But perhaps it is best that these purer motives and higher objects should not be brought forward and exposed to the public gaze; still we may acknowledge their existence and give poor human nature all the credit it deserves. For not only does the popular view, which considers money as the only power that sways the minds and hearts of men, do them injustice, but it forms an unsound basis upon which schemes for their amelioration are founded. The failure of these schemes is attributable to a large extent, no doubt, to this cause. This great overshadowing desire and a huddle of the grosser wants that spring from it are all that are acknowledged by those who concern themselves with the present condition and future needs of society.

This failing to provide for other wants, and, in fact, the total ignorance of their existence, is operating upon society in the country to its serious detriment. The city is, undoubtedly, suffering the consequences of the same blunder to full as great an extent, but as our attention has been more particularly given to matters in the country, we will attempt to trace the latter out here. The disquietude and longing for city life so manifest among the young men of the country has attracted general notice and is justly deplored. But denouncing and deploring it will not effect a cure; and as long as the sources of this dissatisfaction are undiscovered, the ridicule and censure that are bestowed upon it are powerless; falling wide of the mark. And the efforts that are made to create a disrelish for city life (sometimes verging on misrepresentation and abuse), are alike powerless for good, so long as the real attractions that draw people thither are misunderstood.

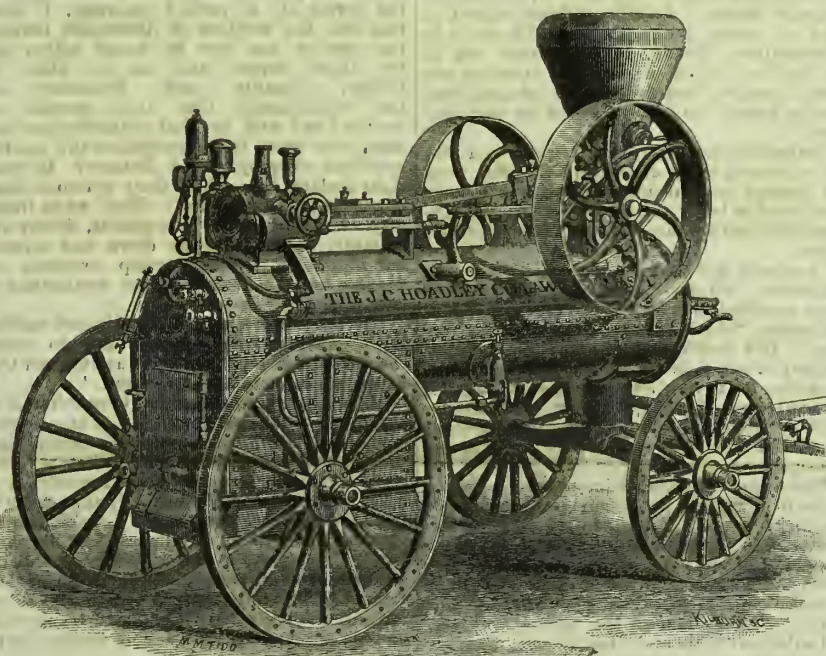
To attribute the prevailing distaste for country life to the haste to be rich is incorrect and unfair; and the idea that the young people of the country are impelled by a desire to plunge into the vices and follies of the city is only applicable to a condition which we are by no means justified in assigning to this class. If this appetite is developed to the extent which some have asserted, there is no need of the subjects of it going to the city to finish their course, for they will find nothing there to add to their degradation. If such were the desires of the young people in the country they would spread desolation wherever they went, and the city would suffer most by the acquaintance.

But the case has been imperfectly understood, and unfairly presented to the public. Let any person who has associated with the class alluded to judge from what he has seen and heard, and the decision will be such as will confer credit rather than disgrace upon the parties; and instead of throwing an ominous cloud over the future it will invest it with a hopeful light. For the discontent which is so palpable would be found to have its origin in tastes and appetites refining and healthful in their nature, which, being deprived of their proper gratification, create a feeling which is rather a morbid disquietude than a fixed desire. It is a want which is felt, though it cannot be expressed.

And not recognizing, or failing to supply, these undefined and inexpressible wants, has

not only deprived the subjects of them of these proper gratifications, but has entailed the most serious consequences upon the world. During the period of childhood, when the want of speech deprives it of the power of making any other want known, these are anticipated and provided for by the parents and nurse; but every period of life and every stage in human progress brings with it incipient wants and undefined desires. Where the young are the sub-

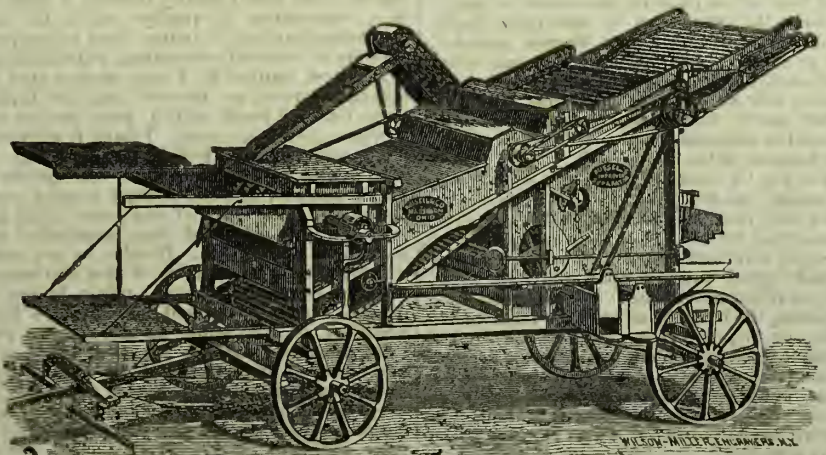
jects of these desires, the best treatment which they receive goes no farther than toleration; a patient waiting for them to outgrow the condition; but the approved method is to bestow ridicule and censure upon them at every turn—in consequence of which their tastes become perverted; and the emotions and affections are dwarfed or assume unnatural proportions. But where society at large is the subject, embrac-



PORTABLE THRESHING ENGINE.

needed to make home really attractive. But the simple acknowledgment of this want or the willingness to provide for it will not effect an immediate cure; time is needed to replace what has been lost. And, more than this, the gentle affections and warm sympathies that coarse ridicule, studied satire and stern reprimand have endeavored to crush out of the young heart, must be countenanced and encouraged.

needed to make home really attractive. But the simple acknowledgment of this want or the willingness to provide for it will not effect an immediate cure; time is needed to replace what has been lost. And, more than this, the gentle affections and warm sympathies that coarse ridicule, studied satire and stern reprimand have endeavored to crush out of the young heart, must be countenanced and encouraged.



THE RUSSELL SEPARATOR.

ing, as it evidently does at times, the whole human family, and where statesmen and social economists fail to comprehend the situation or neglect to provide for it, the result is often anarchy and revolution.

The discontent which is so palpably increasing in the country is of this deep-seated character. But the farmers should not give up to the impression that their homes alone are afflicted with this disease, for it is not confined to any locality or to any grade of society. They should rather congratulate themselves on having at their disposal the means by which this evil may be eradicated.

It has been treated in a manner too superficial. The young people who manifest this desire to leave the country cannot be stopped

Society in the country is more controllable than in the city, and if the people will consider its present state as being produced by a chronic social disease, and treat it accordingly, they may bring it up to a condition that cities will be glad to pattern after. But any bugbear exhibited to prevent an incontinence toward the city, or any pecuniary inducements that are held out to tempt new comers, or to restrain the present population, will effect only a temporary relief.

THERE are eleven woolen mills on the Pacific coast—eight in California and three in Oregon. They have in the aggregate 28,840 spindles and 232 broad looms.

The Russell Separator and Engine.

A few weeks since we gave the readers of the RURAL a description of the Improved Hoadley Engine imported and sold by Messrs. Treadwell & Co., of this city, and this week we lay before them two cuts showing the Engine and the Russell Separator mounted and ready for the field. We have not the space this week for a detailed description of the improvements on the Hoadley, and would refer those of our readers who are interested in the matter to No. 20 of the present volume of the RURAL PRESS. We wish, however, to again call attention to the claims of the inventor and the selling agents, who guarantee a saving of 50 per cent. in fuel and 20 per cent. in weight over engines of equal power of the old style.

The running gear and manner of mounting are of the finest character. The hind axle is bent, and instead of straining the boiler, acts as an actual support, and is attached without the use of a single bolt. The forward axle is entirely of iron, and by a novel arrangement of the bolster can be turned very short and with but a trifling amount of friction. The bolster is hollow and contains several springs, thereby masterly reducing the jar on the engine when traveling over a rough road.

It seems almost superfluous to say anything commendatory of so well known a machine as the Russell Separator, which has been so long and successfully used on this coast. Of some of the later improvements, however, we wish to say a few words. The greatest of all is the "Laufenberg End Shake Shoe." By this valuable invention the capacity of the machine is very much increased, and the grain is so cleaned as to be marketable as it comes from the spout, thereby saving the farmer the trouble and expense of running it through a fan mill.

The agents inform us that from the testimony of all farmers and threshers who have used the Laufenberg End Shake Shoe these facts are proved. First—There is no jar created on the machine or separator using the End Shake. Second—There being no stakes used in putting down the separator for work, it requires but one-half the time for setting. Third—It requires less power to run the separator in consequence of there being no opposite motion or jar to overcome. Fourth—It cleans the grain better and faster, the sieves seldom if ever clogging, even in damp weather. Fifth—There is more space or room on the sieves for cleaning, consequently more capacity for the grain. Sixth—The tailings being carried by an auger evenly into the elevator, it will not clog or be over-run as in the old shoe. These facts will commend themselves to every one familiar with the requisites of a good separator, and we would recommend parties about to purchase, to see these machines at Messrs. Treadwell & Co's before doing so.

Reports From the Hay Crop.

According to the limited accounts thus far received from the hay-crop now being harvested, the yield is quite variable as to locality. Reports from certain quarters, especially in some portions of the foothills, are extremely flattering; while in some of the valleys the crop is described as being rather light. On the whole it would seem as though we may safely depend on an average crop throughout the State. But it would be well perhaps for both the producers and consumers of hay (we mean, of course, the owners of the consumers) to bear in mind that the country is more thoroughly cleared of old hay than is usual at this season. This is the case to a remarkable degree at the East. The hay crop of 1873 was moderately good throughout the whole country; but the winter in all parts, especially at the East, has been an unusually long one. Feeding commenced very early and continued late. Mid-winter, it is true, was quite mild; but this does not benefit the stock-keepers of the East; for cattle must be fed just the same. In fact, farmers declare that cattle consume more feed in these "broken" winters than in colder seasons, if the weather be of a uniform character.

CORRESPONDENCE.

Harrowing Small Grain.

EDITORS PRESS:—Does it pay to harrow small grain in the spring, after the grain is up four or five inches high? This question is now agitating the public mind, not only in California, but all over the United States; and as it, together with other things, is of value to farmers, I beg a little space in your paper for one practical communication.

The wheat growers of North America, who have large bodies of good land, well adapted to wheat, are in a better condition to rise to fortune, by prudent management, and an intelligent cultivation of the soil, than any other class of farmers. I am satisfied that our present mode of farming, in California, is not calculated to produce the greatest amount of small grain. Corn is planted and cultivated with plows and hoes three or four times in one season, with satisfactory results; but grounds, for small grains, are plowed but once, and never harrowed until the grain is sown, and then the work is done quite superficially. Our straw is burned, and good manure encumbers our barn yards; and lands in California, that once produced 40 to 60 bushels per acre, now only produce 20 to 30 bushels.

Our farmers must rise to a better management of our soil. There are three things, partly neglected in this State, that stand inseparably connected with our prosperity as farmers. First, the necessity of harrowing summer fallowed grounds as soon as they are plowed in the spring. A large majority of our red and adobe land turns up before the plow in large clods; and if the intention of farmers is to expose the soil to the sun and air, then a much larger surface would be exposed by thoroughly pulverizing these clods. The ground should be thoroughly harrowed as fast as it is plowed. It is impossible to pulverize our soil without a degree of moisture, and farmers, waiting for the fall showers to dampen the clods, are caught, as they were this year, by the beginning of the wet season with the first showers, which continue through the winter and spring, and entirely defeat their plans of farming.

We lost a very large breadth of summer fallowed lands this year, because the clods were too large to be pulverized by the harrow until the fall showers; and when the fall showers set in they proved to be the beginning of our wet season, and continued through the winter. If farmers would run their harrows after their plows in the spring, and prepare their lands, so that one harrowing would do for their grain in the fall, we need not loose one acre of our summer fallowed lands.

Our summer fallow is subject to the same conditions as our volunteer; there is no more danger of them drying out; and we generally raise good volunteer crops.

Second—Subsoiling will pay well on a majority of California lands. Our soil holds a native fertility unsurpassed, and would bear our method of farming if properly managed; but failing to receive the recruiting supply of manure, the surface soil in many of our farming districts is now failing; and the matter of manuring the wheat lands, or raising a new coat of soil to the surface by the use of subsoil plows, now stands as one of the unavoidable things, before many of our farmers. The question of cheapness is at once settled in favor of subsoiling, as long as the fertile soil at our command below will last; but as the soil that we can raise to the surface must finally fail, without the assistance of proper manure, it would be best for farmers to adopt both. Subsoiling will restore California land to the once fabulous number of bushels produce to the acre, and manuring our lands will keep them good.

The third thing that I will consider is that of harrowing small grain in the spring, when the grain is four to six inches high. For years I rejected the idea, but on no special grounds, only that it would tear out the grain. I have long known that to cultivate small grain would do it as much good as corn and potatoes; but how to do this without ruining the crop by tearing the grain all out of the ground, was the question. On the 27th of May, I visited the farm of George Williams, near Chico, in Butte county, and carefully inspected a piece of wheat that Mr. Williams had harrowed. The wheat was too thin on the ground, and Mr. Williams had sown alfalfa seed among the wheat, and then harrowed it over three times with a large harrow, intending to exterminate the fine scattering stalks of wheat if possible.

The few thinly scattered stalks of wheat thus dealt with had stood out, and made the wheat thicker on the ground. The stalks were taller and heads much heavier than the remainder of the field.

I do not think that three times harrowing would be best as a general rule; but that to cultivate our wheat crops once by running our harrows over them lightly and breaking up the hard incrustation that invariably forms on the surface at the beginning of the dry season, is an advantage no one can doubt. The harrow will, and ought to nroot the wheat where it is too thick; and it will cause the wheat, where it is too thin, to stool out and become heavier. This will equalize the crop and be of great advantage in harvesting. I am now satisfied that the position, taken by the RURAL PRESS, that spring harrowing is a good thing for small grain—is well taken. Spring harrowing, if the

result is as good in other cases as it is with Mr. Williams, will add one-fourth to our wheat crops. This would pay better than any other farm work, and comes at a time when farmers are comparatively idle.

I also had a talk with James Montgomery, a well known farmer of Butte county, who harrowed strips through his field, leaving large spaces between, with a marked difference in favor of the strips of ground harrowed. In speaking of spring harrowing, Mr. Montgomery was very decidedly in its favor.

Mr. Robert A. Moore, also of Butte county, harrowed a piece of sand and clay soil in Feather river bottom with the most satisfactory results. Mr. Moore thinks the land he harrowed would produce from five to eight bushels more to the acre of heavier and better wheat.

Here are the opinions, and the results of the experience of three practical farmers, all strongly centering on one point of practical utility to all the farmers of America, and I close by asking farmers to speak out, through the PRESS, and let us see and know whether spring harrowing is a farm labor worthy of general use.

B. W. T.
Roseville, June 3, 1874.

Domestic Liberty, Equality and Fraternity.

EDITORS PRESS:—I owe Mr. Berwick an apology for apparent neglect of his weighty appeal of March 28th. I expected and looked for some pleasant retort to my banter of Feb. 28th, but only yesterday found it hidden away between two leaves that clung together and so escaped the dividing knife.

"Putty and firefly," my dear sir, express extremes of temper. Yielding without regard to right or wrong, putty is as culpable as it is contemptible. Firefly, though rather apt to put her foot in for a row, is of excellent use often, in setting back fires and in admonishing "tinder boxes" to keep "behind the vest pattern."

"Submissiveness and forbearance," you will see by turning to my article of Feb. 28th, were not ignored as womanly virtues, but simply mentioned as being considered—by some—incompatible with woman's enjoyment of equal rights.

"A woman will have the last word," is a very inoffensive "old saw." I make no objection to being regarded as one of the class from whom the maker "obtained his metal and his pattern." But forgive me, brother B., if in my jealousy of sex, I thought "the bay horse"—conscious of having lightened his own burden at the expense of "the gray mare"—betrayed a trifle of contempt for his patient companion; which a little bucking on her part might divert to weightier matters.

That women are readier in speech than men seems to be implied in the much-used phrase—"mother tongue." As an endowment of the creator, this abundance of the gift indicates that God had more talking for her to do. Reverently then, let her accept the indication. With the glorious first words—"God and humanity"—let her inspire the lagging workers, and with brave, hopeful "last words," urge on the column of "Liberty, Equality and Fraternity."

And now, as we have drawn our slippers up at the heels and cosily settled ourselves for a good pain talk, allow me again to trot out your illustration, and suggest that you have, indeed, "saddled the gray mare with burdens that the bay horse could, with equal propriety, be made to bear." Forgive me, for I am terribly in earnest; but I do think there would be some of the tallest bucking the world ever saw, if the burdens packed upon the grays were transferred to the backs of the sleek, fat bays. And here let me place my confession of faith—so far as this discussion is concerned—beside yours. It is, that all men, women included, are by creation equals before God, and therefore should be recognized as equals before all human tribunals and in all human relations, which involve the exercise and enjoyment of natural or inherent rights. I believe, also, in the freedom of the human will.

You say "a woman, though ever such a haud at making the firefly, would have small respect for a putty man, who abandoned his deliberate convictions for fear of a few wordy expressions, however vivid and sharp." That, I imagine, would depend entirely upon the nature and subject of his convictions. If he insisted upon spanking the baby, as an anodyne for stomach-ache, or required the dinner to be cooked without wood, as sometimes happens, I think a hasty abandonment of his deliberate convictions would be his best chance of wifely respect. And inasmuch as you admit that "the imputation of puttness" would rile you if you were a woman, you ought to be able to comprehend that a loving, self-respecting woman would sooner brave her good husband's displeasure, in behalf of her deliberate convictions than incur his contempt by puttness. Self-respect is gate-keeper to the virtues. Strike it down and all that is noble or beautiful in human character suffers blight. Woman, as the God-created helper of man, owes it to him to stand fast for the right, as against God and the woman he stands alone, which is not good. A laudable forbearance yields in non-essentials, that it may hold fast the right and true, in the manifest love of them and of the contestant. To be submissive under the inevitable and forbear to resist wrong in the spirit of wrong, are virtues alike essential to nobility of manhood or womanhood.

You maintain "that in marriage, the sub-

mission of one is a necessity," and you indicate which that one shall be by asking, Which is preferable—anarchy or paternal despotism? You say further, "When opinions clash, one must go to the wall while the other becomes dictator," and you indicate which shall go to the wall and which become dictator, by declaring that "the one who bears the outward brunt of life's battle, should be allowed the marshaling of his own array." In other words, the man—by virtue of his outside relations—becomes dictator over the little woman in the cabin, whose labors of lint, bandages, lotions and soothing syrups insure the life and comfort of this valiant warrior, when he comes in—maimed and wounded and sore in temper—from his "life's battle" with unruly cattle, exacting swine, thievish rodents, bucking steeds and ungenial skies. Seriously, however, if bearing the outward brunt of life's battle—as brother B. terms it—entitles one to play dictator or despot, the question of sex is yielded, and the woman who keeps the wolf from her door and maintains the respectability of her family is entitled to dictate terms. Many a woman—wife or widow—driven by necessity, has borne the outward brunt of life's battle, additional to the never-ending cares of house-mother, and won the plaudit, "well done."

Having briefly noticed the conditions of brother Berwick's marriage relation—in which the husband is a dictator and despot, with a submissive wife for his kingdom—let us hear him state the conditions of God's marriage relation.

He says, "Liberty, equality and fraternity are a relationship of a perfect marriage, the relationship that God presses on unwilling acceptance."

If liberty, equality and fraternity are the terms of a perfect marriage, I maintain that the solution of differences between the parties can best be found within and by these terms, and on no other. If liberty, equality and fraternity are the relationship that God presses on husband and wife, by what authority does any man press upon their acceptance the relative positions of subject and dictator? By what right declare that when their opinions clash, one must go to the wall? That when fraternity is disturbed, its life-guards, liberty and equality, shall be strack down and a paternal despotism, or dictatorship, crushing out the last hope of fraternity, be established on the ruins.

Mr. B. further says: "On God's part nothing has been left undone to induce man to accept the offer; man's will alone is wanting and Omnipotence cannot compel free will."

If on God's part nothing has been left undone and man's will alone is wanting, it is a logical conclusion, that either party, accepting and holding fast the terms of this perfect relationship, viz: liberty, equality and fraternity, is in unity with God and His will. If this party be the wife, what becomes of her duty of submission to the despotic or alien will of her husband? To submit to the will of her husband, as against God, would be the death of her. For, according to brother B's theology, as set forth in the RURAL of May 23, "The exercise of will, apart from God's will, incurs the inevitable penalty of death."

Again, if Omnipotence cannot compel free will, where is this creature, man, to get his power to compel woman's will? Omnipotence cannot confer a power that Omnipotence does not possess. And if man succeeds in doing what Omnipotence cannot, it must be by criminal use of physical strength, or by fraud and injustice, the cannot of Omnipotence, to whom wrong or sin is impossible.

In this perfect marriage relation, there is no wall-flower; the fraternity that preserves liberty intact finds its happy solution in equality of rights. God would stultify Himself if, in place of a relationship of equality—which He had left nothing undone to induce man to accept—He were to sanction a despotism, a dictatorship.

And now, brother B., I must confess that in arraying Berwick vs. Berwick and his God, I have felt very much as if I were putting my foot in a chapparral patch. I think it will come out a good orthodox foot notwithstanding. I have aimed to keep strictly to the points of your argument, and that I might present your positions in clearer relief and avoid tiring the reader, I have abstained from presenting my own views of marriage. Besides, as you make will supreme in your theory of God and man—not even mentioning love as a power, human or divine—I may be excused for feeling a little hesitancy, as if it would be throwing my precious pearls to a loveless bachelor, whose will had never been switched off its track by the one power, that having created, sustains and saves, viz: Love, omnipotent in God and man! Reserving your queries as to the possibilities of "the good old ideal marriage," for a future paper, I have to thank you, brother Berwick, for the courtesy and consideration of your personal appeal.

C. I. H. NICHOLS.

Potter Valley, Mendocino Co., May 16, 1874.

[In the RURAL PRESS of May 24, an article appeared under the title: "An Orchardist's view of Eve's Apple." The readers of the PRESS will perhaps remember that it was stated in the same issue that we did not wish to have the discussion of the subject continued through its columns; as not being in keeping with the character and purpose of the paper. But the article having brought forth a reply from a valued correspondent, and wishing to allow woman the last word, the restriction is removed for this occasion only.—Eps. Press.]

Semi-Tropical Fruits.

EDITORS PRESS:—In leaving California for an eastern tour a year since, the route was chosen through Mexico and the West Indies, for the purpose of once again giving careful observation to the cultivation of some of those semi-tropical fruits that are suited to our climate and market. One of the most important of these is the orange. Our former visit to those sections had left a vague impression of the mode of culture, the keeping qualities, flavor, texture and color of the perfect fruit. Leaving Los Angeles with several boxes of the average fruits produced there, we were not prepared for the pleasurable surprise that awaited us, in finding that upon comparison with like fruits in most of the famed places of this production, the California fruit was in most respects, if not all, superior. We confess a partiality for California, her land, her climate, her people, born of her as our foster-mother, upon whose bounteous breast her adopted child has so often lovingly reclined, and we therefore hoped that the opinion formed of her productions would be warranted by the comparison, but hardly expected that others would subscribe to our interested judgment.

In New York, Boston, Ireland, Scotland, England, France and Italy, and the Mediterranean, there were no better flavored fruits than the specimens taken with me for samples. I bought a ticket in New York for the round trip, to take the holder via the above and Germany, Austria, Italy and return by the Mediterranean, of Cook's Sons & Jenkins. It was expected to find the oranges of Majorca superior to those of Los Angeles, as that island and Sicily are supposed to produce the finest specimens as to all their qualities; in the world. But a disinterested judgment gave the verdict in favor of my California fruits.

Holding a commission from a California horticulturist (who is by the way one of the most thorough and liberal men in that specialty I have ever met), Thos. A. Garey, to obtain all reliable information regarding the culture of the orange, not sparing the expense, and also having a commission from the editors of the Tribune to examine again and report in detail upon the system of irrigation in Southern Europe, especially Lombardy, we prepared ourselves with letters of introduction to Geo. P. Marsh, the finished scholar and long-resident of the latter country, and to other persons that were in positions to give facilities for obtaining the best possible practical data. Thus armed, and with the previous experience in countries where irrigation was practiced, it was confidently expected that a mass of facts could be gathered that would be of incalculable value to our growing commonwealth; where, above all other resources, her water supplies are the most important and valuable.

It remains to be seen whether this labor, that has been undertaken at our own expense, and for the benefit of the Pacific Slope more especially, will be fruitful in results.

The space ordinarily devoted to a correspondent does not admit of elaborating the details bearing upon these interesting topics in one communication, therefore further trespassing upon your time and valuable space is postponed to another communication.

F. M. SHAW.

From Washington Territory.

EDITORS PRESS:—In my letter of April 13th, in your issue of May 9th, you made me say: "Delightful weather, but most too many rain-storms from June to September." Rain-storms should be mosquitoes. Though we do around these marshes have too many mosquitoes, we do not have too many rain-storms. We do, however, have occasional rains all summer; which make them delightful and kept our crop growing. The farms on these reclaimed salt marshes have in from fifty to two hundred acres each of grain. It was put in much earlier this year than last, and could not look finer. One hundred and sixty acre claims, dyked, are held at from three to five thousand dollars each. Unreclaimed land can be bought at from \$3.50 to \$10.00 per acre, and will cost about as much more to dyke it—only, inversely, the cheapest land being the most expensive to reclaim. Ours cost us about \$9 per acre, as we had several large sloughs to cut off, and we had some bad luck with them from lack of experience. This is a great country for tame grass; if once started it grows luxuriantly, and yields from two to three tons per acre. It is a fine dairy country, as we have no hot weather. Apples, pears, plums, cherries and all kinds of berries seem to be at home here and bear very young. Cabbage, turnip and other vegetable seeds grown here are the finest in appearance I have ever seen.

R. E. WHITNEY.

La Comar, Whatcom Co., W. T., May 26.

Sacramento Items.

[A correspondent at Sacramento kindly furnishes us with the following items.]

EDITORS PRESS:—I notice the army worm among the grapes, eating the leaves. Morning is the best time to kill them.

Hay is over and the new crop in the market. Crops are light in this section. Hay will command a good price in the fall.

The strawberry crop is light; the bulk will be marketed this week. Although late in coming in, they will not last but a short time. Prices rate low.

Prospects are that the blackberry crop will be heavy, but command a small price. Canning them will be the best way to use them up. The prospects for grapes are encouraging, and shipping will be done on a large scale if the transportation is not too high.

All fruit seems abundant, with the exception of peaches, as far as I can hear.

Large quantities of fruit will go to waste if not dried; we need a drying establishment, but money is scarce, and the farmers generally do not feel like investing heavy in it.

There has never been a season when so many harvest implements have been bought by the farmers. It looks well for the farming community.

June 4, 1874.

Vaccinating Dogs, Etc.

EDITORS PRESS:—Looking over the columns of your valuable paper, of date May 23, I find an article on dogs. I would most respectfully beg leave to offer my advice to that doctor: There is no need of using vaccine matter for distemper when you can cure any dog by giving a few doses of common table salt, remembering you will be compelled to use force in administering the dose in sufficient quantities to cure. I also send you a valuable cure for strychnine, which if generally known, might do a great deal of good. I have tried it many times on dogs, and when they were kept from water never knew it to fail. At any time after the poison has been taken give the whites of six or eight eggs, being sure to give nothing else.

May 26, 1874.

H. S.

SHEEP AND WOOL.

Sorting the Flock—Selling Wool at Home.

Shearing time is undoubtedly the proper time to sort the flock in order that the better ewes may be marked and saved for breeding, and that such wethers as show the best fleeces may be reserved, so that, in selling the surplus, those least valuable for wool and carcass may first go to the butcher. Thus, when the wool is off, those sheep that, with equal chance, have not kept up with the balance of the flock, may be more easily distinguished, and may receive a permanent mark easily known.

If the shearing is done at so much per head, the shearers will assist in this process; for the more indifferent sheep, of each new lot, will naturally be sheared first, and thus the culls will be disposed of. In the examination, care should be taken to note the general excellence of the carcass and the weight, length, evenness and firmness of the wool, disposition to take on flesh, and, especially, the fineness of bone and breadth of loin—for a good loin is apt to be connected with other good points. Thus, in a few years, especially if you are careful in selecting none but purebred rams of the most reputable strains, you may secure a most excellent flock, even if the start be an indifferent one.

There is but little fear that sheep farming will be unremunerative in the long run. There will be years of depression, perhaps over production, as in any other commodity, but wool is an article easily kept, and one that does not deteriorate by so doing; indeed the clip gets better, rather than worse, and the fore-hand shepherd, having a reserve stock of wool on hand always has property as good as money, for the reason that at any time it can be turned into cash.

To do this, however, the flock master must have means of storage at home, and must be himself sufficiently an expert to be able to sort and grade his own wool. In this case, with a stock on hand, it will not be necessary for him either to send his wool away from home to be sold, or to depend upon the ability or integrity of his commission man to sort, sell and make returns. His best market will be right at home, just as the best markets for extra heaves, hogs and fat sheep are at home. Buyers will eagerly find out and hunt up such lots and pay the highest market prices therefor.

If rightly managed, that is, if care be taken that none but persons qualified for the task by special training and a thorough knowledge of the business, be selected as selling agents—and if vigilance be used by individual members that no personal consideration on the part of their head men be allowed to enter into the choice of such agents—it is in this line that the chief money value of the Granges and Clubs will be found.

If Granges, Clubs and communities of farmers would agree among themselves to sort, store and mass not only wool, but other commodities at home, there would be no difficulty in making sales at home, often at better prices than are now obtained in our cities. Especially is this the case with wool. There is no reason why it should be stored in city warehouses where every inch of space is costly and has to be well paid for. Storing at home would eventually take the farmers out of the hands of a class of middlemen who are but little, if any better than scalpers.—*Western Rural*.

The Colorado *Agriculturalist* complains of the falling behind in the production of wool in that Territory. While they have millions of acres of grazing lands, capable of sustaining ten times the present number of sheep, the supposed prospect of suddenly acquired wealth which mining offers, tends to withdraw capital and labor from wool growing and other agricultural pursuits.

To Wash or Not to Wash Sheep.

"Is it better to wash my sheep before shearing or to sell my wool in the dirt?" Letter after letter asks this question, and in every instance the meaning of the question can be stated thus: "Will my clip net me more money if fleece-washed than if sold in the dirt?" The consideration of injury or benefit to the sheep or to the washers, and, in most cases, even of the cost and trouble of washing, are to be left out of the calculation.

In answer it may be stated, that much has been written and talked on this subject to little purpose, simply because experience has not yet afforded the basis for a decision of the question. The hap-hazard manner in which dealers and manufacturers buy in this country renders it purely a matter of chance whether the same clip fleece-washed will bring more or less than it would if sold unwashed at the same time and in the same market. There is no reliance whatever to be placed on the tastes or preference of judgment of buyers. They never pretend to pay what the wool is really worth—partly because they don't know what it is worth, and chiefly because if they did they could not make any money. It is, therefore, like everything else, simply a question between buyer and seller, neither one ever knowing exactly what the market price should be.

It is practically true that dealers and speculators in wool prefer to buy fine wools when fleece-washed, and the lower grades (medium to common) unwashed, and they can have no choice in the matter; except as they make more or less money, and have more or less margin for speculation, accordingly as they handle the wools in one or the other of these conditions. The lesson to the producer is, of course, that as he loses most when the buyer makes most, it is better for him to sell his fine wools unwashed and his medium and coarse wools fleece-washed. But this again is modified by the cost and trouble of washing, and by various other considerations which are peculiar to the situation of each wool-grower, and hence it results at last that no positive, uniform rule can be applied.

All wools, whether unwashed or fleece-washed, have to be scoured before they are worked. The operation of washing is of little advantage to the manufacturer, and hence, in buying fleece-washed wools, he does not expect to pay for the cost of washing.

The old rule of "one-third off on unwashed," is seldom adhered to in these days, because buyer and seller can seldom agree to apply it to a given case. There is, however, one rule which may be safely adhered to. Wash well, and put up your fleeces neatly in good bright condition, or do not wash at all, and do not let the sheep run too long after washing before they are shorn.—*Prairie Farmer*.

HORTICULTURE.

Flower Garlands.

Flowers are an essential part of a bridal array in all countries, and it would be difficult to name the nation where they are most lavishly used. All European nations are profuse in their use on every possible public occasion and family meeting.

The flowers selected for bridal purposes vary with the tastes of the different citizens. In Normandy, roses are the bridal flower. When a man has little or no dowry to give his daughter, it is a saying there that he will give her a chaplet of roses. In Italy, the jasmine is the rose selected. In Germany, the myrtle wreath prevails, as in the classic days of Greece and Rome.

It is a frequent practice, says the *Argosy*, for a young girl to plant myrtle, and to watch and tend it till the time arrives when she requires the delicate blossoms for her bridal wreath. Should she die unmarried, the same myrtle furnishes her coffin. It is considered extremely unlucky to present another with myrtle from a plant dedicated to one alone, either for life or death.

The myrtle crown of the bride is frequently alluded to by German poets.

In the northern provinces of Germany, and in Scandinavia, the bridal crowns are composed of artificial myrtle, ornamented in a manner more showy than tasteful, with additional flowers in gold and silver.

These crowns are often a foot or more in height. In the evening the garlands are put up and danced off; a lively tune strikes up, and the bridesmaids and other girls dance round the bride, who is blindfolded. Suddenly the music stops, when the bride places the crown on the head of the girl who happens to stand before her at the moment. Of course the maiden thus crowned will be the next to be married.—*Horticulturalist*.

A BEAUTIFUL ROSE.—The London *Gardeners' Magazine* describes a rose now growing at Mr. Harrison's nursery at Darlington, which is certainly a beauty. The tree is three years old, budded on the Manetti stock, but is now growing on both the Manetti and its own roots. It covers eight lights four feet broad by ten feet long. The house is spanned roof. This spring Mr. Harrison has cut about two thousand roses, and a third crop is now approaching maturity. These blooms find a ready market. In early spring they sell at sixpence each. Two thousand blooms at threepence each would produce £25.

Likes and Dislikes of Vegetable Neighbors.

Cuthbert W. Johnson, F. R. S., gives the following hints:

It was an early observation of the cultivators of the soil that there are good and bad neighbors, even in the vegetable world. The Roman farmers noticed the vigor with which the vine vegetated when planted near the elm. They were wont to call that tree the husband of the vine, and it has been supposed that the elm was, in fact, first introduced into England by the then masters of our island when they made their vineyards.

They were all well aware, although there is a "friendship" between some plants, there is "enmity" between others. Cato, one of the very early Roman authors, noticed that the vine is at "enmity" with the cabbage. And these facts were observed by more than one author of the sixteenth century. Thus, Conrad Hereshach, who was born in 1508, remarks in his treatise on Husbandry, "because there is a natural love and friendship between certain trees, you must set them the nearer together, as the vine and the olive, the pomegranate and the myrtle; others," he continues, "have a natural hatred, as the vine with the filbert and the bay."

Modern cultivators have noticed other facts of a similar kind, as that the acacia tree is a bad neighbor; the gardener makes the same remark as to the cabbage tripe; the agriculturist is well aware how well the corn flower (*Centaurea cyanus*) flourishes amid his cereal crops, and in no other place, and how the poppy almost always attends his crop of peas. He further notices how very vigorously the plants of wheat and rye flourish amid his tares.

Worms After the Grapes.

EDITORS PRESS:—There is a section of country about four miles in extent, and a few miles north of this place, in which the vineyards are infested with a worm about four inches long, black body with bright yellow lines lengthways on the back and light yellow underneath. They have marched three miles west and destroyed some small vineyards on their line of march, and have now just commenced on the east side of the vines of Mr. M. T. Robinson. Their appearance is something new and they are very destructive, leaving no leaves. As many as three dozen have been counted on one vine.

Can you suggest a remedy, or give any information which will throw light on the pest?

O. W. OTIS.

Vaca Station, June 4.

[The item of news conveyed in the note of our correspondent is of painful interest. The worm alluded is one with which we are unacquainted; and like our correspondent we are anxious to receive any information in regard to it. Let us hear from those of our readers who have anything to suggest on the subject. We hope Mr. Otis will keep us informed as to the progress of his unwelcome visitor.—Eds. PRESS.]

A NEW way of utilizing refuse fruit has recently been adopted, which promises the best results. It is the conversion of all the low-grade apples, pears, plums, and all the unsalable small fruits into jellies. Apple-cores, fragments cut from unsound fruit, and nearly all the waste of the orchard, can be cheaply converted into jellies, which are always in demand at good prices. The drying process is not a necessary part of this operation, although currants and other small fruits have been converted, after drying, into jellies with great success. The new process is one of concentration. The large per cent. of waste product of the orchard is worked up into the most appetizing jellies. Every family wants more or less. The consumption of jellies is now very large, and has been limited only by production.

LUCERN should be cut as soon as it begins to blossom, since, if left longer, the stalks become woody. If cut much before, it is watery and innutritious. Its seed is, when good, yellow, glossy and heavy. If light colored it shows that it is not ripe, and if brown we may infer that it has been heated. Lucern becomes more and more hardy with age, and we should advise, in experimenting with this crop, that it be protected the first winter with a slight covering of mulch, to be raked off the succeeding spring.—*Ex*.

REMEDY FOR SLUGS.—A correspondent of the *Gardener's Chronicle* says that he has found garter water, diluted to the color of weak coffee, to be the best preventive to the ravages of slugs on all garden crops, and also an excellent manure, applying it by night from an ordinary watering pot, and half the slugs will be killed, and the rest much weakened. A second dose, after an interval of a week, is sufficient to banish them altogether.—*Horticulturalist*.

CAMPOR FOR SEEDS.—Camphor is found to have a marked effect in stimulating the germination of seeds, both by shortening the period of germination and causing more seeds to sprout. Turpentine has a similar effect, but retards development.

IMPROVED MODES FOR PREPARING MEDICINES.—In these gelatine, glycerine, and water, together with a certain quantity of medicine, is compounded and poured out on a plate divided into small equal squares. When dry, it is loosened from the plate, and each square forms a dose.

THE APIARY.

Bee Keeping Pays.

One of our exchanges says: A colony, if properly managed, will every year give another colony without injuring itself; indeed, it is really better, because it exchanges in swarming its old for a new queen. The capital invested in the hive is thus doubled every season, giving one hundred per cent. on the money, whether the hive be worth five dollars or twenty-five. In average seasons, from thirty to fifty pounds of honey may be obtained also from both the old and new colonies. When the number increases too much, part may be sold; or, if it is preferred to have less increase and more surplus honey, they may be easily managed to secure that end. Does anything pay better than this? In almost every country village in the land, to say nothing of the cities, honey is a high-priced luxury, while at the same time, rich honey harvests all around are unappropriated. This should not be. While we do not advise any to go to bee keeping on a large scale, unless sure they possess an aptitude for the business, we would urge every dweller in the country, and many in the towns and suburbs of the cities, to keep bees enough to furnish honey. Only one rule is necessary to be observed to insure success, whether you have few hives or many. Keep every colony always strong in numbers. When in this condition they are prepared to winter well, to rear broods, to keep their numbers good, and if adverse seasons come, wait, without injury, until better times.

RICH SOIL BEST FOR HONEY PRODUCING PLANTS.—Mr. E. Gallup, of Iowa, has noted the conditions of soil and climate most favorable for the production of honey in flowers. If the atmosphere is moist and warm, and well charged with electricity, then is the time our flowers produce the most forage. On the contrary, the air may be dry, warm or hot, and flowers produce nothing. But by heavily manuring a piece of land for white clover or huckwheat, we can cause it to produce honey in a dry or cool season. Manure warms up the land, and it also causes a vapor or moisture to arise from the soil, which does not arise from an impoverished soil. We have noticed this repeatedly. We have seen a row of currant bushes alive with bees, that had been heavily manured the season previous, while a row that was not manured was not visited by bees. We have seen a four-acre patch of white clover that had been heavily manured the season previous, covered with bees, while the clover field by the side of it was not visited by a single bee. We have had some buckwheat on poor land, and on rich land at the same time. That on poor land was not visited, while that on rich land was alive with bees, and fairly scented the air with sweet around. White clover on warm, sandy land produced abundance of forage the past season, while on clay soil it produced nothing.

MOVABLE HOMES FOR BEES.—It is well known that bees may be moved from place to place, and, honey-secreting plants being in abundance, they will store large quantities of honey. A contemporary, in illustrating this, mentions the following circumstance said originally to have appeared in the London *Times* in 1830. It will of course be taken with a large allowance for "salting" by those who know bees:

As a small vessel was proceeding up the channel from the coast of Cornwall and running near the land, some of the sailors observed a swarm of bees on an island; they steered for it, landed, and took the bees on board; succeeded in hiving them immediately, and proceeded on their voyage; as they sailed along the shore, the bees constantly flew from the vessel to the land, to collect honey, and returned again to their moving hive; and this was continued all the way up the channel.—*Western Rural*.

IS BLACK COMB USEFUL?—Black comb, unless it be very old and choked with pollen and filth, is as useful for breeding purposes as any other. For guide combs it is better than any other, as it is tough and will not break away from its fastenings as new comb will. Care should be taken, notwithstanding, to discard all comb from which the bees of former seasons have not hatched out. Sometimes in old combs some cells may be observed from which the sealing has not been removed; some cells may have small holes in them, their contents being sunken, and their contents dried up; others may still retain the remains of dead brood; but wherever these are seen, the comb should be consigned to the melting pot, for there is danger that the combs are infested with foul brood.—*Ex*.

WHY DON'T FARMERS KEEP BEES.—Mr. Quimby is credited with giving the following four reasons for the neglect of bee-keeping on the part of farmers:

1. They don't know how.
 2. They doubt if it will pay.
 3. They have had such poor success in wintering bees.
 4. They are afraid of being stung.
- To these the *American Bee Journal* adds a fifth reason—Want of enterprise.
- To these we would add a sixth—The disgust produced by the conduct of many advocates of bee-keeping.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

Patrons who are subscribers to the RURAL PRESS should pay their subscriptions promptly in order to secure club rates.

List of Organizing Deputies.

COUNTY.	DEPUTY.	POST OFFICE.
Alameda.	A. T. Dewey.	Oakland or San F'co.
Butte.	Wm. M. Thorp.	Chico.
Butte.	G. W. Colby.	Nord.
Colusa.	J. J. Hick.	Grand Island.
Contra Costa.	R. G. Darr.	Antioch.
Lake.	J. M. Hamilton.	Guenoc.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Merced.	H. B. Jolley.	Merced City.
Monterey.	J. D. Fowler.	Hollister.
Napa.	W. H. Baxter, (Gen'l Dep.)	San Francisco.
Sacramento.	W. S. Manlove.	Sacramento.
San Francisco.	I. G. Gardner.	General Deputy.
San Francisco.	John Hegler.	Ellis.
San Joaquin.	E. S. Stiles.	Moro.
San Luis Obispo.	A. J. Motherhead.	Pescadero.
San Mateo.	B. J. Weeks.	San Jose.
Santa Clara.	W. G. Henning.	San Jose.
Solano.	R. C. Haile.	Snisun.
Solano.	J. O. Merryfield.	Dixon.
Sonoma.	Geo. W. Davis.	Santa Rosa.
Sonoma.	A. B. Nally.	Windsor.
Stanislaus.	J. D. Spencer.	Modesto.
Yolo.	Wm. M. Jackson.	Woodland.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Santa Barbara.	O. L. Abbott.	Santa Barbara.
Ventura.	Nilton Wasson.	San Buenaventura.

Farmers desiring to organize Granges, can apply to J. M. Hamilton, (W. Master), Guenoc, Lake Co.; W. H. Baxter, (W. Sec'y), 320 California St., S. F.; J. W. A. Wright, (W. Lecturer), Borden, Fresno Co.; or to the nearest Deputy to their locality. Thos. H. Merry, (W. Ex-Lecturer) of Healdsburg, is also deputized to organize Granges.

Be Wise and Prudent.

We cannot too frequently or too earnestly urge upon Patrons the necessity of the strictest secrecy in all matters pertaining to the Grange. Of course, as every Patron knows, these secrets pertain almost exclusively to business matters, and the necessary machinery for protecting the inviolability of the Grange. The only way to keep the secrets and the business of our Order among ourselves, is to adopt the practice of absolutely saying nothing, whatever, about our business and the subject matter discussed in our private meetings.

No Patron has a right to determine what part of the proceedings of the Grange may be safely told. Hence absolute secrecy is the only safeguard. Even a trifling incident, the revelation of which might seem quite harmless, may, when told under certain circumstances prove a link in a chain that will in time form just the clue that is desired to unravel some important business matter, the knowledge of which, by our enemies, may defeat the object we have in view.

No business firm can succeed which retains a leaky partner or clerk; neither can the Grange hope to maintain a successful business character, unless its secrets are faithfully kept. As long as the Order sees fit to continue a secret organization no member has a right to report any of its proceedings to the public, unless specially delegated to do so. Some of our Granges, even in their organized capacities, are too thoughtless in this matter. Resolutions are often published which ought never to go into print. We have in several instances withheld such for prudential reasons, when they have been sent to us for publication by order of the Grange; and yet we are quite sure that we have erred in this direction rather in publishing than in withholding. It is not, as a general thing, that the matter revealed amounts to anything of itself; but rather because in connection with other matters, in or out of the Grange, it may become the means of betraying a secret in a policy where secrecy is especially desirable. Let us therefore be wise and prudent in all our converse with those who are not of us and fully with us.

WM. M. THORP, Organizing Deputy, P. of H., Tehama county, sends us the names of the officers of the three Granges organized by him, as given last week. Brother Thorp has recently returned from a trip to the East, and reports the Order in a most flourishing and harmonious condition, in the localities which he visited in Missouri, Illinois and Indiana. The farmers there, he says, are deriving most substantial pecuniary benefits from the Order, to say nothing of its priceless value as an educational and social institution. They estimate a saving of fully 25 per cent. by buying their agricultural implements through the medium of Grange agencies.

FOR THE SUFFERERS.—We have to add, for the Louisiana sufferers, \$22.50 from Napa Grange, and \$25.00 from Salida Grange. These amounts were duly forwarded by Worthy Secretary Baxter on Tuesday last. The Patrons of Illinois are moving in the matter of aid to the Northwestern homesteaders, and Master Golder calls for a bushel of wheat from every Patron.

SEPARATE PRICES OF AGRICULTURAL MACHINERY.—The Maryland State Grange requests manufacturers and dealers in agricultural and farming implements of all kinds to discontinue the practice of demanding exorbitant pay for separate pieces and parts of such, when needed for repairs.

THE "Sonoma and Marin Grange Relief Association," a mutual life insurance company, has been organized in Petaluma.

Temperance in the Grange.

Although the Grange is not a temperance society, nearly all Patrons are found more or less earnestly engaged in helping along the temperance cause. No man engaged in selling liquor, or who may be denominated, even in the mildest sense of the term, a drunkard, could find his way into any Grange in the Union. All Granges teach temperance, and many of them are adopting strong temperance resolutions—some of which are with special reference to the Local Option Law. The State Grange of Ohio has passed a strong set of resolutions endorsing the Woman's Temperance Movement, first inaugurated in that State. And now comes the Hollister Grange in this State, which has passed and already printed the following:

WHEREAS, We realize that the sale and use of intoxicating drinks are the principal cause of crime, sorrow and poverty in our land, and

WHEREAS, Many who now drink intoxicating liquor would gladly abstain from its use, and become frugal and industrious citizens, if the tempter were removed out of their sight, therefore

Resolved, That we most earnestly recommend the passage and enforcement of the Local Option Law in our township, and in every township in the State.

Resolved, That we deem it the imperative duty of our brother Patrons, and all legal voters, to be found at the coming election firmly resolved to vote "No License."

Resolved, That we heartily believe the passage of said law would be a moral, social and financial blessing to the liquor dealers, thereby enabling them to engage in some respectable and useful occupation.

SUTTER GRANGE AGAINST LICENSE.—Sutter Grange, of Meridian, Sutter county, has adopted a series of resolutions on the local option question, which are published in the Sutter Banner, wherein that Grange expresses itself decidedly in favor of the local option law.

County Council for Sonoma.

EDITORS PRESS:—The only interesting Grange matter that can be communicated to you now, is that a meeting of delegates of the Granges in Sonoma county was held in Santa Rosa on the 14th of May, for the purpose of considering the propriety of establishing a County Council. Only five Granges were represented: the Santa Rosa, Healdsburg, Petaluma, Sonoma and Bennett Valley Granges.

The question was unanimously (15 votes) answered in the affirmative. The County Council was established, Constitution adopted, and officers were elected. Mr. McPherson Hill, from Sonoma, was elected Master.

The Santa Rosa Grange has already approved the Constitution, and elected as delegates to the County Council, Geo. W. Davis, S. T. Conlter and W. H. Rector. We hope and trust that all the Granges in this county will join this new institution, by which business of an important character can be transacted and which will bring the Granges in Sonoma nearer together.

Yours fraternally,
J. A. O'BRENN.

THE Monterey and Santa Cruz County Council has been duly organized, all the Granges in both counties being represented. Following is the list of officers: J. R. Hebborn, M.; D. M. Clough, O.; G. C. Wardwell, C.; Mrs. I. Kooser, L.; A. F. Richardson, Sec'y; C. E. Williams, T.; H. H. Buckles, S.; J. M. Ripley, A. S.; D. Crawford, G. K. The first regular meeting will be held in Watsonville, on the first Thursday in September, at 10 o'clock A. M. Board of Trustees, one for each Grange—Pajaro, W. G. Hudson; Morning Star, W. A. Evans; Watsonville, D. Tuttle; Santa Cruz, D. W. Madden; Ben Lomond, H. H. Buckles; Salinas, W. Robson.

A COUNTY COUNCIL for Tulare county has been formed with the following list of officers: J. M. Graves, M.; M. S. Babcock, O.; T. J. McQuiddy, C.; H. P. Gray, L.; F. L. Jeffers, Sec'y; J. A. Patterson, T.; C. T. Brown, S.; C. W. Hackett, A. S.; W. Farmer, G. K. Trustees: A. W. Mathewson, D. Rhodes, T. J. McQuiddy, E. H. Baker, W. W. Boyd and Thos. Fowler. There are six Granges in the county, all working harmoniously together, and another one about to be formed at Tulare.

"HAY SEED LAWS."—The St. Louis Railroad Journal says: The enactments of legislatures largely composed of Patrons of Husbandry, have been derisively called hay seed laws. We must say we rather like some of the hay seed laws recently introduced in the Missouri Legislature. The bill to suppress prostitution is the most just law ever proposed in any State. The act doing justice in the matter of Capt. Eads' claims is a credit to the State. The Forest Park bill is also a creditable one, and altogether, we are disposed to compliment our sturdy knights of the scythe and plowshare.

THE GRANGERS' TEN COMMANDMENTS.—We have received several suggestions in the way of improvements and additions to the Grangers' Ten Commandments. Perhaps at some future time we may issue a new edition of the Commandments, in which all proper suggestions of improvements may be embodied.

DON'T FORGET.—Don't forget the Fruit-Growers' Convention in this city, on Thursday of next week—the 18th inst.

BRO. BAXTER went to Monticello, in Berryessa Valley, Napa Co., yesterday, (Friday) to organize a Grange there.

From the Granges.

NORD GRANGE, BUTTE CO.—EDITORS PRESS:—We are commanded to "despise not the day of small things," and when we observe what important results often follow from feeble beginnings we may well heed the injunction. On last Saturday our Grange conferred the fourth degree upon a class of eight; obligated the wife of our worthy Overseer, who is a charter member, but was absent at the time of organization; installed the Master of Cottonwood Grange, and balloted for a number of new candidates.

Considering that several of our brothers were absent at some distance haying, the attendance was good. An organ added interest and strength to the music, especially when our obliging telegraph operator took charge of the musical instrument, waking it to new life and power by his skillful touch. The words

"Shepherdess and Matron
Greet the tired Patron
Welcome to the feast."

Summoned us to the festive board, spread with all the good things that Grangers' wives know so well how to prepare, and the fruits of the season in their natural state. Nothing stronger than lemonade flowed with this "feast of reason," and friends from the outside were invited in to share and witness our enjoyment.

All who have participated in these social festivities know what delightful occasions they are, and that no description of them can be put upon paper. I believe the sisters thought the conferring of the third degree nearly equal to the fourth, as they entered heartily into its spirit and letter, possibly because for once the order of things was reversed, and soliciting a partner devolved upon themselves. We are working every Saturday, in anticipation of the approaching busy season of actual harvest.

In separating, all felt, if they could not musically express, the sentiment,

"What exquisite pleasure
Gathering in the treasure
Of the fruitful Grange.
Joys like these shall never
Let our hearts discover,
Time shall bring no change."

G. A. C.

P. S.—I ought to be forgiven the feminine weakness of adding a postscript, in order to say that the country hereabouts never looked finer.

Wheat and barley are even with the fences, and spread like a vast sea of green in all directions. I hear of no grumblers in all this region. Some are so superstitious as to attribute this overflowing abundance to the Grange movement, as nearly every meeting has been accompanied by a shower.

TABLE BLUFF GRANGE, HUMBOLDT CO.—EDITORS PRESS:—Your paper comes to me regularly, filled with interesting information which is really encouraging to true Patrons, and which cannot fail to stimulate the feeble or irresolute workers to renewed activity in the cause of our Order. Our Grange is prosperous and harmonious. We conferred the fourth degree on a class of nineteen, yesterday, and held our second harvest feast, which was a perfect success, the tables being loaded with everything that heart or appetite could wish; showed the good taste of our wives and daughters, and was appreciated by many of our friends outside of the Grange. After the appetite was satiated, we listened to a very able and appropriate address delivered by I. G. Swinerton, Esq. A unanimous vote of thanks, which was tendered for the same, testified to the satisfaction given by the address. Everybody went home rejoicing. Our Grange now numbers sixty, and we expect to initiate a fair-sized class at our next regular meeting. We have been having an unusual rainfall lately, which has made the farmers late getting in their crops. There are some fears that the grain on bottom lands may grow too large in body in consequence of the late rains. The crops never looked better in this county, and grass in the hills has not been as good for years before. Last Monday, May 26th, was the day the Board of Supervisors set for the Union, Ferndale, Hidesville, Eel River and Table Bluff districts to hold an election to decide whether license should be issued to retail intoxicating liquors in said districts or not. All the localities gave a majority for no license. Table Bluff blotted out its hard name by giving forty-five votes against, to seventeen for license. Yours fraternally,
B. H. C. POLLARD, Sec'y.

MORO CITY AND OLD CREEK GRANGES, SAN LUIS OBISPO CO.—EDITORS PRESS:—I have concluded to drop you a few lines to let you hear from this portion of our State. Our crop prospects could not be better. On Moro and Old Creek they are very heavy; in fact, the crops throughout the county, so far as I have traveled, are very good. Our little Grange at Moro is in fine working condition, getting along harmoniously. We shall never have a very large Grange in numbers, but hope to make up the deficiency of numbers by industry and punctuality in business. Old Creek Grange is in good working order, and getting along well under the instruction of Brother Isaac Flood, whom I find baptized in the work and very proficient in the unwritten work. On Wednesday, June 3d, with the assistance of my Worthy Brother, R. Flood, we organized a Grange in this, San Luis Obispo county, named Paso Robles, with 24 charter members.

Yours fraternally, A. J. MOTHERHEAD.

PLAINSBURG GRANGE, MERCED COUNTY.—Bro. H. B. Jolley furnishes the San Joaquin Argus with the following: On Saturday last I paid a visit to the Plainburg Grange and assisted the Worthy Master, Mr. Welch, in conferring the

fourth degree on a class of 21 members which increases the membership to 60. I find them active and alive to the good work. After conferring the degree the sisters were anxious to exercise in the unwritten work in which he found them very proficient, Sisters Mason and Spangenberg going through the work without a mistake. We also enjoyed the harvest feast, and from the good feelings during the feast, and after, we may expect to see in the course of a few months one of the finest Granges in the State at Plainburg.

DEEP CREEK GRANGE, TULARE CO.—EDITORS PRESS:—On Saturday, May 30th, we celebrated our Harvest Feast. Have now over 80 members, and still they come. A new Grange was formed last week at Tulare City, by Bro. Jolley. Quite a number from that Grange were with us at our feast, and all appeared to enjoy themselves. We have also formed a County Council, called the Tulare County Council. [The names of the officers of the Council will be found in another column.] We hear good reports from all the Granges in the county.

Yours fraternally, F. G. JEFFERDS, Sec'y.

New Granges.

PASO ROBLES GRANGE, SAN LUIS OBISPO CO., was organized June 3d, by Deputy A. J. Motherhead, of Moro City Grange, assisted by Isaac Flood, of Old Creek Grange, with 24 charter members and the following list of officers: H. W. Rhyne, M.; J. M. Cummins, O.; D. W. Gilbert, L.; J. M. Cunningham, S.; D. E. Cummins, A. S.; A. Frick, C.; P. Klipple, T.; J. P. Moody, Sec'y; B. Matthew, G. K.; Mrs. Mary Middaugh, Ceres; Mrs. Nancy Tuley, Pomona; Mrs. Anna Cunningham, Flora; Miss T. E. A. Rhyne, L. A. S.

Brother Thomas H. Merry, General Deputy, furnishes the following report of his recent work—three new Granges in Humboldt and Mendocino counties:

MATTOLE GRANGE, PETROLIA, HUMBOLDT CO., with 30 charter members and the following officers: Stephen Goff, M.; L. W. Gillett, O.; David Simmons, L.; Jacob Miner, S.; James H. Goff, A. S.; Morgan Rudolph, C.; Thomas Clark, T.; D. J. Johnson, Sec'y; Jotham Ball, G. K.; Mrs. M. D. Goff, Ceres; Mrs. S. E. Marshall, Pomona; Mrs. Mary Simmons, Flora; Mrs. Rosa Johnson, L. A. S.

CARTO GRANGE, CARTO, MENDOCINO CO., with 30 charter members and the following list of officers: R. M. Wilson, M.; J. J. Thomas, O.; J. H. Braden, L.; L. P. Beattie, S.; R. White, A. S.; J. G. Burns, C.; O. R. Bennett, T.; J. P. Simpson, Sec'y; B. M. Wayman, G. K.; Mrs. Mary F. Braden, Ceres; Miss Sina M. Wilson, Pomona; Miss Maggie Farley, Flora; Miss Dorinda Harelson, L. A. S.

SANEL GRANGE.—Sanel, Mendocino county, with 27 charter members and the following list of officers: Alex. Marshall, M.; E. H. Duncan, O.; R. M. Parsons, L.; O. Howell, S.; O. R. Meyers, A. S.; Isaac Bickle, T.; Jos. A. Knox, Sec'y; E. Dooley, C.; Wm. Parsons, G. K.; Mrs. E. Duncan, Ceres; Mrs. L. F. Howell, Pomona; Miss Mary Edsoll, Flora; Mrs. Sarah Bickle, L. A. S.

SHERIDAN GRANGE, Sheridan, Placer Co., was organized, May 29th, by Deputy J. P. Manlove, of Sacramento. O. H. Long was elected Master, and T. J. Lewis, Secretary.

WOODVILLE GRANGE, Woodville, Tulare Co., was organized May 29th, by Deputy H. B. Jolley, of Merced. J. A. Slover was chosen Master, and J. Stewart, Secretary.

TULARE GRANGE, Tulare City, Tulare Co., was organized May 28th, by Deputy H. B. Jolley. D. E. Wilson was chosen Master, and Victoria Wright, Secretary.

THE FIRST GRANGE IN NEVADA.—The first Grange in the State of Nevada was organized at Reno, June 4th, by Bro. J. W. Hamilton, Master of California State Grange, with the following list of officers: A. J. Hatch, M.; G. W. Huffaker, O.; J. C. Smith, L.; W. Higgins, C.; R. H. Kinney, Sec'y; M. C. Lake, T.; O. C. Ross, S.; T. W. Norcross, A. S.; A. M. Lamb, G. K.; Mrs. H. F. Hatch, Pomona; Mrs. Jane Lake, Flora; Mrs. F. M. Smith, Ceres; Mrs. T. W. Norcross, L. A. S.

OFFICERS OF NEW GRANGES.—We give below the list of officers for several new Granges, the organization of which we reported last week with only the names of Masters and Secretaries:

EVENING STAR GRANGE, BUTTE CO.—E. W. S. Woods, M.; C. Howard, O.; A. M. Woodruff, L.; C. F. Butler, Sec'y; G. D. Sanderson, S.; G. C. Nelson, A. S.; W. Downing, C.; T. C. Pearson, T.; I. D. Williams, G. K.; Mrs. A. M. Woodruff, Ceres; Miss Pearson, Pomona; Mrs. Wm. Downing, Flora; Mrs. G. D. Sanderson, L. A. S.

READING GRANGE, SHASTA CO.—J. F. Dinmore, M.; A. Wood, O.; J. J. Bell, L.; H. C. Woodrum, S.; Wm. Hawse, A. S.; E. Anderson, C.; E. A. Read, T.; S. Gilbyrt, Sec'y; T. George, G. K.; Mrs. Anderson, C.; Mrs. Hawse, P.; Mrs. Wilson, F.; Mrs. Woodrum, L. A. S.

NEW SALEM GRANGE, TEHAMA CO.—Chris. Harris, M.; W. W. Batkin, O.; Mary Harris, L.; I. W. Harris, S.; W. G. Harris, A. S.; C. Harris, C.; M. Burt, T.; J. R. Whitlock, Sec'y; Jas. Wilder, G. K.; Julia Batkin, Ceres; Mrs. Burt, Pomona; Mrs. Wilder, Flora; Mrs. Whitlock, L. A. S.

California Grange Centennial Committee.

The Centennial Committee appointed by the Executive Committee of the California State Grange have not yet organized, but will probably do so at an early date. In relation to the duty of this committee, after organization, Mr. B. P. Kooser, one of the committee resident at Santa Cruz, writes as follows to Bro. H. B. Jolley of Merced county:

"There will be enough money subscribed by States, (Pennsylvania, New Jersey) and Philadelphia City, to make a fine exhibition; whether Congress, therefore, gives one cent, makes no difference. I infer the duty of the Grange Committee, in part, will be to secure and arrange samples of the natural products of every county in California, such as wheat, barley, oats, rye, flax, hemp, cotton, (both in the stem and prepared for market) for exhibition. Cereals, flaxseed and corn, in 2-oz. phials, hermetically sealed, should be arranged—three samples from each county. Also three samples of wheat, oats, barley and rye, in head. The stools should be firmly bound in clusters or bunches, for exhibition. Accompanying this should be attached certificates, sworn to by producer, or on honor of the Grange, certified to by the Master of the Grange, the Secretary, (with seal appended,) and the farmer or other person who produced the crop, giving a minute description of the mode of cultivation, quality of the soil, kind and cost of seed, time of plowing, how deep and often, and by what process and kind of plow; time of sowing, reaping, threshing, marketing; cost of transportation; by what mode; whether by water, rail or in teams; in sack or in bulk, and the net return of the crop; number of pounds (or sacks) raised to the bushel of seed; number of sacks (or pounds) to the acre, etc., with incidental remarks, comments and noted events in full, that might be deemed of interest to the experimental farmer or scientific agriculturist.

"The above, I fancy, will be a part of the Grange Centennial Committee's duty in the premises. But the main point is to have the legislature of California, early in December, 1875, pass an act appropriating money sufficient to pay necessary expenses of commissioner, and forwarding these articles to Philadelphia, and properly displaying them, so that we can show the Atlantic, Eastern, Middle and Western States that California really and truly is the great producing State, and wonderful in all that pertains to natural products, art, science and inventions that her people claim she is. The moral power of the Granges, the Pioneer Society, Mechanics' Institute, Masons, Odd Fellows, Druids, Redmen and all other societies, the State, district and county agricultural societies, and all others in power and place, organized or to be organized, should put their shoulder to the wheel to aid the cause and assist us in all honorable effort. As to organization, that can be effected at the State Grange meeting, or even at the present time, if deemed necessary. I will soon write again."

It may also be seen by reference to a communication from B. B. Redding and A. N. Towne, agents for the Central Pacific Railroad, that all goods and packages designed for the Centennial Exhibition will be taken over that road free of expense. The same offer has been made by the agents of the Panama steamship company.

SECRECY.—Some people do not like secret societies. Some churches deem it impossible for men to be Masons, Odd Fellows and Christians. Yet we find some of the best and purest men in the land in these Orders. We hear from time to time charges of all kinds uttered against the secret societies. These charges are, from the nature of the organizations, against which they are brought, very difficult to meet and refute. Yet we believe that in the main they are baseless. A great society can afford to keep on in the even tenor of its way, letting those who make guesses exercise their ingenuity. So long as its members are satisfied it is all well enough. Men will differ in their views on secret societies, and we presume to say, it is all right enough that they shall be allowed to either stay in them or stay outside of them.—*American Patron.*

COMPLIMENTARY RESOLUTIONS.—At a meeting of the Healdsburg Grange, on the 29th of May, the following preamble and resolutions were unanimously adopted:

WHEREAS, Sister S. A. Peck has done her duty and served us faithfully and ably as our Secretary since her installation last January; and whereas she now feels it her imperative duty to use her energies as a devoted wife to caring and providing for her afflicted husband, our worthy Chaplain; and

WHEREAS, She now tenders her resignation as our Secretary, we reluctantly accept, and therefore

Resolved, That we as a Grange hope and pray that Brother and Sister Peck will have a pleasant camping tour, and that Brother Peck's health will soon be restored, and that they be permitted soon to return to us in the enjoyment of health and usual prosperity.

Resolved, That the foregoing be entered upon the minutes of the Grange, and a copy be sent to the Russian River Flag and the Rural Press for publication, that it may serve as a visiting card for our brother and sister wherever they have the good fortune to meet with our brother Patrons.

WILLIAM N. GLADDEN, Sec'y.

The Order is making rapid progress in Virginia. The Petersburg Index expresses the opinion that every county in the State will be represented at the next meeting of the State Grange.

TURLOCK GRANGE.—W. S. Robinson is Secretary of Turlock Grange, Stanislaus county, instead of Master, as published in our Grange Directory last week.

The Order in Nevada.

We have received the following from Bro. J. M. Hamilton, Master of California State Grange, who is now on a tour organizing Granges in the State of Nevada:

EDITORS PRESS.—I arrived at Reno on the night of the 3d and found good accommodations at the Depot hotel, where I stopped for the night. After breakfast, next morning, started to look for the Grange element; soon found A. J. Hatch, Esq., wide awake and full of zeal for our cause; took dinner with him and his amiable wife, and during the day was introduced to quite a number of practical farmers, residents of Truckee valley. This being court week, many of the farmers were in town, and I made arrangements to organize a Grange next day, at 2 p. m.

In the evening went out home with M. C. Lake, Esq., one of the first settlers of Reno, and for some time owner of the toll road and bridge across the Truckee at this point. He is now owner of, perhaps, the finest ranch in this valley, consisting of over 1,000 acres of land. After breakfast next morning and an inspection of this ranch, of which I shall speak more fully hereafter, we rode into town, and at the appointed hour met in the Odd Fellows' Hall, where I organized Alfalfa Grange, the first in Nevada, with 20 male and four female charter members. The notice was so short that the ladies did not have time to make arrangements to meet with us, or I am assured the whole number allowed would have been present. Every male member is actually engaged in farming, and, with only one or two exceptions, has no other business to attend to.

This morning I left by the Virginia and Truckee railroad for Carson. I have now quite a number already who are anxious to join the movement and have fixed 2 p. m. on Monday as the time for organization. On Tuesday I shall leave for Genoa, where I am told the people are anxiously awaiting my arrival.

Fraternally yours, J. M. HAMILTON.
Carson City, June 6th, 1874.

CALAVERAS GRANGE, JENNY LIND, CALAVERAS Co., which was organized May 1st, was overlooked in the publication of our Grange Directory last week. M. F. Gregory is Master of this Grange, and A. Miles, Secretary.

San Jose Farmers' Club.

The club met at the usual hour and was called to order by Jessie Hobson.

Mr. Bergland presented a communication from J. C. Monro, in regard to destroying squirrels and gophers with the Caro-nach poison. Mr. Bergland stated that he was experimenting with the remedy, and would report.

Mr. Anderson asked if any one had tried the rat, squirrel and gopher exterminator. He considered it most effectual. He has tried one box, for which he paid \$1, and it killed more squirrels than \$2.50 worth of strychnine would. It comes in wheat, enclosed in cans, about the size of two-pound fruit cans.

Mr. Bergland—I would like to know if anybody has tried splitting the bark of peach trees, to prevent curled leaf. I have tried it, and it is a complete remedy. I split the bark with a knife in several places around the tree, extending the incisions from the junction of the largest limbs to the ground. The curled leaf fell off, and new straight leaves have come out.

Mr. Hobson—I reckon it will do that anyway, without splitting. I have some young trees that had the leaves curled, and they have all fallen off now, and new leaves have come out, and I don't think there is a curled leaf on them.

Mr. Hobson—When is the best time to cut oats so that they will be the heaviest?

Mr. Bergland—I never raised oats here, but I used to grow them in the States. There I found that when the oat is perfectly full of the dough, that is the best time to cut them.

Mr. Hobson—Will the oats get lighter by letting them remain until perfectly ripe—so as not to weigh so much?

Mr. Bergland—I saw a statement the other day, that if the grain gets perfectly ripe it would not weigh so heavy. It will shell off.

Mr. Hobson—If the grain is in a healthy condition, the natural and common sense view is that it must be the best when it is perfectly matured. There are certain conditions in which grain may be found that it will be heavier if cut a little green, as in the case of rust, but where the grain is in a healthy condition it is unquestionably best for the grain to cut it when it is perfectly matured on the stalk. This is a common sense view.

Mr. Bergland—It is best for hay when it is in the dough.

Mr. Holloway—I think it is best to cut oats for hay when they are in full bloom.

Mr. Anderson—I have had considerable experience in that and I think if it is cut in the bloom it is best for dairy purposes, young stock, and perhaps for growing stock, but for work horses it is best when cut in the dough, but not in thick dough.

Mr. Bergland—I believe that cutting hay by the scythe makes better hay than when mown by a machine.

Mr. Anderson—What is your reason, by cutting down where the richness is? You know it is richer down by the ground.

Mr. Bergland—The reason is, that lying in the swath and the wind blowing through it,

doesn't bleach by the sun. It bleaches and loses its nourishment in lying in the sun where the mower throws it.

The regular subject for discussion not having any agricultural bearing we omit the debate.

The following question was selected for discussion next Saturday [to-day]. Resolved—"That the people of the United States should have the right to vote directly for all their officers."—*Mercury.*

CATTLE BREEDERS.

Devons as Dairy Cows.

Having seen many accounts of late in the agricultural papers in reference to great milkers, I give you herewith a statement of the yield of my Devons. I did not test them all, but tested one 5-year old in the month of June, on grass alone, and she yielded 40 lbs. of milk per day. In the eight days her milk was kept separate, the result was 17½ lbs of butter, at two churnings. I have another heifer that was three years old the 17th of June, 1873, which yielded last summer 34 lbs. per day of milk, and very rich. I had another of the same age that gave only 23½ lbs. per day of milk, but it was extremely rich milk for her age. My old cows yielded much more—one of them from 48 to 54 lbs. per day. Average yield of butter per cow for the year 1872, 243½ lbs.; I fed nothing but pasture from May 12 until Oct. 6, when they received some sowed corn and pumpkins while they lasted. I believe their milk and butter are superior in quality, color and flavor to all other breeds, and so is their beef. They are always gentle; I never had one of them raise a foot to kick. They are the most hardy of all cattle; always keep nice, fleshing up in the winter and milking off during summer. My neighbors accuse me of feeding them grain in the winter, when they receive none at all. Some of my neighbors who keep Shorthorns have said if their cattle could have me to take care of them, they would look as well as my Devons do. That I do not believe; but perhaps some of them would come out better than they do if they could be kept in my barns and fed on my hay. I have had some Shorthorns and had them looking very fine, but they received more food and attention than my Devons did, and I concluded that the Devons are the better breed to keep; although those Shorthorns that have an infusion of Devon blood are decidedly fine cattle, and I like them for beef, and some of them are good for the dairy.—*Cor. Country Gentleman.*

MAXIMS IN CATTLE BREEDING.—James N. Brown, of Illinois, was a noted breeder of Short-Horn cattle, and these are some of his ideas: Use pure-blooded males. Keep no more stock than you can keep well—and the young should always be improved. Never sell to the butcher or anybody else your best and thriftiest young females. Calves should be dropped from the 1st of March to the 1st of May. Never allow calves to run with their dams and suck at will; it injures both. Milk the young cows as long as possible. All cattle breeders should have two pastures for summer grazing, and change the stock from the one to the other frequently. Land intended for winter grazing should not be grazed in mid-summer. The summer growth is needed for winter protection. To render stock-growing as profitable as it should be, good grass for winter and summer is indispensable.

THOROUGHbred AND FULL-BLOOD.—The animal containing fifteen-sixteenths of thoroughbred blood is designated as a full-blood. To acquire this, a cold-blooded animal, or one of common or indiscriminately mixed blood, must have received four infusions of thoroughbred blood. The first cross would give you a half-blood; the second a three-quarter-blood; the third a seven-eighths, and the fourth a fifteen-sixteenth-bred animal. Many breeders consider a seven-eighths animal as a full-blood.

A thoroughbred is an animal that may be traced through the herd book or the turf register, to a given ancestor without the intermixture with impure blood. In cattle, the Short-Horns are called thoroughbreds, the Devons pure bred, the latter being animals that come constant in color and characteristics. They are a distinct race of cattle. The Short-Horns in cattle, and racing stock in horses, are descended from mixed breeds.—*Western Rural.*

ENGLISH SHORT-HORN PRICES.—The twenty-third number of Mr. Thornton's Circular—just received—furnishes the data by means of which a comparison can be made between the Short-horn prices of this spring and those of the corresponding season of last year. The prices at Irish sales show an advance of ten per cent. for animals of exactly the same stamp as those sold from the same herds last season, and similar remarks will apply to nearly all the British sales of the season.

SALE OF BLOOD CATTLE.—The celebrated Lyndale herd of short horn cattle, belonging to Hon. W. S. King, of Minneapolis, was sold near Chicago, May 21; fifty-eight cows and twenty-one bulls bringing \$126,990, Duke Hillhurst, one of the bulls, selling to G. Robbins, of London, England, for \$14,000.

PUBLIC sales of cattle do not show fancy prices now. At the recent sale of Henry T. Brown, at Providence, R. I., choice full blooded "Ayrshire" cows, only brought \$60 to \$130.

THE HORSE.

Cold Sweat.

An old stage-owner, having had a large experience with horses, and who ought to be able to give good practical advice, sends the following, which we commend to the attention of our readers:

"I find not a few persons having charge of horses in cold and stormy weather complain that some of them are troubled with what they term 'cold sweat'; that is, they are found in the morning with the hair wet and cold from yesterday's work. They say: Why is it that this horse does not dry off, like the rest of the rest of the team? There may be more than one reason. Perhaps this horse is not in good condition, and he may not be able to do as much work in the same length of time as others. Certainly he cannot, if he has this so-called 'cold sweat' in the morning. At any rate, this horse has been worked until his blood became heated, and the pores of the skin opened and the hair wet with perspiration, and then allowed to cool off so quickly that the pores of the skin close so that no heat can come from the body to dry the hair, and the consequence is that the poor horse stands with his wet coat on all night, or until something is done to open the pores to let the heat out. This is usually by hitching him up and putting him to work, which is better than nothing. But I think he feels about as you and I would, if we had slept in a wet coat all night, and I think I should say to my employer that I had taken a bad cold and could not work. But the poor horse cannot say so, and he is put to work.

"But the question is, how to prevent this cold sweat. One way is, give him gentle exercise until dry, or nearly so. But my way is to scrape the horse as dry as I can, rub the hair the way it grows close to the skin, throw a woolen blanket over him, buttoned round the breast only, give him a warm bran mash thinned down so he can drink it. This will supply heat and keep the pores of the skin open, and the heat of the body will dry the hair, so that in 25 or 30 minutes you can dress your horse for the night, give him his supper, and in the morning you will have a fine feeling horse, and he will be ready for work. By the way, a drying blanket should never be lined. The best cheap blanket to dry a horse under is an all wool cheap floor carpet, one that is not wove-tight. It will protect the body from cold, and will let the steam through.

"To make a bran mash, take as many quarts of rye or wheat middlings as you have horses, add as many tablespoons of caraway seed, stir it up with holling water (or better in cold, and bring it to a boil), set it off and cover it for five minutes, and then it down with cold water, and it is ready. If there is any left, and it is cold, thin with hot water.

"I practiced this treatment for years with my stage horses, and I think it paid."—*Journal of the Farm.*

HORSES IN INDIA.—The English Government established breeding studs in India as far back as 1794. Stallions and mares were purchased in Persia and Arabia for this purpose. The enterprise grew from small proportions into large ones. In the Central Stud in Pusa the mares owned by the stud department are now lent to farmers and covered by government stallions, the farmers being bound to sell the foals to the department at eight months old. In the north-western provinces the farmers own the mares, and the government the stallions. Twenty stallions were sent from England to India by the Secretary of State every year from 1861 to 1865, thirteen in 1866, nineteen in 1867, ten in 1868, two in 1870, and six in 1872. The government takes great interest in breeding in India for the reason that she desires good horses for the use of the army.

BLOOD MARES FOR SPRING.—A correspondent of the Michigan Farmer gives the following sensible directions. The best food for the brood mare is corn stalks, or good timothy hay, with four quarts of ground oats and wheat bran, equal parts, daily. The ground oats and bran not only enable the dam to make all necessary preparation to supply the coming foal with nourishment at the time most needed, but keep her healthy and strong, and enable her to feed the growing fetus on the very best kind of material to make the most bone and muscle. The dam should have moderate exercise, but it should be regular. If she is used in a team, she should not be driven faster than a walk, nor loaded too heavy, for in either case there is danger of injuring the dam and ruining the foal. She should be housed or sheltered nights, and in all stormy weather.

At a recent sale of very large, powerful cart horses in Liverpool, prices ranged from \$244 to \$500. Forty-four head averaged \$340. The animals were mostly five and six years old, only a few seven. The whole lot was represented to be in fine order and of great size, averaging seventeen hands in height and probably 2,000 in weight.—*Live Stock Journal.*

PAWING HORSES.—To break a horse of pawing in the stable, a correspondent of the Farmers' Union says: Take a piece of trace-chain two feet long, fasten it to the leg he paws with, just above the knee, with a hame strap, and let the chain hang at the side of the leg. He will soon be glad to keep it still.



The Ride of Collins Graves.

[Collins Graves was the milkman who, at the time of the recent disaster in Massachusetts, mounted a fleet horse when he heard the dam was breaking, and galloped ahead of the flood, giving the alarm. Passing through the other villages he reached Haydenville just ten minutes before the flood, and when another courier took up the message, just managed to get on the hill-side as the flood burst through.]

No song of soldier riding down
To the raging fight from Winchester town;
No song of a time that shook the earth
With the nations' throes at a nation's birth;
But a song of a brave man, free from fear
As Sheridan's self or Paul Revere;
Who risked what they risked, free from strife
And its promise of glorious pay—his life.

The peaceful valley has waked and stirred,
And the answering echoes of life are heard;
The dew still clings to the trees and grass,
And the early tollers smiling pass,
As they glance aside at the white-walled homes,
Or up the valley, where merrily comes
The brook that sparkles in diamond rills
As the sun comes over the Hampshire hills.

What was it that passed like an ominous breath—
Like a shiver of fear or a touch of death?
What was it? The valley is peaceful still,
And the leaves are soft on top of the hill.
It was not a sound nor a thing of sense—
But a pain, like the pang of the short suspense
That enfolds the being of the who see
At their feet the gulf or eternity.

The air of the valley has felt the chill;
The workers pause at the door of the mill;
The housewife, keen to the shivering air,
Arrests her foot on the cottage stair,
Instinctively taught by the mother-love,
And thinks of the sleeping ones above.

Why start the listeners? Why does the course
Of the mill-stream widen? Is it a horse—
Hark to the sound of his hoofs, they say—
What gallops so wildly Williamsburg way?

God! what was that, like a human shriek
From the winding valley? Will nobody speak—
Will nobody answer those women who cry
As the awful warnings thunder by?

Whence come they? Listen! And now they hear
The sound of the galloping horse-hoofs near;
They watch the trend of the vale, and see
The rider who thunders so menacingly,
With waving arms and warning scream
To the home-filled banks of the valley stream,
He draws no rein, but he shakes the street
With a shout and the ring of the galloping feet—
And this is the cry that he flings to the wind:
"TO THE HILLS FOR YOUR LIVES! THE FLOOD IS BEHIND!"

He cries and is gone; but they know the worst—
The treacherous Williamsburg dam has burst!
The heath that nourished their happy homes
Is changed to a demon—it comes! It comes!

A monster in aspect, with shaggy front
Of shattered dwellings, to take the brute
Of the dwelling they shelter—white-maned and hoarse,
The merciless terror fills the course
Of the narrow valley, and rushing raves
With death on the first of its hissing waves,
Till cottage and street and crowded mill
Are crumpled and crushed.

But onward still,
In front of the roaring flood is heard
The galloping horse and the warning word.
Thank God that the brave man's life is spared!
From Williamsburg town he nobly dared
To race with the flood, and to take the road
In front of the terrible swath it mowed.
For miles it thundered and crashed behind,
But he looked ahead with a steadfast mind;
"THEY MUST BE WARNED!" was all he said,
As away on his terrible ride he sped.

When heroes are called for, bring the crown
To this Yankee rider—send him down
On the stream of Time with the Curtius old,
For his deed as the Roman's was brave and bold,
And the tale can as noble a thrill awake—
For he offered his life for the people's sake.
—John Boyle O'Reilly, in Boston Pilot.

NOT A BAD RETORT.—A young blood, much given to quizzing people, went into an eating saloon on Fulton street the other day, and with a great deal of flourish took a seat at one of the tables. A colored waiter approached him with a look of inquiry on his shining mug.

"Well, ah?"
"What have you got to eat?" asked the customer.
"O, got almost anything, boss."
"You have, eh?"
"Yea sah, shner."
"Almost anything. Well, well, give me a plate of that," said he, looking earnestly at the darkey.

The waiter returned his gaze for a moment, and catching the fellow's idea of quizzing him, he yelled to the cook at the further end of the room:

"One plate of hash!"
"What's that? I ordered a plate of that—didn't you understand? 'Almost anything'—which you spoke of."
"Well, sah, dar's most every thing in hash. Yah! yah! yah! and the darkey laughed as though he really enjoyed the joke that he had turned upon the quizzer.

A KANSAS judge believes a man and his wife to be one. He has decided they are both entitled to admission to "shows" on a ticket which says, "admit one."

Farm House Chat.

[For the Press by MARY MOUNTAIN.]

Since so much has been said about "graham" and how to cook it, I have had it in mind to present a brief sketch of

The Original Dr. Graham

As it may be found on page 103 of Horace Greeley's "Recollections of a Busy Life."

"Sylvester Graham first appeared in New York as a lecturer, I think, in the winter of 1831-1832. He had been a Presbyterian Clergyman, and was styled 'Dr.' though I do not know that he ever studied or practiced medicine. He had an active, inquiring mind and a considerable knowledge of physics, metaphysics and theology. He was a fluent and forcible, though diffuse and egotistical speaker; and he was possessed and impelled by definite convictions. He was at home in single combat alike with alcohol and atheism; but there was nothing narrow in his temperance or in his orthodoxy. He believed and taught that health is the necessary result of obedience, and disease of disobedience, to physical laws. That all stimulants, whether alcoholic or narcotic, are pernicious and should be rejected, save possibly in those rare cases where one poison may be wisely employed to neutralize or expel another. He condemned tea and coffee as well as tobacco, opium and alcoholic potables—cider and beer equally with brandy and gin, save that the poison is more concentrated in the latter. He disapproved of all spices and condiments save (grudgingly) a very little salt; and he held that more suitable and wholesome food for human beings than the flesh of animals can almost always be procured and should be preferred.

The bolting of meal to separate its coarser from its finer particles, he also reprobated; teaching that the ripe, sound berry of wheat or rye, being ground to the requisite fineness, should in no manner be sifted, but should be made into loaves and eaten precisely as the mill-stones deliver it.

Such is, in brief, the "graham system" as I heard it expounded in lectures by its author, and fortified by evidence and reasoning which commanded my general assent. A boarding-house was soon established, based on its principles, and I became an inmate thereof as well as of others afterward founded on the same general ideas, though I never wholly rejected the use of meat.

My wife, whose acquaintance I made at the Graham House, and who was long a more faithful, constant disciple of graham than I was, in our years of extreme poverty kept her house in strict accordance with her convictions; never even deigning an explanation to her friends and relatives who from time to time visited and temporarily adjourned with us. As politeness usually repressed complaint or inquiry on their part, their first experiences of regimen which dispensed with all they deemed most appetizing could hardly be observed without a smile. Usually a day, or at least two, of beans and potatoes, boiled rice, puddings, bread and butter, with no condiment but salt, and never a pickle, was all they could abide. So, bidding her a kind adieu, each in turn departed to seek elsewhere a more congenial hospitality.

"But what peculiar effects of a vegetable diet did you experience?" some will ask. I answer, much the same as a rum-drinker notes after a brief return to exclusive water-drinking. First a quite perceptible sinking of animal spirits, a partial depression of natural energies. It seemed as though I could not lift so much, jump so high, nor run as fast as when I ate meat. After a time this lowering of the tone of the physical system passed away or became imperceptible. On the other hand there was no feeling of repletion or over-fullness; I had no headache and scarcely an ache of any sort; my health was stubbornly good, and any cut or flesh-wound healed more easily and rapidly than formerly. Other things being equal, I judge that a strict vegetarian will live ten years longer than a habitual flesh-eater, while suffering in the average less than half as much from sickness as the carnivorous must. The simple fact that animals are often diseased when killed for food, and that the flesh of those borne in crowded cars from far inland, to be slaughtered for city markets, is almost always feverish and unwholesome, ought to be conclusive.

On the whole, I am convinced by the observation and experience of a third of a century, that all public danger lies in the direction opposite to that of vegetarianism. A thousand fresh Grahams let loose each year upon the public will not prevent the consumption, in the average, of far too much and too highly seasoned animal food; while all the Goughs and Neal Dows that ever were or can be scored up, will not deter the body politic from pouring down its throat a great deal more fire-water than is good for it. And while I look with interest on all attempts to substitute American wines and malt liquors for the more concentrated and maddening decoctions of the still, I have noted no such permanent triumphs in the thousand past attempts to cast out big devils by the incantation of little ones as would give me reason to put faith in the principle, or augur success for this latest experiment."

Thus endeth the quotation from Greeley, and many readers will agree with his final conclusions. I am not sure but the concentrated, highly seasoned food is the little devil paying

the way for the big one; for if we eat such food and give it to our children, just as surely do we create the morbid craving for some stimulant, the feverish thirst of an abused stomach and ill-nourished body. Let all women who fear for their dear ones study most carefully the wise and temperate diet which insures healthful tissue and a clear, strong, steady brain.

Santa Cruz mothers are rejoicing that Local Option closes up for a time the saloons that have furnished a downward path for so many souls that might have gone upward. But an election triumph does not close the fight. What shall be done for the homeless men, for the bright, restless boys, for all the sociable spirits, who abhor quiet and dullness, and will make it the business of every evening to seek amusement?

And what shall be done for the appetites already depraved and which require patient and careful "treatment" to restore normal conditions?

Culinary topics might well take front rank in the temperance discussions, for just at this crisis the table should be more healthful and attractive than ever; not in the greater abundance of knick knacks but in the irresistible excellence of plain, nourishing food.

Mrs. Greeley's table, as described by her husband, was a most effectual cure for intemperance in eating and intemperance in visiting; but could hardly be attractive except to the well-toughened few who are already in good training against "the world, the flesh and the devil."

Her "purely vegetable" antidote for visitors might have been rather funny, but the smiles would hardly "go round."

ADVANTAGES OF STUDYING BOTANY.—The most important advantage realized from knowledge of botany is the pleasure and happiness it gives. It makes us acquainted with the vegetation which surrounds us, the trees, the shrubs and herbaceous plants, and also the grasses which contribute so largely to the wealth and support of mankind in the temperate zone. Having an intimate acquaintance with these, our daily walks or rides in the country are made doubly pleasant and agreeable. The entire country belonging in a measure to the botanist, 'tis his to enjoy and admire; and he often derives more pleasure from it than its owners, because he does not have to care for or pay taxes on it.

We have known invalids to become perfectly healthy by studying botany and collecting plants. Their walks and rides were pleasant and exciting, and their attention being always drawn to new and pleasing objects, their exercise was not fatiguing. They were looking for something new, and rarely failed to find it, sometimes it was a rare and beautiful flower.

To the agriculturist and horticulturist a knowledge of botany will give more pleasure than any other science. It is with plants he deals, and the better he understands them the better he can manage them, and the more happiness he can derive from their cultivation. Such a person will be apt to make his home pleasant and its surroundings attractive with rare and beautiful flowers and fine fruits. Such a person has more of the elements of happiness at his command than a Stewart, Vanderbilt or Astor, with their millions; for these last have made the acquisition of money their chief end and aim. Their minds have not been enlarged by scientific studies, and they are strangers to the pleasures which studies afford. The many cares which they have, and which cannot be avoided in the management of such vast estates, render their lives toilsome and laborious, much more so than he who has a competency in the country, a good library in a pleasant home, and a scientific knowledge of his surroundings. He sees

"Wisdom in trees, hooks in the running brooks,
Sermons in stones, and good in everything."
—Rural Alabamian.

CANINE GRIEF.—When Jebhard Beise, the barber, hung himself a few days ago, at his house on the Hamilton road, a favorite but ninth-looking dog, that he had taught many tricks, and treated long as his companion, demonstrated his grief by crowding close to the body, licking the face and hands, and whining piteously. When the undertaker came the animal was disposed to attack him, and it was with extreme difficulty that he was removed and confined in an adjoining room. The day of the funeral the dog's lamentations were louder even than before, and although it is not known how he saw the proceedings, he jumped through the closed window and made his way to the hearse. Unsuccessful attempts were made to drive him back, but he managed to keep close to the hearse until it started, and then he was allowed to trot behind it all the way to Spring Grove. At the gate he threatened to attack the keeper, and continued with the cortege to the grave. When the earth was thrown the poor dog howled again, and when all was over, he sorrowfully departed with the other mourners.

It was an out pouring of unaffected grief deeper than is often felt for any man, and profoundly touching. —Cincinnati Gazette.

THE MIDDLE POINT OF LIFE.—Forty is an ugly corner that takes a man into the shadow of life, as it were. But better be in the shadow with friends you love than keep in the everlasting sunshine of youth, if that were possible, and see them go down in the valley without you. One does not feel his progress when all around is going on at the same rate.

Origin of the Temperance Crusade.

The ladies' temperance movement commenced at Hillsboro, Ohio, by a lady whose husband and son had fallen victims to the intoxicating cup, and all earthly means of reforming them having failed, her burdened soul cried out to God for help; and she arose in the church and asked her sisters to meet her in her own parlor to pray. A number volunteered. They held a prayer meeting in her parlor; the Divine presence was with them in power. Deeply impressed to do so, she asked her friends to follow her into the street, and they all did so, neither she nor any of the others knowing what would be done, or by what mysterious influence they were led; but, single file, they passed along the principal street, singing as they went, until they came to the leading saloon; and led by the same unseen hand, they entered it, and plead with the proprietor to quit the business; but he said that it was his only means of support, and his family would suffer and starve if he quit; but he gave them permission to hold a prayer meeting in the saloon; and they sang and prayed until all the ladies present had led in prayer, and there was a wonderful manifestation of Divine power accompanying the exercises. They again treated the saloon-keeper to desist; he said he would if he had any other means of support, but he could not as he was situated. In a moment the lady asked for a sheet of paper, wrote out a subscription, and, in as brief a time as the names could be written, \$1,000 was subscribed by the ladies, the wives of bankers and merchants. The man closed his saloon, and it has never been opened since. He is now converted, and a member of the church. This was the unpremeditated beginning of this wonderful movement.

ARE WE A GOOD LOOKING PEOPLE?—We begin to think we are. Robert Dale Owen, in his reminiscences, recently published, says he saw more handsome women in New York or Boston in five weeks, than he saw in Italy in as many years. And now comes Kate Field—and women are better, though severer, judges of this matter than men—who declares that there are more Greek heads in the United States than in Greece, adding:—"The purest classical profile known to me is that of a New England woman." The same writer recently asserted that the ill-health of American women was owing, generally, to mismanagement in the way of diet and habits, and that when true to themselves they hold out better than English women, besides having a better capital of good looks to begin with. Being at one time among the fox-hunters of England, she was surprised at the vigor of the septuagenarian idlers. But recently in New York honors were deservedly paid to the living Peter Cooper, on the occasion of reaching his eighty-third birthday. If he had been a fox-hunting English squire, or an M. P., the whole world would have been called upon to admire the spectacle. But there are a great many such fine old fellows scattered about in this country. What has this to do with good looks? A vast deal; beauty of symmetry, a good organization is good condition, and to be anything more than an incident of youth—a phosphorescent light playing over decay—it must be the accompaniment of sound health, leading to longevity. There is no reason why, with the spread of intelligence this should not be on the increase in this country, thus enhancing the good looks of the people, in which we believe they, particularly the women, have been endowed by nature as abundantly as any other. —Boston Journal.

INFLUENCE OF NEWSPAPERS.—Small is the sum that is required to patronize a newspaper, and amply rewarded is its patron, I care not how humble and unpresentable the gazette which he takes. It is next to impossible to fill a sheet with printed matter without putting into it something that is worth the subscription price. Every parent whose son is away from home at school, should supply him with a newspaper. I well remember what a marked difference there was between those of my schoolmates who had, and those who had not access to newspapers. Other things being equal, the first were always decidedly superior to the last in debate, composition and general intelligence. —Daniel Webster.

"An effeminate man," says a recent writer, "is a weak poultice. He is a cross between table-beer and ginger-pop, with the cork left out; a fresh-water mermaid found in a cow-pasture with her hands filled with dandelions. He is a tea-cupful of ayalab; a kitten in trousers; a sick monkey with a blonde monache. He is a vine without tendrils; a fly drowned in oil; a paper kite in a dead calm. He lives like a butterfly—no one can tell why. He is as harmless as a pennyworth of candy, and as useless as a shirt-bottom without a hole. He is as lazy as a slug, and has no more hope than last summer's fly. He goes through life on tiptoe, and dies like cologne water spilt over the ground."

A MAN who had ague for a long time, and had become so reduced by it that his life was despaired of, was advised to make his will. One of his bequests was, "I give and bequeath to Mr. —, the parson of this parish, these plaguey fits of the ague." This legacy so tickled his fancy that he burst out into a loud and long-continued fit of laughter. From that time the ague left him.

No Children.

A home without children is like a heaven without angles. We often hear landlords prefer some of their tenants because they have no children. Advertisements and houses to let, or boards, are qualified by words "without children." Children are an incumbrance, nuisance, and are not wanted. Supposing to change the order, and say, select circles and classes of society, and single persons and childless parents; houses and homes where no little lips prattle, no little voices cry. How stiff and prim the parlors, how orderly and me—chanical the company, how cold and formal the salutations; there is no romp nor fun there; no scratches on the furniture; nothing awry, and no glees. The guests are like fish; cold-blooded; no throb of paternal feeling beats in those veins; no pets or playthings, because no children are there. Any of the company are free to bring in a kitten or poodle, with weak eyes, and the corners of his mouth streaked in channels, like the stream that flows from the lips of a tobacco chewer; to be fondled and kissed, and lie on the lap of its devoted mistress. But no children. Better sweep the flowers from the soil, better pluck the stars from the sky; yes, let paint and varnish, and upholstery go, but let the children come. Next to the song of an angel is the laugh of a child. And the heart that can feel, and the lips that can say, I hate children, should exchange places with Lot's wife. The man or woman that has fallen, no matter what the crime is, who retains in his soul the love of song, of flowers and of children, has not yet been left without the ministry of angels, to woo and to win him back to virtue. And the home that has not echoed to the merry voices of childhood, has not yet been baptized to its name, even through formal prayers may have dedicated it to the purpose of a home. However close may be the affinities of loving natures, the bond that perfects that union is only found in parentage. The full heart is never known until paternal love reveals it.

THE BIBLE IN AMERICA.—In the year 1777, at a time when the population of our country was only about three millions, and all the Bibles in the entire world did not exceed four millions, a memorial was pending in Congress on the subject of Bible distribution and the printing of an edition of thirty thousand copies. The committee to whom the memorial was referred, finding it difficult to procure types and paper, recommended Congress that twenty thousand English Bibles from Holland, Scotland, or elsewhere, should be imported at the expense of Congress into the different States of the Union. But owing to the existence of the war, no English Bible could be imported, and no one knew how long the obstacle to importation would continue. It was accordingly resolved, in 1781, that Congress recommend to the inhabitants of the United States an edition of the Bible printed by Robert Aiken of Philadelphia, and that his laudable undertaking in publishing the edition, at the risk of private fortune, was worthy of the highest approval. Before this no Bible had ever been published in the English language having an American imprint. Among all the facts recorded and filed in our revolutionary archives, we no of none of more moral dignity than this act of homage rendered by the rising nation to the word of God—a nation indeed destined to become noble and puissant—"kindling her eyes at the full mid-day beam, and purging and unsealing her sight at the fountain itself of heavenly radiance."

A BLOATED ARISTOCRAT SELLING BEER.—He is the son of a titled gentleman of England. The utmost care was taken of his early education, and he was graduated from the University of Cambridge, one of the first of his class. When his school days were ended he passed several years in foreign travel, like others of his class, and then returned to England to enjoy life. The round of dissipation at London, on the turf and in the gambling-hell, speedily made him short of funds, and when, a few years since, his father died, he encumbered his estate for money to pay his debts, and left England. The estate he cannot alienate, but the proceeds go for a number of years to his creditors. He has a small annual allowance of money, and from this, with such occupation as he is able to get, he manages to eke out an existence. His education fully fits him for teaching, but he has no taste for such an employment, and, besides, he has some bibulous habits that wouldn't appear well in a school-room. About three years must elapse before the income from his estate will have amounted to enough to pay his debts, and meantime he is selling beer in a Des Moines saloon.—*Des Moines Register.*

A QUESTION.—Which shall you do, smile and make others happy, or be crabbed and make everybody around you miserable? You can live among flowers and singing birds, or in the mire surrounded by fogs and frogs. The amount of happiness which you can produce is incalculable, if you will only show a smiling face, a kind heart and pleasing words. On the other hand, by sour looks, cross words, and a fretful disposition, you can make others unhappy almost beyond endurance. Which will you do? Wear a pleasant countenance—let joy and love beam in your eye. There is no joy so great as that which springs from a kind act or pleasant deed; and if you do a kind act during the day whereby some fellow has been made happy, you will feel its glorious influence at night when you rest, the next morning when you rise, and throughout the day when you go about your daily business.

Young Folks' Column.

Rare Justice.

A crab and a turtle lived under a myrtle,
Just in the pond at the foot of the hill;
The crab was the back—sharp, snappy and black;
The turtle was master—fat, pokey and still.

The turtle gave orders from off the pond's borders;
The crab did the marketing all by himself,
And worms fat as butter and all full of splutter
He brought for his master to lay on the shelf.

They lived there together through all the line
weather,
And then came the autumn with whirlwind and gale;
The pond grew an ocean, and in the commotion
The turtle imagined his victuals were stale.

"I've pains in my liver," said he, with a shiver;
The worms are like shavings, the snails have no meat.
I'm meagre and hollow; I was an Apollo;
Go quickly and get me some food I can eat."

They argued together. The crab said the weather
Was much too severe for his delicate frame;
"The wind," said his master, "will blow you the faster!"
Then kicked the crab out with no scruples or shame.

Ten sprawls! he is landed, well watered and sanded;
One groan! and he starts for the inn just ahead;
He's nobody's chicken, to mind for a kicking;
He'll have his revenge on the turtle instead.

"A splendid old turtle lives under the myrtle,"
He cries to the landlord who comes to the door;
"Go get him for dinner before he grows thinner."
Go quick! I will show you the way to the shore."

The crab went the faster, and reached his old master
In time to inform him of what he had done.
"O, whippity-whoop, sir, you'll make a fine soup,
sir;
I'll watch while they fix you, O, that will be fun!"

The landlord looked gently; but very intently,
All over the crab who had acted as guide;
Then said: "You are tender and dainty and slender;
You'll do for my supper, well buttered and fried."

The crab cried in terror, perceiving his error;
The landlord walked off with both master and man.
They boiled the fat turtle from under the myrtle,
And fried the false crab in a hot buttered pan.
—R. W. Esterbrooks.

A Fable.

In a certain zoological garden two bears were chained several rods apart, which were fed each with a certain kind of fruit.

Now there were in the same garden a half dozen monkeys who thought it would be nice if they could manage to get a portion of these luscious fruits for themselves. Accordingly they persuaded the bears that, variety being the spice of life, it would not only be grateful to their palates, but conducive to healthy digestion, if they would exchange with each other a portion of these fruits at each meal. But the chains being too short for the bears to come in a convenient distance of each other the exchange could be effected only through the kind offices of the six monkeys aforesaid. Accordingly the truce was passed by bear No. 1 to the first monkey, who passed it to the next, and so to the last, who delivered it to bear No. 2. The fruit in exchange passed back to bear No. 1 in like manner.

Now each monkey through whose paws the fruit passed thought that a few bites was no more than a just compensation for his services, and it happened when the fruit reached its destination little more of it was left than the cores. So the bears grew lean in spite of improved digestion, and the monkeys grew fat, and put on many airs, and winked at each other as they passed the hungry bears in the course of their employment.

The keeper of the gardens seeing this, and ascertaining the cause, lengthened the chains of the bears, and so the services of the monkeys were dispensed with, and the bears grew fat again.

But the monkeys set up a howl at being deprived of their legitimate employment, and berated the bears for their ingratitude.

Hæc fabula docet—a lesson which patrons should ponder.—*Ex.*

A HORSE AND HIS LITTLE FRIEND.—On a small farm in France was a young horse, whose temper was so untractable that all attempts at taming him failed. The farmer would have parted with him but for his youngest child, a boy about six years old, to whom the animal showed a great liking. He would come to his young friend and receive food from his hand. He seemed pleased to have his shaggy neck patted by the little fellow. One day, all the family were out in the fields, excepting the mother, who, being busy in the house, left the child playing in the yard, when he fell into a pond, and would have been drowned but for the timely aid of his friend, the horse. The animal happened to be loose in the stable, and hearing the familiar voice, came out at a trot. Seeing the child struggling in the water, he seized him by his garment, and drew him out at the very moment the mother came to look after him.

LITTLE SINS.—A little hole in a ship sinks it; a small breach in a sea-bank carries all away before it; a little stab in the heart kills a man; and a little sin, as it is often improperly called, tends to his final destruction. A little drop has been many a man's ruin—every drunkard began with a single glass.

He that will eat the kernel must crack the nut.

Good Health.

The Future of Hygiene.

Dr. Jarvis, in the *Sanitarian*, inquires: Where shall sanitary science be taught? And to whom shall it be taught? I will answer this question by and by. In the meantime, let me ask: *Who need sanitary instruction?* In my opinion, the people need it—and the medical profession need it. Let the elements of hygiene be taught in every common school, in every academy, in every private school, and in every college in the country. The bodies of our youth need the saving grace of cleanliness. And when they grow up they will teach their children the simple and health-saving rules of hygiene. But where shall we begin to dissipate ignorance? Why, of course, begin with the medical profession, and begin with undergraduates.

It was a damaging thing, when one of the officers of health of New York city gravely informed Judge Whiting that "highjinnicks" meant "a bad smell arising from dirty water,"—damaging both to politics and medicine, but most damaging to the people, whose most important interests were in the hands of ignorant keepers.

But what shall I say of medical schools and hygiene? If medical schools taught hygiene *per se*, and insisted upon their graduates being "posted" in the principles of sanitary science, officers of health would at least have the merit of being sanitarians.

What hope is there for hygiene in this country? Will it succeed? Can it be planted among the people? And will it grow and flourish? In my opinion, hygiene has a grand future in this country; I will tell you why I think so. The American youth—and especially those who come here to study medicine—have a practical turn of mind; they do not believe much in theories—they believe in the useful first, and after that, the beautiful. It is an acknowledged fact, that our medical men are among the best practitioners in the world; they have more science on the other side of the ocean, but our students are always wanting to know what will cure their patients, and they generally find out, too. Now, I hold that this practical turn of mind is the best kind of soil for the cultivation of sanitary science. Let the seed be planted there—it will take root and grow, and it will be perennial; the seed will be scattered over the length and breadth of the land, and the harvest will abound more and more; the calamities that befell Memphis and Shreveport will not occur again; the beauty and healthfulness of our rivers will not be marred by dead animals, by the refuse of factories, and by sewage; there will be more to live for, and life will be more desirable; there will be less sickness and less need of medicine. Hygiene will be invited to come to our banquets; she will be a perennial guest in our homes; she will be the presiding genius of our hospitals; she will be sculptured in marble and wrought in bronze in our public parks; and she will be raised high above medicine, and enthroned in the Capitol of the nation with Liberty.

PETTENKOFFER says, in the *Herald of Health*: The difference of temperature between a place sheltered from the rays of the sun and a neighboring one exposed to them, produces a motion, a current, because bodies of air of unequal temperature are also of unequal weight. They are not in equilibrium, and seek to re-establish it by motion. Any one may easily convince himself thereof who, on a hot day with calm air, walks alternately over places exposed to the sun and sheltered from it. As soon as he comes into the shade of a cloud, a house or a tree, he feels at once a soft wind rising. The shade not only protects us against the direct solar rays, but it increases also the ventilation of the shady place. The fan acts on the same principle. The pankah in the bungalow, by increasing conduction and evaporation, keeps the blood of the European at its normal temperature of 99°. When the temperature of the air rises to 140°, when the walls of the bungalow are no longer cool enough to provoke radiation from the heated human body, man is reduced to cooling by evaporation. It greatly depends upon the state of dryness of the air how far he succeeds. The drier the hot air is, the better is it able to withdraw water from the skin, from the respiratory organs, from the wetted floors, and consequently the more heat from the human body. The moister it is the less it is able to act thus. In order to give you an idea of the quantitative differences in play, we will consider the losses of heat by respiration as they take place at different temperatures and different conditions of moisture of the air we draw in. In twenty-four hours the quantity of this air is on an average 2,000 gallons. It has been calculated that by the process of respiration a person loses 1,172 caloric units when the air is at 32° and quite dry, 1,116 when it is half saturated by water, 1,060 when it is completely so. The difference between the two extremes is only a small percentage of the whole loss. But when the temperature is 86° the above numbers would be respectively 1,096, 760, and 420.

DR. BEARD, of New York, says the golden decade in the age of the mind, is between thirty and forty, the silver, between forty and fifty, the brazen, between twenty and thirty, and the iron, between fifty and sixty years. It is impossible, of course, to fix definite limits, which would apply equally to all.

Checking Coughing, Sneezing, Etc.

There are many facts which show that morbid phenomena of respiration can also be stopped by influence of arrest. Coughing, for instance, can be stopped by pressing on the nerves on the lip in the neighborhood of the nose. A pressure there may prevent a cough when it is beginning. Sneezing may be stopped by the same mechanism. Pressing also in the neighborhood of the ear, right in front of the ear, may stop coughing. It is also true of hiccup, but much less so than for sneezing or coughing. Pressing very hard on the top of the mouth inside is also a means of stopping coughing, and I may say that the will has immense power there. There was a French surgeon who used to say, whenever he entered the wards of his hospital, "The first patient who coughs here will be deprived of food to-day." It was exceedingly rare that a patient coughed then.

There are many other affections associated with breathing which can be stopped by the same mechanism that stops the heart's action. In spasms of the glottis, which is a terrible thing in children, as you well know, as it sometimes causes death, and also in whooping-cough, it is possible to afford relief by throwing cold water on the face, or by tickling the soles of the feet, which produces laughter, and at the same time goes to the gray matter that is producing the spasms and arrests it almost at once. We cannot always prevent cough by our will; but in many instances these things are possible, and if you remember that in bronchitis and pneumonia, or any other acute affection of the lungs, hacking or coughing greatly increases the trouble at times, you can easily see how important it is for the patient to try to avoid coughing as best he can.—*Ex.*

Lead Poisoning.

The *Annales de la Societe de Medicine de Grande, Belgium*, speaking of lead poisoning caused by the use of a hair preparation, relates the case of M. R. W., aged fifty-five, who was suffering from muscular rheumatism, affecting chiefly the deltoid and other muscles of the shoulder; the patient had also lost the use of both arms. Dr. Crocker, the attending physician, had the painful parts wrapped up in cotton wadding, and prescribed lime juice and narcotics. A great improvement was rapidly felt, but it only lasted for a short time, for a month afterwards the patient's fingers were struck with paralysis. No blue tinge could be seen on his gums, though he had suffered with severe colics at various times. The water used for drinking purposes was obtained from a brick well and kept in wooden pails; the culinary utensils offered nothing worthy of notice.

At last, after long researches, Dr. Crocker discovered that for the 15 years preceding, his patient had been in the habit of using, for blacking his hair, a certain liquid that he prepared himself by adding to a pint of water two teaspoonfuls of sugar of lead and three teaspoonfuls of sulphur. This he used to apply to his hair at least once a week. The physician stopped entirely the use of the mixture, and under the influence of electricity and the use of iodide of potassium the colics disappeared and the patient recovered entirely.

AN INCESSANT WANT.—One of the incessant wants of man is air. We want air mainly to nourish us and to keep us cool. The quantity of air inhaled and exhaled by an adult in 24 hours amounts on an average to about 300 cubic feet, or 2,000 gallons. What we take in and give out during 24 hours in the shape of solid and liquid food, occupies on an average the space of five and a half pints, which is equal to one three-hundredth of the volume of the air passing through our lungs. It will astonish you to hear, perhaps for the first time, that this amounts to 730,000 gallons in one year, and to be reminded of that continuous work which goes on day and night—a never ceasing bellows-blowing, by which the organ of our life is kept in play. Of course the quantity of air flowing round the surface of the human body is greater than that. Do not object that air is something so light that it need not be taken into account. It has some weight; water, certainly, is 770 times heavier, but our daily 2,000 gallons have for all that a weight of 25 pounds avoirdupois.

NOXIOUS GASES IN WELLS.—Lives are frequently lost by noxious gases in wells. This may be prevented by the adoption of the following very simple means: Take some pieces of carpet, or common sacks, and make them up into a loose bundle, nearly as large as the area of the well. Enclose in it a brick to give weight, and attach to the bundle a rope of sufficient length to reach the bottom of the well. Throw this bundle down the well, and haul it up again as quickly as possible. Repeat this operation rapidly for ten minutes, and the atmosphere of the well will become quite innocuous, as may be proved by letting down a lighted candle. The bundle, as is easily understood, carries before it a quantity of fresh air from the surface, and this, of course, displaces the foul and dangerous air from the bottom.

BATHING.—Delicate people may bathe daily if they do it in a warm room, in tepid water, and use much friction and little water. They ought to bathe at least three times a week. The morning is a good time, and so is the middle of the forenoon.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. H. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

Office, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year \$4; six months, \$2.50, three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week, 1 month, 3 months, 1 year.
Per line.....25 .50 2.00 5.00
One-half inch.....1.00 3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, June, 13, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Discontent in the Country; The Russell Separator and Engine; Reports from the Hay Crop, 369. Pomona in San Francisco; The Vanishing Forests; Alfalfa as an Exterminator; The Potato Panic; To the Rescue; Improper Standard of Wages, 376. Cheese as an Article of Food; The Dairying Season at the East; Permanent Faucet for Beer Casks; Sowing Small Seeds, 377. Patents and Inventions, 380.

ILLUSTRATIONS.—Portable Threshing Engine; The Russell Separator, 369. Brize's Improved Fanet, 377.

CORRESPONDENCE.—Harrowing Small Grain; Domestic Liberty, Equality and Fraternity; Semi-Tropical Fruits; From Washington Territory; Sacramento Items, 370. Vaccinating Dogs, etc., 371.

SHEEP AND WOOL.—Sorting the Flock—Selling Wool at Home; To Wash or Not to Wash Sheep, 371.

HORTICULTURE.—Flower Gardens; A Beautiful Rose; Likes and Dislikes of Vegetable Neighbors; Worms After the Grapes; Remedy for Slugs; Camphor for Seeds, 371.

THE APIARY.—Bee Keeping Pays; Rich Soil Best for Honey-Producing Plants; Movable Homes for Bees; Is Black Comb Useful? Why Don't Farmers Keep Bees? 371.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings, etc., 372-3.

CATTLE BREEDERS.—Devons as Dairy Cows; Maxims in Cattle Breeding; Thoroughbred and Full-blood; English Short-horn Prices; Sale of Blood Cattle, 373.

THE HORSE.—Cold Sweat; Brood Mares for Spring; Horses in India; Pawing Horses, 373.

HOME CIRCLE.—The Ride of Collins Graves (Poetry); Not a Bad Retort; Farm House Chat; Canine Grief; The Middle Point of Life; Origin of the Temperance Crusade; Are we a Good Looking People? Influence of Newspapers, 374. No Children; The Bible in America; A Bloated Aristocrat Selling Beer, 375.

YOUNG FOLKS' COLUMN.—Rare Justice (Poetry); A Fable; A Horse and his Little Friend; Little Sins, 375.

GOOD HEALTH.—The Future of Hygiene; Checking Coughing, Sneezing, etc.; Lead Poisoning; An Incessant Want; Noxious Gases in Wells; Bathing, 375.

AGRICULTURAL NOTES from various countries in California, 380.

MISCELLANEOUS.—San Jose Farmers' Club, 373. Waterproof Structures; Petroleum for Fuel; Cleaning Glassware; Detection of Curarine; Inventors' Mistakes; Grain Mixture in Distemper; Adulteration of Albumen; Method of Rendering Photographs Soft and Brilliant; Tanning; Aromatic Mixture; The Time Taken in Nerve Telegraphy; Mowing and Reaping Machines; Mineral Waters; Precipitation in Fresh and in Sea Water; The Centennial of Chemistry; Recipes for Gine; Rendering Wood Uninflammable, 378.

RETURN TO WHEAT GROWING IN WESTERN NEW YORK.—The farmers of Genesee Co., N. Y., are returning again to wheat growing. For a term of several years, "Genesee wheat flour," once the most popular brand in America, has been almost unknown in the market. Wheat growing was abandoned temporarily in Genesee county, in consequence of the continued presence of the "midge;" but this pest seems to have entirely disappeared, and the land meantime has recovered much of its original character by change of crops. The locality was once famous for the abundance, as well as the quality of its wheat crop, and was the principal reliance of that and other parts of western New York; but for several years past they have not raised wheat sufficient for their own consumption. Where farmers are so situated that they can abandon the field to pests like the midge, and stop the growth of what they feed on, it is undoubtedly the most effective mode of warfare. Hop-growers have practiced it most successfully, in regard to hop-lice, and by skipping one or two seasons only, the vermin disappeared.

The hop culturists of Santa Clara valley expect a large crop of hops this season. The season has been very favorable so far, and the vines are now to the top of the poles. A year ago, although the season was earlier for general vegetation than the present, the vines in that valley were not over half as large as now.

The Vanishing Forests.

The public have been called upon of late to consider the fate that seems to await our native forests, and the probable consequences that would follow their destruction. It is generally admitted that the subject is worthy of the serious consideration claimed for it, and the public are not disposed to leave it in the hands of mere theorists. It has become a subject of popular interest, and even though no specific remedy is offered, the sense of individual responsibility, and the expressed demands of public sentiment, will establish a more economical use of timber and do much toward preventing actual waste.

This is commendable; but with the prudent forethought and sense of responsibility manifested here, it is evident that an alarm, which can produce no good and which is also unreasonable, is blending itself with this subject.

The bugbear that the destruction of our forests is to entail upon the country an almost perpetual drouth is already creating a degree of uneasiness in the public mind. The fact that forests have a beneficial effect on the surrounding country, by producing an increase of rain, is indisputable; and the prospect of their entire removal, with nothing substituted to perform this office, would be truly alarming. But it is confidently asserted, and the opinion is gaining ground, that railroad tracks and telegraph wires are already producing, in the new countries which they are intersecting, effects corresponding with those for which the forests have been accredited.

A change, of this character, is already noticed in the climate of the plains, which, it is claimed, is produced by the Pacific railroad. The same result has been remarked in other sections of the west. It is also claimed that the severity of thunder-storms is materially modified by the same influences—the iron rails and telegraph wires attracting the electric current and diffusing an equality through the atmosphere.

No greater stretch of imagination is required to find a remedy for the supposed impending evil that is called into play in the anticipation of it. And, without any aid from imagination, but with the light of science alone, we may safely reckon on a supply of minerals from the spots that we are denuding of their forests that will, to a great extent, supply their loss—furnishing materials for much that is now constructed of wood only, and throwing into disuse much that is now considered indispensable.

Are we not justified in trusting in Providence to supply the actual wants of each generation, or of the world at large, as well as those of the isolated individual?

Alfalfa as an Exterminator.

In a recent issue we had occasion to allude, incidentally, to the ability of alfalfa to grow down dominant weeds, even the wild morning glory. Our readers declare that this is the greatest achievement yet for alfalfa—if it can do it.

We have testimony from reliable sources that it has been done most successfully. From its services in similar situations it was confidently hoped that it would grow down even wild morning glory; and was accordingly put to the test. The results, as far as heard from, are satisfactory. It is evidently the great depth to which its roots strike that gives this plant its remarkable overcoming power. It does not blight anything by its presence, but by the depth of its resources it is enabled to achieve a growth which allows "no rival near its throne." If alfalfa can grow down the wild morning glory it can grow down anything with which the farmers of California have to contend.

Every agricultural district has its local pest in the form of some obnoxious weed. Every good soil has its accompanying evil; the better the soil the more rampant the evil; and if the farmers of various localities can find in a valuable crop like alfalfa an efficient auxiliary to aid in exterminating their weedy enemies, it will certainly be an invaluable acquisition. Its record in this connection will be watched with much interest; and we hope to hear from those who have put alfalfa to this test.

There is still another important benefit to be derived from the cultivation of alfalfa; and one which has hitherto received little, if any consideration. By perforating the subsoil in search of its deep-hidden nourishment, it becomes a conducting medium for the fertilizing properties existing beyond the reach of ordinary vegetation.

It is to accomplish this that subsoiling is resorted to; and in districts where ditching is extensively practiced the above object, namely, to open up a communication with these deep fertilizing reservoirs, is considered scarcely secondary to that of getting rid of surplus water. Nothing could more effectually accomplish this object than the thorough perforation of the subsoil by the vigorous roots of alfalfa. And this communication once opened it will not again be entirely closed upon us, even though alfalfa were withdrawn from the soil as a crop.

According to present indications this will speedily become the source upon which the farmers of California will rely for assistance in securing three important and distinct purposes: a large amount of good fodder, an aid in ex-

terminating obnoxious weeds, and a means by which the fertilizing properties of the subsoil can be reached.

The Potato Panic.

To deny that there is sufficient cause for alarm, in regard to the prospects of the potato crop, would be as short-sighted, and would probably result in as little good, as to throw up our hands in despair and aid in spreading a panic about a supposed approaching potato famine. Contradictory reports are continually coming in, but the statement that the almost sensational reports of last week were without foundation is also contradicted by good authority.

The reports of last week conveyed the impression that the blight was principally among the early potatoes. Later accounts, however, state that the late crops are most affected. The irregularity of the course of the present blight, with other erratic features, corresponds exactly with the characteristics of the potato-rot of the East. And it is on account of this family likeness, and because we have reason to believe that the veritable potato-rot is obtaining a foothold in the State, that we are principally concerned. Cases, however, are reported which even at present are ruinous to individuals. One case of particular hardship is reported. A farmer near Coloma had planted potatoes to the exclusion from his ranch of all other crops; this being a reliable and paying crop in that locality. His are among the late planted potatoes, from which the most discouraging accounts are received.

If this is in reality the regular potato-rot, predictions and hopes, founded on ordinary experience, will alike come to naught. Nothing that theory has devised, or that prudence and energy have practiced, has been of any avail in arresting its progress.

One of the peculiarities of the present potato crop is a decided inclination to reproduction on the part of the growing tubers. On many of these, minute potatoes are forming, to the serious detriment of the crop; this second growth being valueless of itself, and ruinous to the regular crop. This is not supposed to be connected with the blight. It is probably owing to warm and inopportune rains.

To the Rescue.

Yolo and other counties are in want of hands for harvesting. In some places the business and professional men of the villages have been appealed to in the emergency to come into the field and lend a hand. Now, you stout men who are loitering about San Francisco "waiting for something to turn up," go into these districts that are scantily supplied with help, and turn up the hay and grain. The city will soon recover from its loss by your absence, and if you wish to return at the close of the harvest season, you will find San Francisco just where you left it, and you will also find that the something for which you were waiting to turn up has really been waiting all this time to be turned up. Now is the time to make your debut on the agricultural stage. Go when you are wanted and proper allowance will be made for your inexperience. Do not go simply to make a raise of a little coin to bring back here and scatter it among the saloons of San Francisco; make up your minds to locate in the country.

What ability you possess will be recognized and appreciated more readily in the country than in the city. Of course the grand army of harvesters will be disbanded at the close of the season, but this season will be a long one to those who follow it in its glorious course through the later succeeding districts, and if a man takes a fancy to any particular locality, and endeavors to adapt himself to it, he will find but little difficulty in becoming a permanent fixture there.

And you, who want this help, should manifest a willingness to come half way in forming this co-partnership. Do not be too critical; bear in mind that all who hail from the large cities are not "scalawags." Good men are on the road without even a pair of blankets. Suppress your somewhat too frequent flings at "city farmers," and do not be quite so sensitive about "those fellows who come here from the East to show Californians how to farm it."

SOIL FOR POTTED PLANTS.—One of our correspondents asks for information in regard to soil for potted plants. Favorite plants are as often spoiled by pampering as are other pets. The former as well as the latter thrive best on a plain diet. "Richness" is the great desideratum with amateurs in plant-growing; and to secure this they too often resort to compounding of soils, using animal or artificial manures to excess. A soil in which decayed vegetable matter is liberally mixed is the best. An experienced florist informs us that in furnishing his plants with soil he endeavors to obtain it in its original condition, going among the forest trees. He declares that the presence of the live oak is an especial indication of a good healthy soil, and he obtains it when practicable from about the roots of this tree.

On the Mount Diablo summit road there is a laurel tree growing, with a wild grape vine growing out of it.

Improper Standard of Wages.

The benefits conferred upon agriculture by amateurs and adventurers were pointed out in a recent number of our paper, and the obligations that the strictly practical farmer is under to his less prudent neighbor were alluded to. But, although these obligations are numerous, and some of them important, they have brought in their train some serious evils. One of the most prominent of these is the establishing of a scale of wages that the profits of farming will not warrant.

The extravagant estimate formed by these enthusiasts of the profits to be derived from farming has induced them to carry out their plans regardless of expense; and in their impatience to get the work done, they have, in many cases, employed inexperienced hands at wages quite above the range of ordinary farming. The workman and his employer have, of course, the right to adopt any scale of wages agreeable to themselves; but the practice of overbidding for help has operated very injuriously in farming. Manufacturers may mark up their goods to correspond with the advance in wages, and their readiness in yielding to strikes is generally prompted by the conviction that the advantage will be as great to themselves as to the strikers.

But the market prices of farm produce are not governed by the cost of producing it. Combinations among manufacturers, or protective tariffs, may enable them to regulate the price of their goods by the demands from laborers or from any other quarter. But such combinations would be powerless among farmers, and protection seems to be out of the question here. The advantages derived from the early supplying of a temporary demand on manufacturers, or the importance of hurrying forward labor contracts to their completion, may warrant a material advance to mechanics and laborers for a season, to be reduced according to the decreasing demand. But a mere glance at the operations of farming will afford ample proof that such a system is inapplicable here, though the influx of beginners in agriculture has been composed mainly of those formerly engaged in these other callings, who have introduced the rules of their former business into that in which they are mere experimenters.

They are very desirable employers, for they pay extravagant wages and are not very exacting masters, being incompetent judges of the quality of work and of the amount of work that should be done. But they afford a standard for working people to refer to in their estimate of wages, or of the amount of work to be performed. The established system of farming has, perhaps, been too unyielding; and the economy, bordering on privation, that was essential to their own success heretofore, has inclined farmers to expect that those who are to take their places will submit to the same course of exacting labor at low wages. But the employers of working people in the country are now called upon to adopt the changes that working people in the cities have effected in wages, etc., under circumstances that will not warrant it.

It is an old saying that "fools build houses for wise men to live in," and perhaps fate has ordered that this generation shall be compelled to expend its labor and money in making the waste places glad for those who are to come on the agricultural stage hereafter. But we may console ourselves with the assurance that they, in their turn, will have the same thankless task imposed upon them. We should not forget that we are under quite as many obligations of this character to our progenitors as we can possibly entail upon the coming generation. But it is not required of us to waste our strength or spend our money foolishly. And, realizing how much is required of us, the demand for judicious management seems all the more urgent.

Pomona in San Francisco.

We are now enjoying the glorious succession of fruits, which the country spreads before those who hunger and thirst after the good things which Pomona dispenses. Strawberries have had, for them, a long, and of course a glorious reign. Cherries are now in full supply, exhibiting a great diversity of size, color, price, and even of flavor. Apricots are common on our fruit stands, their blooming cheeks displaying a delicacy of tint which the ladies of San Francisco can hardly equal, with all their skill at painting. Green apples, for cooking purposes, are already in market, and ripe ones are announced to appear within a few days. No postponement on account of weather. Then we shall have blackberries, raspberries, peaches, pears and grapes, crowding into the city in thick profusion. But while this rich abundance of fruit is thus poured into the lap of San Francisco, how is it that her children are stinted? Families can probably purchase fruit at prices sufficiently low; but San Francisco, proper, takes its meals at the restaurant; and here it pays ten cents for about the third part of a pound of strawberries, which cost the restaurant keeper five cents a pound. Is there not something rotten in the fruit market, as well as the fruit itself, which is allowed to rot there while waiting for purchasers?

Let those who are writing essays on the healthful effects of fruit-eating, give a thought to the healthfulness of the fruit market.

Hay is worth \$100 per ton at Belmont.

Cheese as an Article of Food.

The claims of cheese as a wholesome, nutritious and economical article of food, have been ably and persistently urged upon the American people for a period of several years. Dairymen's associations have awarded ample prizes for the best essays on this subject, with a view to increase the home consumption of cheese; and physicians and writers on hygiene have rendered assistance that was at the time supposed to be valuable. But the American people, to the evident disgust of the dairymen and their zealous champions, did not take to the cheese which was set before them, or rather to the cheese which was not set before them. There was a reason, however, at the bottom of the subject, or at the bottom of the pockets of the expected cheese-eating public, which the dairymen and essayist did not fathom—the public could not afford to eat cheese.

The cheese had been scientifically analyzed, and its component parts exhibited in due order; but the would-be consumers were more interested in the analysis of the contents of their purses. There were good reasons presented by the dairymen, showing that the people ought to buy more cheese; but the latter presented a counter reason which there was no getting around—they had nothing to buy with. These prize essayists will find no difficulty in convincing the masses that cheese is both wholesome and nutritious; but they will earn their prizes before they convince the working people of this country that 25 cents paid for a pound of cheese is as economically expended as in bread, beef or bacon.

With the present low prices of flour, meat and vegetables, even butter is only placed upon the tables of the working people as an article of luxury; while cheese is excluded altogether. At our popular restaurants here in San Francisco, where perhaps three-fourths of the workmen of the city obtain their meals, cheese is scarcely ever placed before the customer. Meat, fish, vegetables, even pastry, are furnished in sufficient abundance and variety; and a customer can obtain a satisfactory meal of these, with tea or coffee, for less than the price of a pound of cheese. They would like to have this added to the list of good things on the table, but they are aware that the proprietor, in furnishing them with a good wholesome meal at the low rates which he charges, cannot afford to include dispensable luxuries. And if those who are in search of something commendable in housekeeping would take the trouble to bestow a glance upon the arrangements of the affairs of the humble families of the cities and villages, and not expend all their regard upon the cottages of the country, they would find that the worthy women having charge of these establishments exhibit, among other evidences of fitness for their station, a remarkable aptness in devising substitutes for whatever is placed beyond their reach by expensiveness. They will find that cheese is prominent among the articles that were once considered economical articles of food, but are now classed among luxuries.

These inventive and saving housewives have caused this to be only a partial privation, substituting other delicacies; and no matter how thoroughly the subject may be discussed by the advocates of a cheese diet, nothing but a reduction in the price of cheese will make it popular among the consumers. It is supposed that Americans ought to feel proud of our dairies; but the thousands who are debarr'd year after year from the eating of cheese, and look on, seeing the manufacturers and dealers in this product becoming rich, cannot be expected to manifest a great amount of zeal in glorifying cheese. If the working people of the cities and villages go out of their way to patronize the dairy interest, they will certainly deserve some credit for returning a kiss for a blow. This appeal to their pockets cannot be made to their sympathies; for the fact of this being an article in abundance in their midst, but which they are forbidden to touch, has created a feeling more difficult to combat in this discussion than if the luxury were an imported article.

It was our good fortune, a few years since, to be present at the annual meeting of the American Dairymen's Association, before which a one-hundred dollar prize essay, on the subject—"Cheese as a wholesome, nutritive and economical article of food," was read by Prof. L. B. Arnold, of Ithica, N. Y.; and an able essay it was too. This was followed by an address, by H. A. Willard, of Herkimer county, on the commercial aspects of the dairy. His great point was to induce the dairymen to use every effort to keep up the high prices of cheese. He took the position that the higher the prices the greater would be the consumption; declaring that a "higher price for cheese would whet the public appetite for cheese." This "brought down the house;" but these same orators, and their applauding friends, would retire and meditate on the unaccountable backwardness of the people in adopting cheese as an article of food.

If a convention of manufacturers of dairy implements should offer a good paying prize for the best essay on the value of their wares, and have another party hired to get up at the close of this advertisement and urge upon the assembled manufacturers the propriety of keeping up the prices of their wares, assuring them that the higher the prices the greater would be the demand for cheese-vats, cans, etc., how would the dairymen take it?

It is not expected that dairymen are going to make any material sacrifices for the sake of

placing cheese, as a standard article of food, on the tables of the masses; nor should they expect that these masses will endure pecuniary martyrdom for the glory of American cheese. Their appetite for cheese does not need any whetting; it is already sufficiently sharp; but they are otherwise too sharp to pay as much for one pound of cheese as they pay for two pounds of choice beef, for ten pounds of flour, or for twenty pounds of potatoes.

This deprivation in regard to cheese extends through all portions of the country. Even the cheese-makers themselves, in the most prosperous dairying districts, use it only as a luxury. We may possibly be accused of going to the opposite extreme of the analytical and statistical champions of cheese alluded to above; nevertheless we venture the declaration that ten times the amount of cheese now consumed would find ready and regular purchasers if it could be brought down to the level of economical articles of food.

This is a matter worthy of serious consideration. In regard to some of our productions the question is continually arising—how shall we dispose of them? but with butter and cheese it is—how shall we multiply their production and diminish their cost?

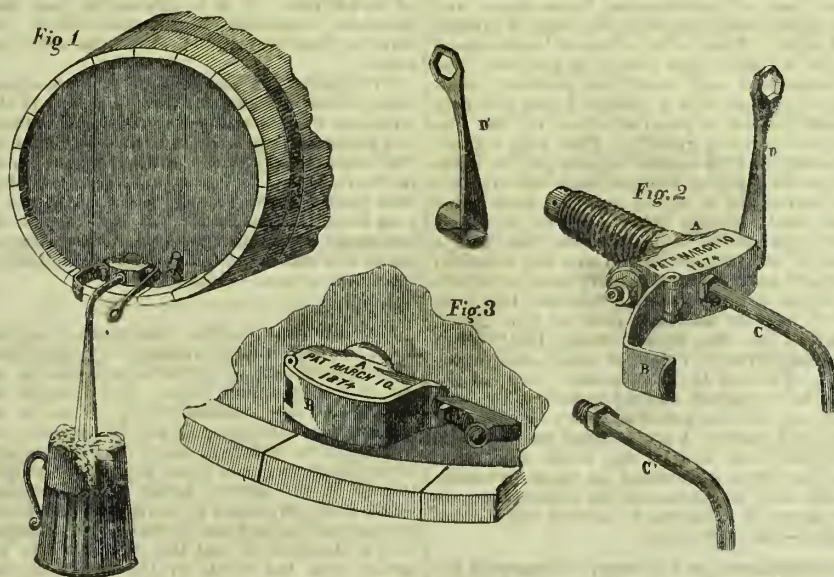
The Dairying Season at the East.

Central New York justly prides itself on its dairies; and when the people throughout the country, in California especially, examine the statistics of the exports of cheese, amounting to several millions of dollars annually, they imagine that these dairymen revel in greenbacks. But this is not so; money does not "stick to the ribs" of the Eastern dairymen any more than to those of other producers. As the say-

year. It is true that the Eastern dairyman can form a pretty close estimate of what he can get for his butter and cheese; but, unfortunately for him, this uniformity does not by any means prevail in regard to the cost of their production. In this very important consideration California undoubtedly has the advantage. The cost of wintering dairy stock at the East is always enormous, and sometimes ruinous to the owners. In the early autumn of 1870, in the great dairy district of New York, cows that cost eighty dollars per head in the preceding spring were driven from county to county, and urged upon buyers at twenty dollars per head. A partial failure of the hay crop, with the inevitable season of seven months' feeding approaching, had forced them to dispose of their cows even at this sacrifice, as a matter of prudence. And, be it understood, at the end of this long period of feeding, when the dairy season was to open again, there was no prospect of a corresponding advance in dairy prices to make their losses good, or to warrant them in replacing their stock at the enormous prices inevitable in such cases. Instead of this, there was that "reliable uniformity in price" staring them in the face.

Now if such an exhibit could be given of the condition of any department of agriculture in California, it would be paraded as an evidence of the instability of everything here.

In the Press of last week regrets were expressed at the apparent discouragement on the part of some of our dairymen in regard to the present condition of their business in California. As was hinted in the article alluded to, our dairymen undoubtedly know better than any outsiders what they can afford to do; and we do not suppose that it will give them any comfort to know that the supposed prosperous dairymen of the East are in a worse predicament than themselves; but a man



BRIZEE'S IMPROVED FAUCET.

ing goes, "we have been there and ought to know."

The dairymen themselves are by no means parties to this popular delusion. If the eyes of people are dazzled with the glare of these millions let them open a communication, personally or by correspondence, with any of the dwellers in those places that are supposed to be flowing with milk and money and they will learn that they are obliged to earn their butter and cheese, as well as their bread, by the sweat of their brows. Three years ago we were favored personally with the experience of one of the most successful dairymen of Herkimer county, N. Y., a man noted for his energy and prudence in business matters, as well as for his success as a dairyman. He assured us that for 15 years, embracing what was supposed to be a prosperous period of dairying, he had struggled hard to keep his head above water; and only worked himself clear at last by combining with dairying a branch as dissimilar as could well be imagined, namely—vinegar manufacturing. Other individual instances could be given of a similar character; but we assure the readers of the Press this may be accepted as the proper gauge of the history and present condition of Eastern dairying.

But among the farmers of California there are many who, though they may not be deceived by the unwarrantable estimates of the profits of Eastern dairymen, are still given over to the belief that its gains are sure, though slow. They are ever ready to join in the solemn chorus that agriculture and everything else in California is all "deceitful shine, deceitful show" and that there is nothing sure but Eastern dairying. But, unfortunately, this is among the things that are slow but not sure. In the favorite and almost classic contrast between California and the Atlantic States in regard to stability and certainty, great injustice is done to the former; while the latter is arrayed in robes which do not correspond with her actual condition. Especially is this the case in regard to dairying in California. Its progress is of a far more healthy character, and it is at present on a sounder basis than is generally believed; while in the old dairy districts of the East it is not at present and never has been the "sure thing" that it has been represented to be.

People are deceived in this matter by the uniformity in the price of cheese from year to

should look before he leaps out of anything, as well as before he leaps into it. We would like to see our dairymen make something like the same sacrifices in adjusting themselves to their present condition, which a change of business would demand. It is well for them that they are aware that they have not "got hold of a big thing" in dairying; for there are no longer any big things in California; and to convince them that they are no worse off than their Eastern neighbors, we append an item clipped from a late number of the *Rural New Yorker*. The article from which it is taken is especially devoted to a plain statement of the present condition of the dairymen. It is headed—"A Hard Year for Dairymen." We give the opening paragraph:

"A good many dairymen throughout the central counties of New York start this season with a heavy load; and in many instances the year's labor will not enable them to pull through." Take, for instance, this example:—A dairymen of our acquaintance having a herd of 50 cows was short of hay last fall, and has already (May 5th), expended more than \$1,000 in hay and feed. He is now buying hay at \$30 and \$35 per ton to get his cows through to grass. Let us see how receipts and expenditures figure. If there are no losses in stock, and if the 50 cows make an average of 400 pounds of cheese each, we have 20,000 pounds. Say that the cheese averages 11c. per pound net, after paying all expenses of manufacture or factory charges, and we have the gross receipts from the cheese amounting to \$2,200. The sales of butter will probably be no more than sufficient to pay the cost of keeping the stock from the 5th of May until grass comes. We have, then, after deducting the \$1,000 named for winter keep, \$1,200 as the total receipts for the herd."

BARLEY IN SAN DIEGO.—A subscriber, L. H. Gaskill, of Campo, San Diego county, writes that one of his neighbors recently cut 75 tons of barley hay from 14 acres of land, over five tons to the acre. Our correspondent writes that there are many fields in that vicinity which will yield 100 bushels of barley to the acre. Much of it is five feet high, well headed out—some of the heads measuring six inches in length.

Permanent Faucet for Beer Casks.

We illustrate this week an improved faucet, which will be of interest to brewers or others who put up or consume liquids kept in casks under pressure. The improvement to which we refer is the invention of John Brizee of Alvarado, Alameda county, recently patented through the Scientific Press Patent Agency, and is intended as a permanent faucet for beer and other casks which contain liquid under pressure. Its object is to permit the contents being drawn without the trouble of driving a faucet into the cask by driving out the plug or bung at the risk of losing the liquid.

The arrangement is very simple and effective, as the following description and accompanying engraving will show. Referring to Fig. 2, A, represents a casting which is provided with a short projecting tube at one side. This tube is provided with screw threads so that it can be screwed down into a hole in the head of the barrel, leaving the casting, A, fitting closely down against the outside of the head. This casting, A, is not as high as the chimes of the barrel or cask, so that it will not interfere with the standing of the cask on end. A conical hole passes horizontally through this casting, parallel with the head of the cask and in this hole is placed a tapering plug similar to an ordinary tap plug, secured by a nut its small end.

In the outer face of the casting, A, is a hole with interior screw threads. The hole is in line with the hole through the short tube which screws into the barrel head on the opposite side of the casting. The tapering plug passes directly across through the casting between the two holes, and is itself provided with a hole which will form a direct communication with the interior of the barrel when the plug is turned so as to bring the holes in line; but when the plug is turned out of this position the communication is closed in the same manner that an ordinary faucet is operated.

A bent tube, C, has one end provided with screw threads so that it can be screwed into the hole in the casting, and through which the liquor will flow. This tube is removable so that it will not be in the way when the barrel is turned on end. The tap can be turned by a lever handle, D, which is detachable. This tap is provided with a countersunk triangular end, over which a small triangular wrench, E, is fitted, in order to turn the tap. B is a cover hinged to one corner of the casting, so that it can be shut down over its upper face and end, when the tube, C, and wrench, D, are removed, and thus protect the openings from becoming filled with dirt. This is shown in Fig. 3, the cover being closed over the hole in the casting.

Fig. 1 shows the faucet when liquid is being drawn, the lever, D, being down. Fig. 2 shows the faucet closed, the lever, D, being up. Fig. 3 shows the arrangement when closed, the barrel not being in use. The invention provides a permanent faucet which only needs the tube, C, to be screwed into its place and the tapering plug to be turned by the lever, D, to draw the liquid, thus avoiding the trouble of driving in a faucet every time the barrel is tapped.

Sowing Small Seeds.

Much has been said and written on the subject of imitating nature in our farming operations, and while we would hardly assert that she invariably does her work in the best possible way, we do believe that her hints and indications always point towards the correct solution of our farming problems. Especially ought her methods to be closely studied and advantage taken of her hints in the sowing of small seeds, such as clover, alfalfa, etc. As the winds and rains are her only harrows, she has wisely provided these tiny seeds with the power of germinating with very little covering, and if we are too careless to take note of this fact, we shall certainly be losers from our want of thought. Owing to their small size, if sown on freshly plowed or unharrowed ground, and then covered by the usual heavy harrow, many of these seeds are buried too deeply to germinate; and the farmer is twice loser—in the loss of his seed first, and in his light stand next harvest. The finer the seed, as a rule, the lighter should be the covering; and to secure the best possible results the ground ought to be gone over and thoroughly pulverized with a heavy harrow before the seed is sown, and then lightly harrowed over afterwards. Of clover seed particularly, some recent experiments have shown that the greatest success with red clover is attained when the seed is covered with only half an inch of soil; when covered one and a half inches deep, 50 per cent. of the seed germinated, but at a depth of two inches not a single plant appeared. White clover will not show above the surface if the seeds are covered one and a half inches deep, and at three-quarters of an inch only 50 per cent. of the seeds produce plants. Of course the same results follow in a more or less marked degree in all other fine seeds; and we have seen vacant little streaks in wheat fields that could be plainly traced to deep covering from a ridged furrow, headland or some similar cause. It will pay to properly prepare the ground for small seeds as well as for other crops.

NOTICE OF FAIRS.—We again call the attention of the officers of agricultural fairs to the propriety of making a public announcement of the dates and places of the approaching fairs, with such other information as exhibitors, at least, should possess. Send in your notices.

MISCELLANEOUS.

Waterproof Structures.

While one useful set of inventors is constantly striving to the utmost to furnish an efficient protection for buildings against the ravages of fire, another is endeavoring to counteract the equally damaging, though slower action of water. It is too evident to need proof that rain, falling from above, and moisture absorbed from below, constitute an important element in that deterioration of structures which is continually going on. In all probability the damage done by weather to such buildings as the Houses of Parliament is mainly due to the action of aqueous vapor and rain, bearing in solution some of the gases which are invariably generated in large towns. Sulphurous acids from the combustion of coal, carbonic acid from the same source, and from the respiration of millions of inhabitants, and, possibly, hydrochloric acid from such operations as those of the Lambeth potteries, all tend to give the moisture always present in the atmosphere the power of attacking the carbonates of the alkaline earths which are usually employed for building purposes. The surface disintegration thus caused is the first stage in their deterioration, producing a roughness, which leads to a crumbling away of the material in successive layers.

Besides this chemical action of acid vapors there is a mechanical agency at work, similar to that which produces the disintegration of rock surfaces resulting in the production of soils. This is the absorption of water, and its subsequent expansion by frost, causing the fracture of the material by which it is absorbed. Manifestly the most porous stones are the greatest sufferers by this agency, though nearly all building materials are affected by it; for, as is well-known, both brick and stone are porous, some varieties extremely so. This porosity is the cause, not only of "weathering" on external surfaces, but of that slow creeping up of moisture into walls, resulting in the incurable dampness of dwelling-houses. The introduction of slate in the courses of brickwork is a preventive sadly too seldom employed.

As might be expected, many attempts have been made to remedy the evil alluded to. These attempts are of two kinds—chemical and mechanical. The most noteworthy of the chemical methods is that depending on the use of alkaline silicates with calcareous and magnesian stones. Here an interchange of acids and bases occurs, an insoluble silicate of lime or magnesia being incrusting on the stone, and an alkaline carbonate, and sometimes sulphate crystallizing out. The chief objections alleged against this system are the unsightliness of the efflorescence, and the necessity of removing it, as well as the length of time necessary to effect the reaction. Still, there is little reason why a chemical method of this kind should be a failure, and if that important element in all chemical changes, time, is only at command, a chemical protection against decay would seem to be efficient as any.—*Iron*.

PETROLEUM FOR FUEL.—The Titusville, (Penn.) *Herald* says: With the present low prices the question of employing petroleum as fuel is again agitated. The latest intelligence upon the subject comes from Canada, where a man named Relighine has been trying an experiment on a locomotive belonging to the Canada Southern railway, with an average consumption of four gallons per mile. The engine steamed quite freely and made good time with a train of 30 cars. This would be about a barrel for ever 10 miles. The most simple contrivance for burning petroleum is either by means of a jet of steam or compressed air passed at right angles over the orifice of a pipe in such a manner that the oil will be sucked and thrown into the furnace in the form of a fine spray, where, if properly adjusted, it will undergo perfect combustion. The cost of the apparatus is trifling. The whole point, it seems to us, turns upon cheapness, and as the market might go up rapidly with any marked increase of demand, there seems to be an indisposition to try the experiment. There can be little doubt that oil will be found in many parts of the country where at present it is not thought of, in which case a new and unlimited market for its utilization as fuel would naturally follow.

CLEANING GLASSWARE.—Dr. I. Walz, who has devoted considerable attention to the uses and properties of potassium permanganate, has devised the following neat and effective method of cleaning glassware: The vessel to be cleaned is filled, or, if large, rinsed, with a moderately dilute solution of potassium permanganate, the contact of liquid being prolonged till a film of hydrated manganic oxide has been deposited; the solution is then poured away, and the glass vessel rinsed with some strong hydrochloric acid. Chlorine is then formed, but not enough to cause inconvenience; and, acting in the nascent state on the organic matters, it speedily converts them into substitution products, which are absolute in the slight excess of acid or water.

DETECTION OF CURARINE.—F. A. Fluckiger finds that curarine may readily be distinguished from strychnine by the fact that its chromate is anionous, that of strychnine being easily obtained well crystallized. Further, air-dried chromate of curarine dissolves in concentrated sulphuric acid with a pure and very intense blue color, while the chromate of strychnine gives a violet.

Inventors' Mistakes.

Inventors are too liable to think that upon the granting of their patents success is certain, which it would be if they would display as much business tact as they have done inventive ability. Upon the granting of a patent the inventor thinks his "future made," and thereupon sits down, waiting for the dollars to come without any effort on his part to induce a flow of coin into his treasury. After a season of such inactivity, with poverty finally staring him in the face, he parts with his patent for a small sum to a shrewd business man, who places the matter before the public in a business-like way, advertises it in mediums through which it reaches the attention of all in need of that particular invention, eventually creating for it a large demand, and bringing a correspondingly large revenue to the advertiser.

The day has passed when people having any desirable thing to sell may expect to reap success by waiting for the public to seek them out. At the present day, every important branch of manufacture has its own special organ; if an inventor has anything to sell which is worth buying, the attention of purchasers is expected to be called to the fact through such publications, as well as through the mailing of circulars, etc. A large proportion of the patents granted are for inventions of real merit, and of value to the public, and inventors and the public are alike sufferers for this very want of business tact on the part of inventors, who should, immediately upon the issuing of the patent, have it properly engraved and published in such journals as reach readers who require the use of such particular inventions. "Mastery inactivity" has ruined many an inventor who might otherwise have been to-day in the possession of a fortune.—*Newark Manufacturer*.

GRAINING MIXTURE IN DISTEMPER.—Take equal part of yellow ochre, burnt sienna, and raw umber, and mix with ale, beer, or vinegar and sugar. Then with a bristle brush spread on the mixture—or as termed by grainers, "rub in" as smooth and evenly as possible; or, it may be applied with a sponge, going over only a small portion or panel at a time, for the distemper colors dry quickly. Then with a graining comb made of leather or gutta percha, make the course grain by drawing the comb over the surface in a zigzag manner; then with a finer steel graining comb draw over the whole panel again in the same direction; then with a piece of soft muslin folded over the thumb of the right hand, make the heavy grain or figures by wiping out the graining mixture; this done lightly pass the fine comb over the work again, or with a thin flat bristle brush, lightly brush over the surface to blend or soften the heavy lines. Proceed in this manner over all the parts to be grained, and by imitating the real wood as near as possible, a very fair piece of work will result. A professional grainer would overgrain, and mottle, and stain, and glaze, etc., but as a description of these processes would tend to embarrass the amateur, we do not deem it judicious to extend upon these extras.—*Am. Homestead*.

ADULTERATION OF ALBUMEN.—Albumen is frequently sophisticated with gum, dextrine, farina, etc. To ascertain this, about thirty grammes of the albumen are dissolved in lukewarm water. After some time the mass is stirred. If the liquid contain many white clots the quality is low, that is a notable amount of the albumen has been coagulated by evaporation at a too high temperature. The solution is mixed with acetic acid, and alcohol is added to the clear acid liquid after decantation. If gum is present a precipitate will appear. If it contains amyaceous matters these can be recognized by the addition of iodide of potassium. Albumen often contains sugar, which is detected by means of Fehling's test-liquor.—*Iron*.

METHOD OF RENDERING PHOTOGRAPHS SOFT AND BRILLIANT.—Engelmann accomplishes this object by placing in front of the sensitized plate, during half of the time of exposure, a plate of ground glass, rendered more transparent by rubbing with sweet oil. The ground glass is then removed, and the plate exposed as usual, so that two negatives are produced, one overlying the other, on the same collodion film. The development and printing are conducted as usual, but a rather shorter exposure is advised. With these negatives both positive and negative retouching are said to be unnecessary.

TANNING.—A recently patented process consists mainly in forcing, by the aid of pressure or exhaustion, tanning or other liquids through the pores of the skin or hide, which is laid on a suitable filtering or porous surface on the bottom of a vessel, into which the liquor is then poured. The skin or hide is removed from time to time and immersed in a stronger liquor, after which it is again laid, the other side up, on the filtering surface. To remove lime from the skins, they are thus impregnated with a weak saccharine solution and washed in water.

AROMATIC MIXTURE.—A formula from the collection recently published, for use in the Philadelphia Hospital, affords a pleasant vehicle for administering nauseous remedies. It consists of coriander and angelica seeds in spirits of wine, water, glycerine and syrup.

THE BREATH.—A disagreeable breath can be avoided by keeping the mouth clean, the teeth filled and sound, the stomach healthy, the skin active, and by always breathing pure air.

The Time Taken in Nerve Telegraphy.

The interval between the action of a stimulus on the organ of sense and the conscious reaction is termed by Exner the "reaction-time." This he endeavored to measure in a large variety of cases. The recognition of the impression was generally indicated by pressing a key with the right hand. Both the stimulation of the organ of sense and the responsive pressure of the key produced marks on a blackened cylinder turning at a known rate; so that the interval of time between the two could be estimated by the space between the two marks.

Experiments were made on persons of various ages and temperaments,—one of them a feeble old man of 76 years—the interval being noted between the stimulation of the left hand by an induction shock and a signal in response with the right hand. The reaction-time varied from .1,295 of a second to .3,576 of a second, or roughly speaking, from about one-eighth to one-third of a second. It would seem that, as a rule, the shortest time is to be looked for in persons who have formed the habit of concentrating their attention on an object, depending upon this rather than upon age.

Different methods of measurement give corresponding results with different persons; that is, if one method gives a shorter reaction-time than another method with one person, it will give a shorter time with all the other persons. The shortest reaction-time was obtained when an induction shock was sent through the eye, producing the impression of a flash of light. The next shortest was when an electric shock was given to a finger of the left hand; the next, between a sudden sound and the signal that it was heard. Then follow, in order of quickness, the responses to an electric shock to the forehead, and to the sight of an electric spark; and last and slowest, that to a shock of the toes of the left foot. It is a noteworthy fact that Donders measured the reaction-time for three of these cases, and found the order the same.

Of the circumstances that affect the reaction-time, the most important is the intensity of the stimulus, weak stimuli giving more discordant and generally larger numbers than strong ones. The concentration of the attention comes next in this respect. The reaction-time diminishes with practice, but fatigue increases it. In a long series of experiments, the last results are commonly larger than the first. The taking of tea or of a small dose of morphia did not affect the reaction-time.—*Jour. of Chem.*

MOWING AND REAPING MACHINES.—English inventors appear to be working very vigorously to perfect existing agricultural implements, as well as introduce new forms. The features of novelty in a new machine consist, first, in so adjusting the draught pole and driver's seat according to the nature of the crop or the weight of the driver as not to cause any undue weight to bear on the horses' necks while working, which is accomplished by having slotted holes in that part of the frame to which the draught pole is attached, so that the draught pole together with the whole of the apparatus for carrying the driver may be shifted forward or backward and thus be in a proper balance for the easy working of the horses; secondly, in a method of adjusting the cutters and fingers so as to point up or down, as the nature of the crop to be operated upon may require, by using a lever or link upon the gear frame to adjust its angle to the draught pole. A new English patent consists in the addition, to any ordinary reaping and mowing machine, of a second or under-set of the usual knives or cutters, which may either be made stationary by fixing them to the finger bar or other suitable bar, or be actuated by an extra crank and connecting rod for the purpose, although it will be understood that the upper set of knives might be made the stationary set, although this is not preferred.

The *English Nautical Magazine* says: "The armor plates used by the Americans in the construction of their monitors were not welded together, as are those used by our own government; they were made by simply connecting thin plates together by means of rivets; thus, a 10-inch plate would be made by riveting together 10 one-inch plates. By experiment it has been ascertained that a good five-inch rolled plate is much more capable of resisting shot than 10-inch armor built up in this fashion. In conclusion, it may be remarked that it is not enough, in comparing two iron clads of similar design, to say that they each have armor of a certain thickness; the quality of the armor plates, the accuracy with which they are fitted on the ship, and the nature of the fastenings by which they are kept in place, may so affect the question as to give one ship a decided superiority over another which is said to be as strong."

THIRTY-SEVEN small planets have been discovered in the years 1872 and 1873, or eighteen and a half for each year, making 1,850 per century. From the days of Hipparchus to the present time we may reckon 2,000 years: had astronomers worked with the same zeal and success during these 2,000 years, the number of small planets known would have amounted to 37,000, only three times the number given by Arago of stars to the 7th magnitude, and a very small proportion of the stars of the 10th magnitude. Although very minute, the latter are generally much brighter than small planets as seen at the time of opposition.

Mineral Waters.

On its long subterranean travels water generally meets with substances which it can dissolve. Even the ordinary spring-water is therefore chemically not as pure as rain-water; and, although the carbonate of lime which it contains in solution is found in it only in small quantities, they are nevertheless sufficient, in contact with soap, to form a flaky lime-soap, while in rain and river water the soap is uniformly dissolved. It is also sufficient to prevent the swelling of boiling peas and beans, since the lime attaches to the skin and prevents the access of water. On that account spring-water is called hard, in contrast to soft river-water. The spring is converted into a mineral spring when it contains mineral matter in solution to a greater amount.

Regarding the formation of mineral waters, Pliny long ago pronounced the important fact: the waters are as the land through which they flow. Starting from this point of view, Struve examined the different varieties of rock in the vicinity of Carlsbad, and after having discovered in them all the solid constituents of the neighboring mineral springs, he attempted their artificial imitation by bringing the pulverized minerals under the pressure of a pump in contact with carbonic acid gas and water. His experiments were crowned with success, and the artificial mineral waters which he thus produced have proved to be of great benefit to suffering humanity, especially in regions at a great distance from natural mineral springs. The ocean is the mightiest mineral spring of the earth; but the uniformity of its composition, regulated by evaporation, external access of various substances and organic processes, can be fully understood and appreciated only by following the further wanderings of the water gushing forth from springs, in the form of brooks, rivers and streams, over the surface of the earth—a theme which exceeds the limits of this discussion, and is deserving of a special investigation. It is thus the directly visible complementary link in that circular course of water, the first movements of which have so long been misunderstood, because going on in the air and under the ground, and thus being hidden from the observation of man.—*Gastlight Journal*.

PRECIPITATION IN FRESH AND IN SEA WATER. It is a curious fact that the deposition of sediment is much more rapid in sea water than in fresh water. At a recent meeting of the Royal Physical Society of Edinburgh, some experiments made to determine the comparative rate of deposition in the two cases were described by Mr. David Robertson. The reader can satisfy himself that the precipitation really is quicker in the sea water by a simple experiment. Let him take two glass jars of equal size, and fill the two about four-fifths of their depth, the one with sea and the other with fresh water; then fill both up with clay dissolved in fresh water—say, about the consistency of cream—and stir both well up. Set the jars side by side to settle, and in a very short time the precipitation in the jar containing the sea water will be seen to be going on rapidly, while in the jar with the fresh water little or no change will be observable. From those results, it is evident that rivers running into the sea will deposit their sediment nearer their mouths than if they empty into fresh water lakes, and are, therefore, other things being equal, more likely to be obstructed by bars.

THE CENTENNIAL OF CHEMISTRY.—It has been suggested by a correspondent of the *American Chemist* that the year 1874 be accepted as the Chemical Centennial, and celebrated as such. Of course chemistry has no definite birth-day, but so many important discoveries were made in 1774, and that year was so noted for remarkable activity in the progress of the sciences, it is suggested that the foundation of the modern science of chemistry may be dated from that period. The editor of the *Chemist*, in view of the fact that centennial celebrations are now in order, approves the suggestion, and seconds the proposition that American chemists should meet on the first day of August next, at some pleasant watering-place, to discuss chemical questions, especially the wonderfully rapid progress of chemical science during the last hundred years.

RECIPES FOR GLUE.—1. Powdered chalk, added to common glue, strengthens it. 2. A glue which will resist the action of water is made by boiling one pound of glue in two quarts skimmed milk. 3. For fire and waterproof glue, mix a handful of quicklime with four ounces of linseed oil; thoroughly mix the mixture, boil it to a good thickness, and spread it on tin plates in the shade; it will become very hard, but can be dissolved over a fire, like common glue, and is then fit for use.—*Jour. of Ap. Chem.*

RENDERING WOOD UNINFLAMMABLE.—A recent invention relates to a novel treatment of wood for the purpose of rendering the same uninflammable, which treatment also tends to preserve the wood; the said invention consists in the use of a new composition, and in the novel means employed in its application. The fluid which the inventor employs for the purpose is composed of protoxide of iron, sulphate of potash, sulphuric acid, sulphate of aluminum, hydrochlorate of soda and protosulphure of iron, with sufficient water to give the fluidity required for the application.

ARE YOU GOING TO PAINT? THEN USE THE BEST.

THE AVERILL CHEMICAL PAINT
WILL LAST THREE TIMES AS LONG as the best lead and oil, without CHALKING; is of any desired color. It is prepared for immediate application, requiring no Oil, Thinner or Drier, and does not spoil by standing any length of time. It is equally as good for inside as outside work; over old work as well as new; in fact, where any paint can be used the AVERILL CHEMICAL PAINT will be found superior to any other. Any one can apply it who can use a brush, which truly makes it the FARMER'S FRIEND.

IT IS JUST THE PAINT FOR THE AGE.
IT IS SOLD BY THE GALLON ONLY.
One gallon covers 20 square yards 2 coats.
For further information send for sample card and price list.

HEALY & JEWELL, Agents.
Office—Corner Fourth and Townsend streets, San Francisco.
16v7-eow-bp-3m

Anglo-Californian Bank.
LIMITED.
Successors to J. Seligman & Co.
London Office.....No. 3 Angel Court.
San Francisco Office.....No. 412 California street.
Authorized Capital Stock, \$6,000,000,
Subscribed, \$3,000,000. Paid in, \$1,500,000.
Remainder subject to call.
DIRECTORS IN LONDON—Hon. Hugh McCulloch, Renben D. Sassoon, William F. Scholfield, Isaac Seligman, Julius Sington.
MANAGERS:
F. F. LOW and IGNATZ STEINHART,
SAN FRANCISCO.
The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities. 2v7t-eowhp



It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars
E. P. HEALD,
2v6-tf President Business College, San Francisco.

SANTA BARBARA COLLEGE,
SANTA BARBARA, CAL.
A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to
ELWOOD COOPER,
22v6-ly President Board of Directors.

The Guadalupe Island Company—San Francisco, California.
Notice is hereby given, that at a meeting of the Directors, held on the 31st day of May, 1874, an assessment of ten (10) cents per share was levied upon the capital stock of the corporation, (the Guadalupe Island Company) payable immediately to Arthur Rodgers, Treasurer of the company, at its office, 306 Pine street, San Francisco, California.
Any stock upon which this assessment shall remain unpaid on the 15th day of June, 1874, will be delinquent and advertised for sale at public auction, and unless payment is made before, will be sold on the 3d day of July, 1874, to pay the delinquent assessment, together with costs of advertising and expenses of sale.
ARTHUR RODGERS,
Secretary of the Guadalupe Island Company,
No. 306 Pine street, San Francisco, California. m16-4t

PEPPER'S NURSERIES,
PETALUMA, CAL.
Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouses and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.
Address,
W. H. & G. B. PEPPER,
31v6-ly Petaluma, Sonoma Co., Cal.

San Francisco Employment Office,
NO. 608 CLAY STREET,
Crosett & Co., Proprietors.
(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.
Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP, on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. ap18-tf

CO-OPERATIVE MARBLE WORKS.
JOHN DANIEL & CO.,
Manufacturers of and Dealers in
Monuments, Headstones, Tombs,
MANTEL PIECES, ETC.,
421 Pine street, between Montgomery and Kearny, SAN FRANCISCO.
21v2-ly

POISON! POISON! WAKELEE'S PATENTED Granulated Squirrel Exterminator.

A NEW AND MOST DESTRUCTIVE POISON FOR THE WORST PEST OF CALIFORNIA.

For years the farmers of the Pacific Coast have been spending money in experimenting to find a safe, cheap and efficient way of ridding their grain-fields of their worst enemy, THE SQUIRREL, which destroy Millions of Dollars' worth of grain every year; and unless a strong and combined effort is made to kill them off, they will become more numerous every year.

Wakelee's Granulated Squirrel Exterminator Is just the thing the farmers of California have been looking for. It is sure DEATH. One or two grains of it will kill a Squirrel so quick that if it is five feet from his hole it dies before it gets there. The Poison is put up day and in granular form, and easily handled; in one pound tins, at \$1 per pound. It goes a great way, as 10 to 15 grains of it are sufficient to place at each hole. Also successfully used for killing Gophers and Rats. It has been thoroughly tested in different parts of the country, and gave universal satisfaction. It is kept and sold by druggists and dealers generally throughout the country. The following are some of my testimonials, viz:

SANTA CLARA, April 20th, 1874.
H. P. WAKELEE, Esq.—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,
J. R. ARGUELLO.

SAN LEANDRO, Cal., April 3d, 1874.
H. P. WAKELEE, Esq.—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,
J. M. ESTUDILLO.

DOUGHERTY STATION, Alameda Co., Cal.
Mr. H. P. WAKELEE, San Francisco: I have used your Squirrel Poison and found it to be just what you claim for it. It is sure death. Yours,
O. M. DOUGHERTY.

GRANGERS, TAKE NOTICE. WE ARE SELLING

**FRENCH CHINA, GLASSWARE,
PLATED WARE, ETC.,
CHEAPER THAN ANY OTHER HOUSE
ON THE PACIFIC COAST.
O. LAWTON & CO.,
MARKET STREET,
Under the Grand Hotel, SAN FRANCISCO.**

The Sewing Machine —FOR THE— GRANGERS. NO COMBINATION! NO MONOPOLY!

**The New Improved FLORENCE,
Side Feed and Back Feed.**
Agency established on the Pacific Coast in 1863. The lightest running, most simple, and most easily operated Sewing Machine in the Market. Always in order and ready for work. If there is a Florence Sewing Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner. **Samuel Hill, Agent, 19 New Montgomery Street, Grand Hotel Building, San Francisco.**

Mr. I. G. Gardner, State Agent for the California Granges, is authorized to make liberal terms to all Grangers who purchase the FLORENCE. No combination against favoring the Grangers has ever been joined by Florence Agents.

18v7-3m **SAMUEL HILL, General Agent.**



The New Wilson SEWING MACHINE
Has points of superiority over all others. A reliable warranty is given with each machine for
FIVE YEARS.
It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market.
G. A. NORTON, Gen. Ag't for the Pacific Coast,
337 Kearny St., S. F.
ap25-tf

FARMERS WANTING TO HIRE AN Engine and Engineer for the season, for threshing, can hear of one by calling at, or addressing,
J. W. RILEY,
23v7-tf No. 54 Third street, San Francisco.

GEO. H. TAY & CO.,
614, 616 and 618 Battery St., S. F.,
OFFER FOR SALE
**IRON PIPE,
BLACK and GALVANIZED.
PUMPS—LIFT AND FORCE.
RUBBER HOSE, ETC.
STOVES and RANGES,**

**THE RICHMOND RANGE,
THE HENRY CLAY,
THE EMPIRE CITY,
THE ALVARADO.**

THE MONITOR, wrought iron body, cast iron top and hearth, will cook for 50, to 500 men; an excellent stove for large ranches during harvesting season.

AND A GREAT VARIETY OF
COOKING STOVES and RANGES, FARMERS' BOILERS and CALDRON KETTLES.

**Ralph's Patent Oneida Cheese Vats.
DAIRYMEN'S GOODS,
MILK PAILS, PANS, CHEESE HOOPS, ETC.
RABBIT METAL.
Wire for Fencing and Baling.**

ALSO, METALS, HOUSE FURNISHING HARDWARE, JAPANNED GOODS, ETC., ETC.
22v7-3m

**DAIRY PRODUCE
DEPARTMENT
OF THE
CALIFORNIA STATE GRANGE,
P. OF H.,
414 & 416 Sansome St., Cor. Commercial,
SAN FRANCISCO, CALIFORNIA.
J. H. HEGLER, Manager.**

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.
This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.
In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

FACTORY CHURNS.
At the urgent request of some of the prominent Dairymen of the country, we have designed and made two sizes of FACTORY CHURNS which we believe to be every way adapted to the wants of Butter Factories and large Dairies where power is used.
THE NEW NO. 8
Is intended to churn from 50 to 75 gallons of cream, and the No. 9 from 75 to 150 gallons at a time.
They are just the article needed, and may be obtained through any of our agents or directly from us.
Prices and details sent on application to the So's Manufacturers,
PORTER BLANCHARD'S SONS,
m30-4t Concord, N. H.

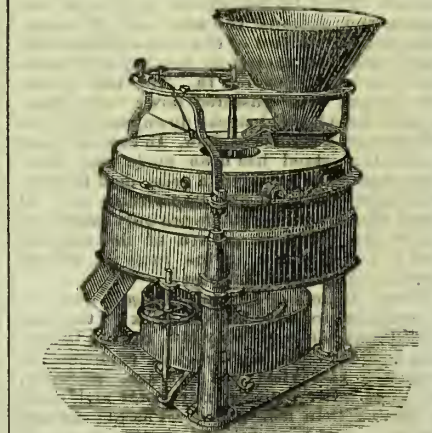
FEED-CUTTER ROLLERS
Covered and made new in the best manner at usual rates, at H. ROYER'S Belt Factory, 437 Braunan St.

NOTICE.
TO THE SUBSCRIBERS TO THE CAPITAL STOCK
—OF THE—
GRANGERS' BANK OF CALIFORNIA.
Notice is hereby given, that at a meeting of the Directors of the Grangers' Bank of California, held this 23d day of May, A. D. 1874, the first instalment of ten per cent. on the capital stock was levied, payable in U. S. Gold Coin on or before the first day of July, 1874. Payable at the office of the President, 320 California street, San Francisco. By order of the Board.
m30-5t **ALFRED F. WALCOTT, President.**

Shipping---Vessels Up.
FARMERS' LINE.
FOR LONDON DIRECT.
THE MAGNIFICENT A 1 CLIPPER SHIP,
MONETA,
621 Tons, Master.
FOR LIVERPOOL DIRECT.
The magnificent A 1 Clipper Ship,
SEA WITCH,
1288 Tons, Master.
BAKER Master.
These fine vessels have nearly full cargoes engaged and will have very quick dispatch. Freight taken in lots to suit shippers.
Will be followed by the splendid A 1 Iron Ship
GLENGARRY,
1769 Tons.
Due here in May; or by other first-class vessels.
Liberal advances made on shipments of produce consigned to our Liverpool house, Messrs. Robert Rodgers & Co.
RODGERS, MEYER & CO.
19v7-3m

IMPORTANT TO FARMERS!
X Line to Liverpool.
DIRECT.
The New A 1 Clipper Ship
FRIEDLANDER.....1,638 tons register
Is intended to sail with dispatch.
Freight taken in lots to suit shippers.
Apply to **E. E. MORGAN'S SONS,**
320 California Street,
San Francisco.

J. WAGNER,
MANUFACTURER OF
FRENCH BURR MILL STONES AND PORTABLE MILLS.



General Mill Furnishing. Portable Mills specially adapted for Farmers' use. 113 and 115 Mission street, San Francisco. 13v7-3m-25m

Patrons of Husbandry.
JOSEPH SEYMOUR & SON,
Manufacturing Silversmiths and Jewelers,
36 MONTGOMERY STREET, SYRACUSE, N. Y.
We are now prepared to furnish Granges with
Full Sets of Jewels for Officers' Regalia (13 ps).....\$10
Full Sets of Working Tools and Case (7 ps)..... 7
Spud, Resping Hook and Shepherd's Crook..... 7
Send P. O. Money Order with your order to W. H. Baxter, room 12, 320 California street, San Francisco. It will save Express collections and overland Express charges.

JOSEPH SEYMOUR & SON,
12v7-3m Syracuse, N. Y.

California Farmers' Mutual Fire Insurance Association.

A meeting of the stockholders of the California Farmers' Mutual Fire Insurance Association will be held at the office of the Secretary, at 320 California street, room 12, on Saturday, June 20, at 2 o'clock P. M., to adopt a code of By-Laws for the government of said association. By order of the acting President,
jn6-td **J. D. BLANCHARD.**

Davis & Sutton, Commission Merchants,
For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Prunes, etc., 15 Warr's street, New York. Refer to Anthony Halsey, Cashier, Tradesmen's National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; C. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

Brittan, Holbrook & Co., Importers of
Stores and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work of the most improved and practical styles
For the very best Photographs go to **BRADLEY & RUFOLSON'S GALLERY,** with an "Elevato" 429 Montgomery street, San Francisco. 2v7-6m

AGRICULTURAL NOTES.

ALAMEDA.

HARVESTING.—*Advocate*, June 6: The hay harvest is pretty well advanced, and hereabouts, as in all other parts of this county, the crops are immense. From present appearances, grain cutting will commence about the 20th of this month, and in some places the fields are "white unto the harvest."

AMADOR.

A WHIRLWIND.—*Amador Dispatch*, June 6: We are informed that a very heavy whirlwind visited Stowers' ranch, about three miles from town, a few days ago, doing considerable damage in the way of scattering hay, tearing down fences, destroying trees, etc. About 150 yards of fence was destroyed, and a tree about a foot in diameter, which happened to stand in its way, was twisted off and carried up in the air a considerable distance. Fortunately, however, it did not happen to strike any of the buildings.

BUTTE.

PROSPECTS.—*Northern Enterprise*, June 9: From Mr. Lady, near Butte City, we learn that the whole country in that vicinity is one vast wheat-field, and that never before was the prospect so flattering for a most abundant harvest. Many of the fields will afford 40 bushels to the acre, and the average yield will not come short of 30 bushels to the acre; 100 harvest hands can find employment in this locality.

CALAVERAS.

HARVESTING.—*Chronicle*, June 6: The utmost activity is being displayed by farmers in cutting and securing their hay crops. The weather during the week has not been especially favorable, however, the sky being overcast with clouds, and indications of rain strong enough to keep farmers awake nights.

COLUSA.

PREPARATION.—*Colusa Sun*, June 6: On every hand we notice preparations for the greatest harvest the Sacramento Valley has ever seen. Our dealers can not get up agricultural implements fast enough.

ALFALFA.—It is the generally received opinion that alfalfa can not be made to grow thicker than the first "stand," and this has been the great difficulty with that grass; but in a conversation with D. H. Arnold and Wm. Ogden, of Grand Island, this week, we learned that each of them had succeeded in making it grow thicker. They let the alfalfa go to seed one season, and gathered the seed; and, of course, there was a good deal of the seed scattered over the ground. In raking up the hay afterwards these seed were covered in. The next spring this ground was pastured down very close, so as to keep the old stocks down, and give the new sprouts a chance to grow. In each of these cases a thin stand has been made very thick. This experience is worth a great deal to those who have alfalfa fields imperfectly set. It seems that the young plants are only smothered out by the luxuriant growth of the old, and that it is not caused by the roots of the old plant, as is generally supposed.

FROM ANTIOCH.—*Antioch Ledger*, June 6: Several headers have been at work on the New York Ranch since Monday last, cutting barley. In a few days the harvest will commence in earnest. The yield will average, probably, one third better between Bay Point and Point of Timber than last season. Passing through Pacheco and Ygnacio Valleys, this week, we found the grain looking remarkably well, much of it standing tall, thick, and free from weeds.

CONTRA COSTA.

INUNDATED.—*Contra Costa Gazette*, June 6: The levees of some of the large reclaimed districts of swamp lands on the San Joaquin river in this county have given way under pressure of the floods from the melting snows, and the damage consequent has been considerable, as there were promising grain and other crops of great extent upon some of the lands; but the inundation had not been as great as reported, and the larger extent of the crops in the reclaimed districts have escaped the inundation.

NOT MATERIALLY AFFECTED.—The grain in our section was not materially affected by the warm weather and north winds of Friday and Saturday last, but had not the cool sea wind followed so immediately some damage would have resulted.

HUMBOLDT.

PROSPECTS.—*Humboldt Times*, June 6: In conversing with several farmers from Eel River Valley, we learned that the crops were coming forward more rapidly and luxuriantly than ever known before in the county. Every kind of crop will be heavy; the oat crop they mention as being very superior and promising. The late rains and warm weather have had a wonderful effect upon every species of vegetation in the way of accelerating its growth.

LOS ANGELES.

TOBACCO PROSPECTS.—*Los Angeles Herald*, June 6: By the end of this week the Los Angeles Tobacco Company will have set out about forty-five acres of young plants. It is all in a thriving condition. The earliest plants look fine and are growing rapidly. Dr. Howard returned a few days ago from a trip to Gilroy, and he reports the tobacco here at least three weeks ahead of that of the Gilroy Company. Old tobacco growers and others who have seen a great deal of the business, all pronounce the tobacco now growing in this valley, as promising as any they have ever seen. The opinion of Dr. Howard and others of experience, that the soil and climate of this valley is especially

adapted to the growth of tobacco, is already verified, and we predict that after this year the article will be one of the staple products of the valley.

FROM LOS NIETOS.—*Cor. Herald*: I notice to-day the first lot of the barley crop passing to the depot for shipment to San Fernando. It is now affirmed that the yield of small grain per acre this season, is the heaviest ever known in the valley. Crop prospects generally are very flattering. Everybody is busy—not an idler to be seen, and all the old growers at fortune look happy.

ABOUT ANAHEIM.—The fruit company was incorporated in Healdsburg, Sonoma county, in July, 1872. In December, 1872, R. A. Gilman was elected Superintendent, and sent to this county to purchase land. After examining all portions of Los Angeles and San Bernardino counties he purchased the tract near Anaheim, where the company is now at work. One year ago the company bought some 8,000 two and three year old orange, lemon, lime and English walnut trees, and immediately proceeded to plant them out. But few were set out last year, as the ground must first be prepared. Nearly 40 acres are now set out to trees, and in another year the entire tract of 100 acres will be put to orchard. The Westminster colony is one of the finest settlements in the county. The character of the agricultural productions here is very different from those of the section just described. The moist lands and artesian wells indicate here an entirely different state of affairs. In the dry seasons the people here reap their harvest. There is less of small grain raised here, but more corn, beans, etc., and now the people are agitating the erection of beet sugar works.

Five years ago scarcely an American family was to be found on the south side of the Santa Ana river. Now, within a radius of a few miles may be found three small towns and a flourishing people.

ORANGE is but two years old and yet it is composed of two stone buildings, one of which is occupied, one schoolhouse, one blacksmith shop, a post-office, a Grange of 75 members, and an Odd Fellows' Lodge recently organized. The people are thrifty and are rapidly accumulating the necessities and luxuries of life. One mile east of this place we find Dr. A. B. Hayward, formerly of Los Angeles, the Master of Vineland Grange, and the owner of a fine farm where frost never comes to hurt, his banana trees having withstood the first winter unhurt.

SANTA ANA is the largest town south of the river; it contains two stores, a post-office, blacksmith shop, school house, Grange and Masonic lodge, a lively population, and two artesian wells. The Chapman ditch is being extended to this place and vicinity this season. N. G. Stafford is Master of the Grange, and he is one of our most successful and enterprising farmers. His farm is new, but neat, and shows thrift and enterprise; it is located in the edge of town. Less than five years ago it cost him about \$4 per acre, and is now worth \$50.

THE HONEY CROP.—*Los Angeles Express*, June 6: Honey is beginning to arrive. The crop this season will be very extensive, and one estimate has been given us placing it at 500,000 pounds. Mr. Beckley who has gone extensively into the bee business as a specialty, has now 400 swarms, which keep three men and himself employed in their care. His ranch is located in the mountains, east of town, and last fall, when the bee feed gave out in this vicinity, he moved them to a place in the Los Nietos district. They found good feed there up to a short time since, when he moved them back to the hills. He says it costs some trouble to thus follow the feed, but he finds it advantageous. His colony will produce 50,000 pounds of honey. The hives of Mr. Beal, we hear incidentally, will produce 30,000 pounds. From what we hear, it is doubtful whether the price realized for honey this season will be so favorable as in the past. A lot, being the remainder of last year's crop, sold, in San Francisco, a short time ago, at 8 cents. It is feared that the great tumble in the price of sugar (equivalent to 25 per cent.) will have some effect upon the quotations for honey. But our crop will be so much greater in volume than heretofore that the aggregate returns will make a handsome showing in favor of this industry.

MARIN.

SEVERE.—*Marin Journal*, June 6: The appearance of the county changed very rapidly during the three days' blow of last week. The fields changed from a rich, deep green to the brown and sere almost in a day. The wind of last week, Wednesday, was unusually severe.

MENDOCINO.

HAY.—*Independent Dispatch*, June 6: Farmers are busily engaged in making hay. The crops are good and \$7 per ton is the ruling price.

POTTER.—Thos. McCowan, having returned from a visit to Potter Valley gave us the following items in a communication: Prospects still seem bright in Potter so far as grain and fruit crops are concerned. Hay making had commenced, with the prospects of quite a liberal amount of the article being made. The wheat crop will probably fall a little short of the amount generally produced in past seasons, on account of their being less sown than usual this season.

MERCED.

CROPS.—*Cor. Union Democrat*, June 6: In both Merced and Stanislaus counties, I find the crops in splendid condition, and will yield thousands of tons of wheat to the fortunate farmers the coming season. Only on the west side of the San Joaquin river do you hear of

any complaints from the farmer. On this side, from Grayson up in the vicinity of Hill's Ferry, the crops are going to be very short; and around Bantas a couple of weeks' hot winds, about a month ago, completely blasted the hopes of the farmers in that unfortunate section, which, unless it can be irrigated, will have to be abandoned for farming purposes and given over for pasture solely.

MONTEREY.

HAYING.—*Monterey Democrat*, June 6: There has been no set-back to haying this season, the usual May rain not having caught the mowers. The price of hay in field is about \$5 per ton, and it is delivered in bales for \$8 @ \$9. The hot weather last week developed rust among wheat in quite a number of fields in this vicinity. Not much mischief is anticipated therefrom, its spread being controlled and effects checked by the cool weather which has prevailed subsequently. The crops on the Sausal rancho, are finer than ever before. It is authoritatively stated that the sale of the lands of the rancho will be inaugurated the present year. The failure of crops on portions of the Gonzales and Munras ranches is attributed by some to the effects of frost rather than to wind or drought.

A LADY'S OPINION OF SHAVING.—*EDITORS PRESS*.—I was much pleased to hear what Bro. Henning said when speaking about the Grangers' bank. He said they were going to pick out a good-looking, portly Granger for President; keep him well dressed and cleanly shaved, and see what would come of it. When I came to the words "clean shaved," I was much pleased. I always thought it made a man much better looking, in every sense of the word, more lovable and a great deal more kissable (and I think the ladies will generally agree with me) to keep closely and strictly shaven. If such was the general practice there would not be half so many bachelors in the country; and that, you know, would be a great blessing to them and everybody else. Now, dear PRESS, won't you volunteer to help me along with the "shave?" And I would also say—almost in a whisper—ladies, modify your fashions. Farmers' wives and daughters should be ever ready for any emergency. Consequently they should dress neatly, but simply. The smartest young farmers, when looking for wives, are always sure to go after the plainest and most neatly dressed girls.

TUOLUMNE REUNION.—The Tuolumne Reunion Association will hold their seventh annual picnic at Badger's Park, Oakland, on the 17th inst. This association is composed of residents and ex-residents of "old Tuolumne" who meet once a year and talk over old times when "they were in the mines." The officers this year are: President, L. P. McCarty; Vice President, C. B. Rutherford; Secretary, C. E. McCusker; Treasurer, W. G. Dinsmore. At the picnic next week, musical and literary exercises will be held in the Pavilion, when free and easy speeches are expected from many of the members. The musical part of the programme is made prominent, and Miss Fannie Marston, Prof. Carmini Morley, Mrs. Julia A. Cameron and Mr. C. Makin, will render the vocal music. Robert Ferral is to deliver the oration, and the exercises will conclude with dancing. Wallcott's band having been engaged to furnish the necessary music.

IS IT NOT A MISTAKE?—The San Francisco Post says that among the most prominent workers in the whisky interest at Oakland, on election day, was "Mr. Dewey, of the SCIENTIFIC PRESS." We can't think it.—*California Granger*, May 28th.

It was undoubtedly a mistake on the part of the reporter of the Post. This being understood, and Mr. Dewey's position in the temperance movement well known, no attention was given to the matter. But when parties who are well acquainted with Mr. Dewey's record and present position in temperance matters, parade this mistake in their paper, and thus involve the subject in doubt, his friends, during his absence from the city, feel called upon to notice the matter, and give it an unqualified denial.

A VERY prolific short-horn cow, "Sylphide," of Sir Charles Knightly's herd, now in her 17th year, has bred regularly since she was thirty months old, and produced twin calves on the 12th of February last. She has more than enough milk for both, is still very healthy, and a beautiful specimen of this favorite breed.

READ'S ROAD SCRAPER.

STOCKTON, CAL., June 4th, 1874.

MR. R. F. READ, Agent for Webster & Co.—Dear Sir: After testing your Scraper on our road (the Stockton and Ione Narrow Gauge Railroad) for the past twenty days, we can assure you of its value as a labor-saving machine. In the last four days of its operation it has moved 2,800 yards into embankment in good shape, notwithstanding many inconveniences. The team used consisted of eight horses, and the material was all handled three times and a portion of it four. I consider it a great saving over the ordinary methods of handling earth, but cannot give you the exact proportion that it bears until after further work. Yours, etc.,

H. B. PLATT, Contractor. JAS. D. SCHUYLER, Chief Engineer.

DR. E. J. FRASER, Homoeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No. 305 Kearny street, northwest corner of Bush 6v7-3m

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., June 9, 1874.

FOR WEEK ENDING MAY 26, 1874.

MECHANISM FOR LOADING AND UNLOADING LUMBER.—Hans P. Tothammer and Gustav Osborn, S. F., Cal.

BUTTON-HOLE SEWING MACHINE.—Justin J. Graff, S. F., Cal.

QUARTZ MILL SHOE.—Joseph G. Kittridge, S. F., Cal.

BRAKE FOR VEHICLES.—Elbridge G. Lunceford, Yountville, Cal.

GANG PLOW.—Gideon J. Overshiner, Hollister, Cal.

The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

The Mining & Scientific Press.

Started in 1860, is one of the oldest weekly journals now published in San Francisco. It has been conducted by its present proprietors for ten years, during which period it has been repeatedly enlarged and constantly improved. The active and steadfast efforts of its publishers have gained for its conduct an amount of practical experience greater than any other publishers have accumulated on this coast, of a weekly journal.

The sum paid by us for the best editorial talent obtainable for our special class journal; for engravings, for interesting news and correspondence, and for printing a large-sized, handsome sheet, is unequalled by that of any other American weekly west of the Mississippi. As a PRACTICAL MINING JOURNAL it has no rival on this Continent.

It is the only MECHANICAL, and the only SCIENTIFIC journal of the Pacific States.

Every Miner, Assayer, Millman, and Metallurgist in the United States should take it.

Every Pacific Coast Mechanic, Engineer, Inventor, Manufacturer, Professional Man, and Progressive and Industrial Student should prize its columns of fresh and valuable information.

Every Mining Engineer, Superintendent, Metallurgist, Mine Owner and Mine Worker in the world should profit by its illustrations and descriptions of New Machinery, Processes, Discoveries and Record of Mining Events.

Every intelligent thinker in the land, in high or humble situation, who would avoid literary trash for genuine information, should SUBSCRIBE AT ONCE.

DEWEY & CO.,

No. 338 Montgomery street, S. F.

TREADWELL & CO.

We certify that the partnership of Treadwell & Co., doing business in San Francisco, California, is composed of Leonard L. Treadwell and James F. Place, who both reside in the city and county of San Francisco, and William O. M. Berry, who resides in Oakland, Alameda county, California.

San Francisco, Cal., May 26th, 1874.

LEONARD L. TREADWELL, JAS. F. PLACE, WM. O. M. BERRY.

STATE OF CALIFORNIA,)
CITY AND COUNTY OF SAN FRANCISCO.)

On this 27th day of May, before me Henry C. Blake, a Notary Public, in and for said city and county, personally appeared Leonard L. Treadwell, James F. Place and William O. M. Berry, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

HENRY C. BLAKE, Notary Public.

THE END-SHAKE THRESHER.—The following letter is from Wm. P. Harkey, Esq., Sheriff of Santa county, referring to the value of the Lanfengberg End-Shake Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.

MESSES. TREADWELL & CO., San Francisco.—Gentlemen: In regard to the Lanfengberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I used it throughout the season on a Russell Separator, which I had run previously with a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain. I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thresher.

Wm. P. HARKEY.

It may be that the principle of some other churns is as good as the "Blanchard," but it is certain that no other is made of as good material or as faithfully. "Get the Best." They are made only by Porter Blanchard's Sons, Concord, N. H.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

L. P. MCCARTY—General Agent.

A. C. KNOX, City Soliciting and Collecting Agent.

W. H. RATTENBERRY—California.

CHAS. W. OTIS—Solano County.

C. M. DALY—Colusa County.

CHAS. T. BELL—Alameda, Santa Clara and Santa Cruz Counties.

J. D. CAREY—Sonoma County.

J. W. ANDERSON—Orange and Santa Ana, in Los Angeles County, Cal.

HOOD ALSTON—San Luis Obispo, San Bernardino and San Diego Counties.

AGENTS WANTED to canvass every town on the Pacific Coast for the MINING and SCIENTIFIC PRESS, PACIFIC RURAL PRESS, and the ILLUSTRATED PRESS. Experienced canvassers preferred. Good men can make large wages, besides learning much and improving their talents.

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.



A. G. STONESIFER,

BREEDER OF

Pure Blooded French Merino Sheep.

Has for sale a choice lot of Rams and Ewes, on the Orlinda Ranch, six miles west of Hill's Ferry, Stanislaus County, Cal.

B. W. OWENS, San Francisco, | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado county,
California.

11v6-eow

WEDNESDAY.

WEDNESDAY.....June 17, 1874.

AT 11 O'CLOCK A. M.,

—AT—

M. L. Brittan's Ranch, Redwood City.

WE WILL SELL,



By order of M. L. Brittan,



HORSES.

73 head of Hambletonian, Clydesdale and Graded Horses, and Thoroughbred Brood Mares.

CHOICE DAIRY STOCK.

75 head of Dairy Cows, High Grade Durham Bulls, Heifers and Steers.

The train will be run from San Jose Depot, Market street, and return immediately after the sale. All persons wishing to attend the sale will apply for tickets and catalogues at our salesroom, or at the depot on the morning of the sale. Train leaves at 8:40 A. M.

CREGO & BOWLEY,

m30-3t

Auctioneers.

"THE EAGLE HAY PRESS."

THE KIMBALL MANUFACTURING COMPANY,

OWNERS OF THE PATENT AND SOLE MANUFACTURERS ON THE PACIFIC COAST,
COR. FOURTH AND BRYANT STS., SAN FRANCISCO, CAL.



Several years were devoted by the patentee to the perfection of this powerful press. Its unprecedented sale at the East induced the Kimball Manufacturing Company to introduce them in California and the Pacific States. During the past season a number of important improvements have been made, in order to gain all the power desired in condensing the weight and size of the bales. The wood and iron of the frame have been increased and strengthened, and it is now the most perfect and powerful press in use.

It Possesses Other Advantages:

Being cheap, simple to manage, with no intricate machinery to get out of gear, thus losing time waiting for a new piece.

All who have used these presses pronounce them superior to anything used heretofore.

The power applied by means of two levers increases in ratio to the resistance; and as the levers approach a perpendicular position, the power can be scarcely estimated.

Three men, with one horse, can bale from ten to fifteen tons per day; each bale weighing from 300 to 350 lbs., using less rope than any other press.

When a bale is pressed and fastened, the follower runs down of its own weight and the bale can be taken out on either side.

On account of its great power, it is well adapted to pressing hides, rags, cotton or moss.

The particular attention of wool growers is called to our improved Wool Press, constructed on the same principle, which was tested at the State Agricultural Fair, Sacramento, April 18th, 1871, and stood the test of a bale of wool weighing 550 pounds. Reference, Major Robert Beck.

These presses are manufactured in San Francisco by the Kimball Car and Carriage Manufacturing Co., who have a stock constantly on hand. Prices \$250.00 for Hay Presses; \$350.00 for Wool Presses. Weight of Hay Press, 2,500 lbs.; Wool Press, 3,500 lbs. Can be shipped in pieces or set up. 13v7-2am-3m

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO CAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's Works, as co-operator for VALUABLE IMPROVEMENTS.



THE BEST

Sewing Machine

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO. 2v7-6m



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the



THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at reasonable prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

10v7-eow

Kentucky Sales of Short-Horn Cattle for 1874.

	No. Head.
Hughes & Richardson, Lexington, July 22.....	50
Wm. Warfield & Co., Lexington, July 28.....	140
B. F. & A. Vanmeter, Winchester, July 24.....	80
J. V. Grigsby, Winchester, July 25.....	50
I. O. Robinson & Co., Winchester, July 27.....	40
Warnock & Megibben, Cynthiana, July 28.....	80
F. J. Barbee, Paris, July 29.....	60
C. M. Clay Jr., Paris, July 30.....	90
J. Scott & Co., Paris, July 31.....	70
J. Sudduth, Newtown, Aug. 1.....	40

The above sales comprise all of the most popular families of Short-Horn Cattle in America, and many imported animals.

Apply to the above addresses for their Catalogues. m30-6v

Cotswold Bucks For Sale.

About three hundred Bucks, half and three-quarter bred Cotswold, and a few Thoroughbreds, for sale at Low Prices.

REFERENCES:

MOODY & FARISH, San Francisco.
SHIPPEE, McKEE & CO., Stockton.

Orders left with the latter firm will receive prompt attention.

A. VROMAN,

Jenny Lind, Calaveras Co., Cal.

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

Oak Home Ranch, Waterloo Road, three miles from Stockton. 3v7-3m

SOUTH DOWN RAMS FOR SALE.

The subscriber offers for sale in this city Six FULL BLOODED SOUTH DOWN RAMS, lambed in February and March last. Weight of oldest not less than 150 lbs. Will be sold at a bargain, and may be seen at the corner of Howard and Twentieth streets, directly opposite my residence.

RUFUS ROWE.

San Francisco, June 2d, 1874. jn6

U. S. LIVE STOCK EXCHANGE, Cor. 5th and Bryant Sts., S. F.

For Sale, a number of very choice thoroughbred DURHAM COWS, HEIFERS and BULLS, raised in California. Also the largest number of the best and most valuable thoroughbred Durham Bulls ever brought to this State, just received from Kentucky. Are all of English breeds and of the celebrated Bates' blood, which, for its combined milk and beef qualities, has attracted the attention and won the admiration of respectable Stock Raisers throughout the civilized world. We have in our possession printed catalogues of the pedigree of each animal, and a certificate from Gov. Leslie of Kentucky, confirming the correctness of said pedigree.

Also a large number of Berkshire Pigs from Kentucky. For farmers and stockraisers this is a rare opportunity. Address,

DAWSON & BANCROFT,

jn6

449 5th street, S. F.

U. S. LIVE STOCK EXCHANGE, CORNER OF FIFTH AND BRYANT STREETS, S. F.

Cattle, Sheep, Milch Cows, Hogs and Horses sold on commission or bought on farm for cash.

Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State. Thoroughbred Durham Cows wanted. Address,

DAWSON & BANCROFT, 449 5th St., S. F.

Special rates to members of the Grange. m9

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,

17v7-3m

San Rafael, Marin Co., Cal.

FOR SALE.

25 full blooded Spanish Merino Bucks, one and two years old, from stock imported from Addison county, Vermont, in 1872. Call and see, or address,

B. F. WATKINS,

m9-2m

Santa Clara, Cal.

JERSEY CATTLE.

A few head of very choice Jersey Cows—Heifers and Bull Calves—for sale. Apply to

R. G. SNEATH, Menlo Park.

AGRICULTURAL ARTICLES.



LINFORTH, KELLOGG & CO.,

Importers of

HARDWARE

And

Agricultural Implements.

Sole Agents for

Peerless Mowers,
World Mowers,
Clipper Mowers,
Wood's Eagle Mowers.



Peerless Self-Rake Reapers.
World Self-Rake Reapers.
World Mower and Reapers, with Dropper.

World Reapers, and Mowers with Dropper and Hand Rakes—side delivery. Clipper Mowers and Reapers, with Dropper.

Cayuga Chief Mowers and Reapers. Sulky Rakes—First & Bradley's, and Bay State.

Wood Revolving Hay Rakes—Tiffin and Geneva.

PITT'S "PACIFIC" THRESHER,

30 and 36 Inch Cylinder, with or without Power.

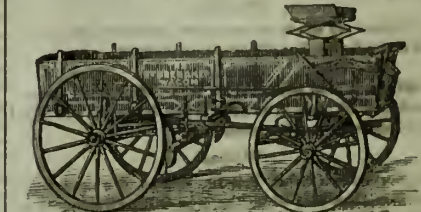
"Napa" Gang Plow.



Garden City Clipper, and other Plows, Cultivators, etc.

The Celebrated

STUDEBAKER WAGON,



The Best in the World.

Rumsey & Co.'s Force and Lift Pumps; Hydraulic Rams; Church, School and Farm Bells.

Also For Sale,

Corn Planters, Corn Cultivators, Mortise Head Hay Rake, Scythes and Snaths.

Soule, Ketsinger & Co.'s First-Class Farming Tools, Gold Medal Forks, Hoes and Rakes, Batchelor's Forks,

Friedman Harrow, Scotch Harrows, Whiffletrees, Ox Yokes and Bows,

Road Scrapers,

Canal and Garden Barrows,

Hay Cutters—Birdick's

National, Belcher & Taylor's

Self-Sharpener and Hide Roller.

Also Agents for

CALIFORNIA HARROWS, on Wheels.

EAGLE HAY PRESS.

Also a Full Line of General Hardware and Miners' Tools.

Send for Descriptive Circulars and Price Lists.

Linforth, Kellogg & Co.,

3 and 5 FRONT STREET, San Francisco.

FOR THE HARVEST OF 1874.



Headley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our illustrated Price List, to TREADWELL & CO., San Francisco.

MATTESSON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

1472-3m MATTESSON & WILLIAMSON, Stockton, Cal.

THE CELEBRATED MITCHELL WAGON



O. CREGO. S. O. ROWLEY.

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

CALIFORNIA STREET.....SAN FRANCISCO

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Snikes, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffey, Camden, New Jersey; Helfield & Jackson, Rahway, New Jersey; Gregg & Bow, Wilmington, Delaware; And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harness, of the most celebrated makers:

O. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingle, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street, 2475-3m San Francisco.

BYRON JACKSON,

MANUFACTURER OF

Patent Self-Feeder & Elevator Attachment

For Separators, at the Yolo Planing Mill and Machine Shop, Woodland, Yolo County, Cal.

This improvement was patented in 1867 and in 1870. For the past two years I have been introducing it to the public with great success. It is pronounced by all that have tried it to be the greatest labor saving invention of the age. No Thresher will be without it after witnessing its operation. It saves all the hard work of feeding and injury to health, and one-half the labor required to supply the grain from the stacks. It will pay for itself in less than thirty days, besides doing better work. For particulars send for circular; it gives all necessary information, besides the best plan for using the Horse Forks ever adopted. Entire satisfaction guaranteed if properly used. 21v7-3m

WATERHOUSE & LESTER,

IMPORTERS OF

WAGON AND CARRIAGE MATERIAL,

BODIES, CARRIAGE PARTS,

Wheels, Axles, Springs & Carriage Hardware

SOLE AGENTS FOR THE PACIFIC COAST FOR

Clarke's Adjustable Phaeton Sunshades.

Send for price list.

ALSO AGENTS FOR

Woolsey's Patent Wheels.

The best and handsomest Wheel made, having great strength and a fine finish. There is no other wheel that has the metallic-shouldered band; and it can be repaired as easily as the common wood wheel.

Send for illustrated circular. Address

WATERHOUSE & LESTER,

122 and 124 Market street, and) SAN FRANCISCO.
19 and 21 California street,)
17, 19 and 21 Seventh street,) SACRAMENTO.
21v7-3m

H. C. SHAW,

STOCKTON, CAL.

Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros." General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Gear Headers. The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW, 14v7-3m Box 95, Stockton, Cal.

WM. ZARTMAN & CO.,

CARRIAGE AND WAGON MAKERS,

COR. ENGLISH & HOWARD STS., PETALUMA. Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate. SPECIAL RATES TO GRANGERS. 12v7-3m

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID & ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot-Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

The STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kane's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Bleaching, Harness Soap, Thomas' Cool Water Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street, 16v7-3m SAN FRANCISCO, CAL.

THE CELEBRATED NEW DRAW-FEED

WHEELER & WILSON

SEWING MACHINES

Are without exception the most desirable for family use. They are the LIGHTEST RUNNING Machine in the market, and sew from the thinnest to the thickest material with equal facility.

These machines have, since their invention, stood at the head of the list in public favor, and the recent improvements to them have increased their superiority still more. Buy no Sewing Machine until you have tried these.

WHEELER & WILSON MAN'G CO.

E. W. HARRAL, Agent,

20v7-4m-15p 427 Montgomery street, S. F.



Self-Fastening Bed-Spring.



Double-Spiral Bed-Spring.

We manufacture all sizes of BED and FURNITURE SPRINGS, from No. 7 to the smallest Pillow Spring; also, the Double Spiral Spring, which is the most durable Bed Spring in use. It is adapted to upholstered or skeleton beds. We have the sole right in this State to make the celebrated Obermann Self-Fastening Bed Spring. Any man can make his own spring bed with them. They are particularly adapted to Farmers' and Miners' use. Send for Circulars and Price List to

WARNER & SILSBY,

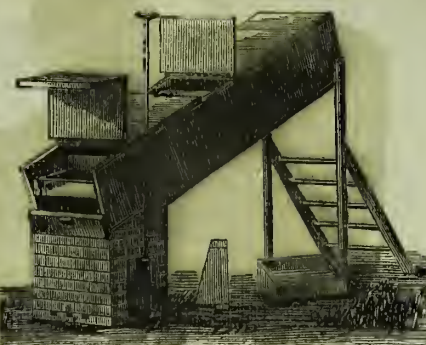
14v28-60w-bd-3m 147 New Montgomery St., S. F.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St., 14v7-3m bet. Montgomery and Kearny Sts., S. F.

Ryder's American Fruit Drier.



This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent,
306 California street, San Francisco

THE CELEBRATED SLUTHOUR PUMP.



Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING and THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from 1/2 to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.

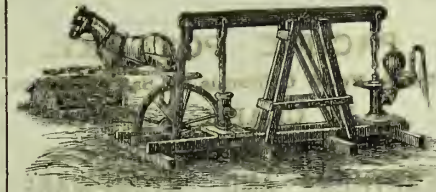
Agents for Eastern Manufacturers, 306 California street, San Francisco.

VINE AND FRUIT GROWERS,

TO RAISE LARGE CROPS

YOU MUST IRRIGATE. To irrigate successfully, you must have the power that does not give out when the wind fails.

Laukottor Bros. & Churchman's Horse-Power,



(PATENTED FEBRUARY 13TH, 1872.)

Never fails to supply more water than four or five Windmills, even supposing you had all the wind you want. It is also suitable for running light machinery, such as Barley Cracks, Corn Shellers, Fanning Mills, Grain Separators or for Sawing Wood. They are never failing, cannot get out of order, easily worked, substantial, and always give satisfaction wherever they have been used. One horse can easily work two 6-inch pumps, with a continuous flow of water. Force Pumps, from 3,000 to 10,000 gallons per hour. WINDMILLS of all kinds manufactured to order. Wells bored, Windmills and Horse-Powers set in any part of the State, and repairing of all kinds done.

Manufactured and for sale by

LAUKOTTOR BROS.,

20v7-2m-3m Cor. J and 10th Sts., Sacramento.

THE ALDEN

Fruit Preserving Company OF CALIFORNIA,

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery street, S. F.

G. W. DEITZLER, President.

W. M. WHEAT, Vice President.

FRANK PYLE, Sec'y and Supt.

BANK OF CALIFORNIA, Treasurer.

H. E. CUMMINGS.

1858.

H. H. BALSTON.

1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington street, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v29-15

LANDS & HOMES FOR SALE

FOR SALE.

A FIRST-CLASS DAIRY FARM & STOCK RANCH,

Situated in Lake county, twelve miles from the flourishing town of Lower Lake, immediately on the road from Lower Lake to Bartlett Springs; containing 880 acres of land, 400 acres of which is choice grain land, 80 acres of the best natural clover land, and the balance good pasture land, all of it under good fence and divided in seven divisions; abundance of water in every part of it, also well timbered. Title perfect—U. S. patent. This ranch is situated in the healthiest part of California, and has been used as a dairy ranch, where the celebrated Durst's Clear Lake cheese has been manufactured for a number of years, and is well adapted for that purpose, as also for grain, sheep and cattle raising. There is on the place a splendid dwelling-house, only built two years; two large barns, cheese and milk houses, other out-houses and corrals, and water very handy in abundance. Price, \$10,000; only one-third of the purchase money required to be paid down, balance can stand to suit purchaser at a reasonable rate of interest. There is also for sale 60 first-class dairy cows, all the dairy and farming implements, harness, etc., at a reasonable price. For further particulars inquire of J. DURST, on the premises; JOS. GETZ & BROS., Lower Lake; or GETZ BROS. & CO., 51 1/2 Front St., San Francisco. m23-1m

RANCHOS

FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,760 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee.

542 MARKET STREET,

ap25-tf

N. E. Cor. Montgomery.

RAKE CHANCE.

Fruit Garden and Homestead for Sale.

About 30 miles from Stockton, a fine Fruit Garden of 2 1/2 acres of land, with good house of six rooms. Garden contains about 200 Fruit Trees of choice kinds, such as Peach, Pear, Plum, Pomegranate, Blue and White Fig, Black Limes, Apples, Grapes and Orange, Almond and Black Walnut. A nice place and an abundant harvest of fruit. Good market. A rare chance to step into a good homestead and profitable business. Title perfect. Warranted deed. Price, \$1,000. For further particulars, inquire at this office. 22v7-5t

FARM FOR SALE.

165 Acres 1/2 mile from the town of Windsor; 1 mile from depot; 2 1/2 miles from the famous Russian River. The place is beautifully situated; land all level, divided into three fields well improved. Good house of five rooms and closets; good out and out-houses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2,500 cords of black oak timber; and wood brings \$5 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to JOSEPH DIMMICK, P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap18-tf

DAIRY RANCH FOR SALE,

Near San Luis Obispo, well stocked and fenced, with fine improvements. Plenty of wood and water.

Apply to T. H. HATCH & CO.,

320 Front street, San Francisco.

Or, R. M. PRESTON, Old Creek, San Luis Obispo.

20v7-3m

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,

ap18-tf 329 Montgomery street, San Francisco.

FOR SALE.

100 Acres of Good Land.

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-tf P. H. SUMNER.

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4.

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

SMALL FARM IN SONOMA FOR SALE.

A farm of 70 acres, handsomely improved, with orchard and vineyard, and 25 acres in wheat, plenty of wood and water, etc., situated within one and a half miles of the town of Sonoma, and same distance from the steamboat landing; price moderate; terms easy. Apply to BERRY & CAPT, 416 Montgomery street, Real Estate Agents. 20v7-1m

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,

OIL Cakes and MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.

Office, 3 and 5 Front street.

Works, King street, bet. Second and Third. fel5-cov

Fourth Year of the Pacific Rural Press.

The publishers of this journal design making its weekly issues during its fourth year (1874) still more acceptable and valuable than those of the past.

A Farmer's Paper Always.

The RURAL PRESS—established Jan. 1870, has been thoroughly a farmer's paper—"first, last, and always." Its success in popularity and rapidly increasing circulation has exceeded that of any other weekly on the coast.

Neither Politics or Creeds.

We refer with satisfaction to the independent, chaste and useful character of our reading matter and the absence from our columns of questionable and demoralizing advertisements.

We shall strive to make it an ever welcome visitor to those who desire to constantly

Improve the Heart and Mind.

And shall give a larger space to our HOME CIRCLE department, which from the first has been a popular feature of the RURAL.

Our aim is to gather information from all reliable sources, in the varied forms in which it is to be obtained. Our work is to distill our gleanings of all superfluities; condense such information as is of most importance to our special class of readers—give it to them in the plainest and fewest words possible,—"saving their time by our labor."

Our Leading Departments

Will be continued under the following heads:
The Home Circle, The Horse,
Young Folk's Column, The Swine Yard,
Short Stories, Sericulture,
Home and Farm, The Vegetable Garden,
Useful Information, The Flower Garden,
Domestic Economy, The Vineyard,
Good Health, The Orchard,
The Dairy, Tropical Fruits,
The Apiary, Small Fruits,
Poultry Notes, The Cereals,
Horned Stock, Pasturage, etc.,
Sheep and Wool, Fertilizers,
Goats, Miscellaneous.

Practical Farmers

Know how important it is that the above subjects should be treated from a local standpoint—that generally the farming tactics of the East will not do for this coast, that agriculture, in its infancy here, can derive greater benefits from an exchange of experience through the columns of the press than in older fields. Constantly observing and studying developments in the special field we represent, we can be expected to give truer information on agricultural subjects, than more general writers at home or abroad.

Our Traveling Correspondents

Will do much service by gathering a large amount of interesting information from various parts of the Coast, which, but for their research and practiced observation might never be placed on record or reach the eye of the reading public. Of our many

Local Correspondents

We have particular reason to be proud. No paper on this Coast—old or new—has ever been so highly favored with volunteer contributions. They are talented, reliable, independent and generous representatives of an intelligent and enterprising people, noble types of good humor, unselfishness and true progress.

Short Stories.

Original and selected, will hereafter appear in each number. Their selection, we trust, will be such as to render them popular and unobjectionable to all. In addition to a large number of

Fine Engravings.

Representing Choice Stock, Farm Products, Scenery, Remarkable Productions, Improvements in Farming Implements and Machinery, Works of Art and the Beautiful in Nature, we shall from time to time present the modest

Faces of Prominent Farmers

Who, as pioneers in the development of agriculture on this Coast, or as active laborers in the "Farmers' Cause," are worthy of the distinction they enjoy, and the favor with which they are looked upon by our many readers at home and abroad.

Engravings (costing thousands of dollars originally) are inserted in our columns during a single year. They afford instant and perpetual impressions often more perfect and real than words can convey.

Patrons of Husbandry.

We shall continue to give our weekly summary of matters connected with the interest and progress of this growing and important movement. We shall aim to give information as fresh as possible in this department. Its readers are aware that the RURAL has been in the lead in calling farmers to organize. We shall continue to work zealously with the Granges for the noble objects of the Order.

The Present is an

Important Period

In the history of our Coast. The coming 12 months promise greater developments in its agricultural progress than has been experienced in any previous year. Agriculturists are alive to improvements in every direction, and those who would keep up with the spirit of the times should certainly read the RURAL PRESS.

The S. F. Market Reports

Will receive greater attention in the department of DOMESTIC PRODUCE than that of any other weekly journal. We shall spare no pains to render the reports as reliable and complete as possible. By the employment of our special reporter we hope to make this very important part of our paper one of its best and most satisfactory features.

Kind Words and Acts

Have done much to build up in this isolated and sparsely settled coast so large and complete an agricultural journal as the PACIFIC RURAL PRESS. We commence the new year with a regular circulation of

Over 5,000 Copies.

A far greater issue than that of any weekly on this Coast, independent of a daily publication. If our friends will continue to "help us help ourselves," we hope to reach a circulation of 8,000 this year, and do a correspondingly greater service of good. While we have the greatest advantages and can make by far the best weekly for

Agriculturists on This Side of the Continent, We cannot expect one-half so large a circulation as journals in older and more populous districts. Consequently readers cannot rightly expect such a paper here at Eastern rates.

No Premiums But a Good Paper

Do we offer a flashy chromo (or cheap map), with an ill suited paper, will hardly satisfy the farmers of this Coast, whose time is too precious for trifling. To many of you the benefit of a reliable and valuable paper should reach a hundred fold its cost, while to all a poor journal would be dear at any price.

Sample Copies Furnished Free

On receipt of stamp for postage.
Agents are Wanted
Who will do more or less active canvassing. To such we will furnish free samples and pay liberally for their services.

Terms of Subscription:

One year (payable in advance) \$4.00
Six months.....2.25
To Granges and Farmers' Clubs, furnishing club lists, \$3 per annum.

DEWEY & CO., Publishers.

Office, No. 338 Montgomery street, San Francisco.



L. U. SHIPPEE, Importer and Breeder of Thoroughbred Spanish Merino Sheep and Short-Horned Durham Stock, Stockton, Cal.

I wish to call your attention to my flock of Spanish Merino Sheep, both Ewes and Bucks, imported during the last two years, and selected from the best flocks in Vermont. Unequaled on the Pacific Coast for quality and size, many of them having taken first premiums both in Vermont and California. Should you or any of your friends require sheep of this quality, you will do well to call and examine this flock before purchasing elsewhere, as I intend to sell them at greatly reduced prices from what they have formerly been sold.

My Flock Consists of 1,500 Sheep, 1,200 Imported and 300 of my own Breeding.

P. S.—This flock is not only the finest but the largest flock of imported Spanish Merino Sheep on the Pacific Coast. They have been selected from the flocks of the best breeders in Vermont, such as Rockwell, Sanford, Rich, Hammond, Saxton, Dean, Ellsworth, Remley, Stickney, and others who are acknowledged to be among the best breeders of Spanish Merinos in America.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.



M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure White-faced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.

776-1692

BRONZE TURKEYS,

Largest and Finest Collection on the Pacific Coast.



EMDEN GESE.

58 pounds to the pair, at maturity.

Eggs for Sale Now.

BRAHMAS, LEGHORNS, HOUDANS, HAMBURGS, COCHINS, BANTAMS, ETC.,

Black Cayuga and other Ducks.

Send for ILLUSTRATED CATALOGUE and Price List.

The Poultry Bulletin, a 32 page monthly, the best. Subscription \$1.00 a year. Send stamp for copy. Agents wanted.

Address: M. EYRE,

Napa, Cal.

Eggs for Hatching, packed to travel safely by rail or stage.

177-2m-16p

PACIFIC POTTERY,

Depot—No. 3 California St., San Francisco.

N. CLARK & CO.

Manufacturers of

EARTHEN AND STONEWARE,

WATER AND SEWERAGE PIPE.

Our Vitified Iron Stone Pipe has been thoroughly tested on private estates and public works, and its merits are fully endorsed by the leading Architects of the State.

J. B. OWENS, Agent.

m9-bp-3m

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Celler. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

Or O. J. CLAYTON,

Clayton, Contra Costa Co., Cal.



EGGS FOR HATCHING,

—FROM—

First-Class Pure Bred Fowls.

Light and Dark Brahmas, \$3 per doz; Buff Cochins, \$3 per doz; White Faced Black Spanish, \$4 per doz; White Leghorns, \$5 per doz. Buff Cochins and Light Brahma Fowls for sale. Address: G. A. DEAN, Pacific Straw Works, 335 Bush St., San Francisco.

12v7-3m-16p

EGGS FOR HATCHING,



FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdans, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILLIPS, 11v7-1m 608 Clay street, S. F.

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than Poor Ones!



OAKLAND POULTRY YARDS,

COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

A few trills of imported Dark Brahmas, of the celebrated Black Prince strain, for sale at \$30 per trio. Also, one trio imported Golden Polish, at \$30. For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the world, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco.

9v7-1f

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,
MESQUIT,
RED CLOVER,
WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p SAN FRANCISCO.

SEEDS. PLANTS.

OF EVERY VARIETY.

Fresh and reliable, such as experience and care only can select.

GRASS AND CLOVER SEEDS, KENTUCKY BLUE GRASS, HUNGARIAN, ORCHARD, ITALIAN RYE, RED TOP, TIMOTHY, MESQUIT, SWEET VERNAL, CHOICE CALIFORNIA ALFALFA, WHITE CLOVER, RED CLOVER, Etc.

Also, RAMIE, JUTE AND TOBACCO SEEDS; together with a fine and complete collection of TREE SEEDS, AUSTRALIAN BLUE GUM, SEQUOIA GIGANTEA, PINUS INSIGNIS, Etc.

For Sale, wholesale or retail, by

B. F. WELLINGTON,

(Successor to E. E. Moore).

425 Washington St., San Francisco.

2v7-1y

PURCHASERS please say advertised in Rural Press.

DEWEY & CO.,

American and Foreign

Patent Agents.

No. 338 Montgomery St.

SAN FRANCISCO.

Patents Obtained Promptly.

Caveats Filed Expeditiously.

Patent Reissues Taken Out.

Patents Secured in Foreign Lands.

Assignments Made and Recorded in Legal Form.

Copies of Patents and Assignments Procured.

Examinations of Patents made here and at

Washington.

Examinations made of Assignments Recorded

in Washington.

Examinations Ordered and Reported by TELE-

GRAPH.

Interferences Prosecuted.

Opinions Rendered regarding the Validity of

Patents and Assignments.

Rejected Cases taken up and Patents Obtained.

Every Legitimate Branch of Patent Agency Business promptly and thoroughly conducted.

SEND FOR CIRCULAR.

Designing

and

Engraving

at

This Office.

We are prepared to do fine Wood Engraving for illustrating Landscape Scenery, Buildings, Machinery, Works of Art, Manufactured Articles, Trade Marks, Seals, Etc. We have a first-class

Machine for Engraving

A portion of the work, which can be finished thereby more perfectly than by the eye and hand alone. Our patrons can depend upon first-class work always, and at reasonable prices. Samples can be seen at our office.

DEWEY & CO.

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

16v7-3m

304 California Street.

W. M. BRANDON.

JACOB W. ROGERS

BRANDON & ROGERS,

California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the state of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.

20v6-1y-16p

WHALE OIL SOAP,

—FOR—

Destruction of Bugs on Plants, Etc.

PHENIX OIL WORKS.

517 Front Street.....SAN FRANCISCO.

20v7-1m

SOMETHING NEW.

NO MORE BROKEN EGGS.

Use the DEFIANCE PATENT EGG CARRIER, the cheapest and best in the world.

GEO. W. SWAN & CO.,

Union Box Factory, No. 114 and 116 Spear street, Agents for the Pacific Coast.

11v7-3m

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Blemishes of all kinds are speedily removed by it.

3v7-3m

Stockton, Cal.

FARMERS write for your paper.

PACIFIC RURAL PRESS

Volume VII.]

SAN FRANCISCO, SATURDAY, JUNE 20, 1874.

[Number 25]

Short-Horns as Milkers.

The superiority of the short-horns as beef has been so generally conceded, and the desire to secure them for this purpose has predominated so perceptibly that little consideration has been given to their milking qualities. The most ardent admirers of this stock have hitherto put in few, if any, claims for them as milkers. There are parties, however, here and there, who have given the short-horn cows a fair show in this respect; the trial resulting in a decided conviction that the short-horn is not, by any means, an inferior milker.

Among those who have fairly and judiciously tested the milking qualities of the short-horns, is Mr. Robt. Ashburner, of School-house Station, San Mateo Co. Mr. Ashburner is one of the pioneers in introducing this stock in California, and is probably as well versed in the characteristics of the breed as any man in the State. He is also particularly well adapted, by his business and experience, to judge in this matter, being the proprietor of a milk ranch. He milks 30 cows, nearly all of which are short-horns; and after an acquaintance with them sufficiently long to arrive at a fair estimate of their merits, compared with those of other breeds, he pronounces the short-horn cow a superior milker. His cows average three gallons of milk per day through the long milking season.

This favorable report does not surprise us in the least. We have long thought that this breed was underrated, or unappreciated, in this respect. For intelligence, docility and quiet habits, qualities essential in milkers, they are unsurpassed; and their physical conformation is not incompatible with milking properties.

Much might be done toward developing desirable dairy points in these cows, without sacrificing, in the least, the short-horn individuality; whereas, we have weakened these points by our want of appreciation of the short-horn as a dairy cow. Let them be fed for milk, and not for beef, and stabled and otherwise cared for accordingly. Let the best milkers of the family be selected to breed from for the dairy, and in rearing them let this object be kept in view. By such means—as those who are acquainted with the details of dairy stock raising will admit—much might be done toward establishing and transmitting reliable milking properties.

In regard to the inability of the short-horns to traverse a great extent of territory in grazing on account of their "stockiness," we would say that this should by no means unfit them, for the dairy stock belonging to the dairy department should not be compelled to perform any walking or climbing feats in procuring food; and the tendency of progressive dairying is fortunately such as will make the country more and more suited to this quality. For dairying, more than any other branch of farming, divides up the land into smaller portions, raises more and better feed within the same space, and fosters the habit of "feeding out."

Besides, there are reasons for believing that the short-horn is not disqualified for equestrianism to the extent that is generally believed. It is not supposed that there has been any willful misrepresentation in this matter; but in drawing the characters of animals, as well as those of men, the sketcher is often tempted into exaggeration.

SOUTH CAROLINA UNDER RULE OF CRIMINALS. A special correspondence from Charleston says South Carolina has more criminals in office than any other State, and that the official records show that one-third of the persons holding minor positions have been indicted for offences during their term of office, and a much larger proportion of offences committed prior to election or appointment. In Charleston county nearly every State officer, from the highest to the lowest, has been charged, and many convicted of one or more offences.

A GREAT storm visited the Eastern States, and particularly Rhode Island, on Monday of last week, which did an immense amount of damage in causing freshets throughout the central and southern portion of New England. Seven inches of rain fell at one locality on Sunday night, the 7th instant, the largest fall of water ever before recorded in that locality.

Local Option in San Francisco.

The all-exciting topic of License or No License, which has caused, and is still causing such lively local contests in numerous localities of our State, is now being extensively agitated in this city, with a view to an immediate test under the law as to whether the retail traffic shall be continued here or not.

The first steps in this direction were taken by the Good Templars, who invited other temperance organizations to meet them in convention. It was the little spark that was only needed to kindle a great fire; and resulted in an enthusiastic meeting of delegates, in which eighteen temperance organizations were represented. Petitions were placed in the hands of the ladies of San Francisco to obtain the requisite signatures to require the Supervisors to call the necessary election; and, as they are

Crops in England.

Nothing can be determined as yet as to the general yield of the crops in England. In regard to grass, however, there is evidently but one opinion—that it will certainly be a very light crop. With the farmers of Great Britain, as with those of nearly all sections of America, the last winter was an extremely hard one to feed through; and the spring found them, as it found us, with empty barns and exhausted flocks. This necessitated the commencement of the grazing season too soon for the good of the pastures. The grass had not acquired a sufficient start to enable it to withstand the vicissitudes of the early season, when the cattle were turned in upon it; and this being the case, a good grazing season could hardly have been expected, however favorable the succeeding season may have been. But thus far, unfortunately,



THE CALIFORNIA WATER THRUSH.

already thoroughly organized, and have the city districted and sub-districted, this will take but a very short time. Meanwhile an Executive Committee, selected from the most prominent and influential men of the city, both from temperance organizations and business circles, have been chosen, who will call mass meetings, secure the best speakers, enlist the aid of all the churches and Sunday schools, and of the various organizations and societies, other than temperance, which favor reform, and, in short, to take complete charge of the coming campaign.

The meeting was very enthusiastic and harmonious, and revealed more power among the friends of temperance than they themselves were aware of possessing.

On the other hand, the advocates of license are also thoroughly organized, and are supposed to have large sums of money ready to expend in the contest, so we may confidently look in a few weeks for by far the most important conflict on this question that will occur on this coast. Both sides seem confident of victory, and the event of the election will be eagerly watched for all over our own State, as well as a good portion of the United States.

SUN STROKE.—Two cases of sun stroke have been noted in this State during the past week; one in this city and one in Petaluma. Such cases have heretofore been almost unknown in this State.

DEAD LOCK.—There is a dead lock in the election for United States Senators from Rhode Island.

nately, it has been remarkably unfavorable. The month of May was unusually dry, and cattle are doing poorly. Fields that had scantily wintered stock turned in upon them, unusually early, and are then deprived of the warm rains of May, present but little cause to hope for even a fair grazing season.

It would seem as though the growing grain had not, thus far, been perceptibly injured; though the cold winds which accompanied the dry weather throughout the month of May checked its growth materially. This, however, is considered rather beneficial to the grain crop than otherwise; as there was danger of the growth of straw becoming too rank; though much depends on the weather of June. The farmers of England have given expression to a portion of their agricultural faith in the following couplet:

"A dry May and a dripping June,
Bring all things around in tune."

THE RAILROAD COMPANIES between this city and St. Louis have tendered the ladies of this State free transportation for 20 tons of provisions to St. Louis for relief of the Louisiana sufferers. The Mail Steamship Company has also made a similar tender of free transportation for the same amount. Forty tons of provisions may thus find free transit, if the people of this State who cannot afford the money, will thus furnish the substantial needed.

STEAM PUMPS IN EGYPT.—There are at work in Upper and Lower Egypt nearly 500 steam-pumps.

California Birds.

Water Thrush or American Dipper.—(Cinclus Americanus.)

This California bird is remarkable for its partiality to brooks, rivers, shores, ponds and streams of water; wading in the shallows in search of aquatic insects, wagging the tail almost continually, chattering as it flies; and in short, possesses many strong traits of the Water Wagtail. It is also exceedingly shy, darting away on the least attempt to approach it, and uttering a sharp chip repeatedly, as if greatly alarmed. It breeds in the higher mountainous districts, as do many of our spring visitants that regularly pass a week or two with us in the lower parts, and then retire to the mountains and inland forests to breed.

The voice of this little bird appears so exquisitely sweet and expressive, that one is never tired of listening to it.

The Water Thrush is six inches long and nine and a half in extent; the whole upper parts are of a uniform and very dark olive; the lower parts are white, tinged with yellow ochre; the whole breast and sides are marked with pointed spots, or streaks of black or deep brown; bill, dusky brown; legs, flesh-colored; tail, nearly even; formed almost like the golden-crowned thrush, except in frequenting the water, much resembling it in manners. Male and female nearly alike.

Swamp Land Disaster.

The immediate loss by the recent giving way of the levees in swamp land district, No. 118, in Contra Costa county, is estimated at \$400,000.

The overflowed grain is described as being of almost marvelous promise previous to the disaster, covering an area of 5,000 acres. The soil is of the finest and most productive character, and the growing crop of wheat was as remarkable for its cleanness as for its heavy growth. Those who had passed over the district estimated the prospective crop as high as sixty bushels per acre throughout the entire tract.

The loss of these splendid fields of grain, serious as it is, forms but a portion of the damage resulting from this accident. The anticipated reclamation of swamp land during next season will be frustrated, or seriously retarded, and thousands of acres had been burned during the present year, and were expected to be sown for the next season. This is now considered as barely possible. It is apparent that the disaster was the result of almost unaccountable neglect on the part of those whose duty it was to watch the levee. This was sufficiently high, and was so constructed, that with ordinary precaution it would have answered all practical purposes. It was known that cavities and cracks are liable to occur from the drying of the sods of which it is largely composed; these, however, required only a little attention; and it is said that a few hours' work would have prevented this disastrous accident.

ROYAL ENDORSEMENT.—It is said that Queen Victoria has sent an autograph letter to President Grant, fully endorsing Mr. Sartoris as one every way worthy the hand and heart of the daughter of a President of the United States. It is also hinted that the royal heart will probably be moved to give some special mark of approbation of this union, by inviting the couple to visit Windsor Castle and conferring some title of nobility upon the bridegroom. It is also said that this action has been prompted from the sincere personal attachment which the Queen formed for Miss Grant, during the brief visit which that young lady made to the palace on her former visit to Europe, and also for the esteem she feels for the President of this Republic in his official capacity.

CROPS ON THE TULE LAND.—Circumstances that have favored crops this season in the valleys and the foothills, the latter especially, have been rather unfavorable to those on the tule land, though the average production of these lands, will, it is said, still be large. In some cases the estimate is placed as high as 70 bushels to the acre. The breadth of tule land sown to wheat and barley is greater than that of last year.

DOMESTIC ECONOMY.

Bread With Potato Yeast.

Some housekeepers have trouble to produce good bread with potato yeast. This is how Lucy C. Hoods does it, as she reports to the *Country Gentleman*:

I take one quart of tepid water, one pint of potato yeast, two teaspoonfuls of salt, and flour enough to mix the dough stiff enough at first; I knead till very smooth; place the dough in the bread pan; sprinkle over it a very little flour, to prevent the cloth, with which it should be covered snugly, from sticking; then turn over it a smaller pan, or what is better, a large, round earthen pudding dish, and set it to rise in a warm place. When quite light, I divide into four parts, and knead thoroughly; then grease two square pie tins with butter (which gives a pleasant taste to the crust); place two loaves in each tin; cover closely with cloth, three or four thicknesses, to keep the surface moist; set where it will keep warm, and when light enough to be an inch above the tins in the center, bake, in a not very hot oven, an hour and ten minutes. I turn occasionally while baking, and when the upper surface is just brown enough to be nice, cover with paper, or what is better, tins the same shape of those in which the bread is baking. When taken from the oven, I wring a cloth out of cold water, and cover the crust if at all hard; then outside of that, wrap closely in dry cloth till cold.

I particularly recommend potato yeast, because the moisture it produces (which makes graham bread and buckwheat cakes sticky,) is just what white bread, raised biscuit, rusk and raised fried cakes want. I should mention that potato yeast does not keep well in very hot weather. Perhaps it might if set in a refrigerator; but my plan during the hottest weather, is to soak two good yeast cakes in a cup of tepid water, stir in flour to make a batter, and while this is raising, peel, slice and boil three or four good-sized potatoes in just water enough to cover them. When soft, rub them through a colander while hot, with all the water they were cooked in; then cool them with as much cold water as is necessary to mix the bread, together with the potatoes and yeast, not forgetting a little salt. This is not much trouble, and the best substitute for potato yeast that I have found in an experience of over 30 years in housekeeping.

CORN BREAD, ETC.—EDITORS PRESS:—Not wishing graham to have all the credit, I will send you my recipe for corn bread, which you may publish if you see fit. We all prefer it to graham, and I am often asked for the recipe for "that good corn bread."

"OLIVE'S CORN BREAD."—Scald two quarts of sifted corn meal with boiling water, enough to make a thin batter; when cool, add one quart sifted flour, one and one-half teaspoonful yeast, one teaspoonful salt, two or three of syrup, and set to rise. When light, sift in a teaspoonful of soda, with a little flour, and bake in two deep dishes for about two hours. Also a recipe for

"JOHNNY CAKE."—One quart corn meal, one and one-half teaspoonful flour, one egg, a little syrup, one teaspoonful soda and two of cream tartar; sweet milk to make a thin batter (sour milk will do, and no cream tartar is then needed), salt, and bake in a quick oven about half an hour. OLIVE.

TO ROAST A QUARTER OF LAMB.—Have boiling water two or three inches deep in the lower part of the boiler, deep enough to just touch the bottom of the pan to be set over it. Place the lamb in the inner pan without water, first seasoning it with salt and pepper, if agreeable. Put on the cover, fitting it in tightly. When the water begins to boil, set the boiler back on the stove or range, where it will keep just at the boiling point, and let it remain cooking the usual time—fifteen minutes for each pound is generally thought long enough. When done take it out, dredge with flour, and put it into a quick oven to brown, but not scorch. It is usually estimated that one pint of gravy is lost when meat is boiled in the usual way. Here you have it all saved in the dish, the pure juice of the meat making excellent gravy.—*Western Rural*.

ELECTRICITY VS. THIEVES.—A novel door-fastening has been recently contrived in Berlin. It consists of electro-magnetic machinery for bolting the office doors from the manager's or cashier's desk, a knob being fastened to the desk or counter, by pressure on which the electric current is made to push a heavy bolt across the doors. The effect is instantaneous. The short period employed by a thief or forger in gaining the door, in some cases suffices for his detection; and, in that event, his escape might be effectually cut off. The machinery has been constructed to the order of a large banking firm in Berlin, in whose office it is now in use, though there has been no occasion as yet to test its powers otherwise than experimentally; but, when so tried, it has given satisfaction.

TINFOIL DECORATIVE PAINTING.—An effort is being made to introduce on a large scale in England a novel industry, well known and appreciated in Paris—that of mural decorations executed in sheets of tinfoil. The process is that of Messrs. Daniel and Co., of Paris, and it is proposed to acquire the various patents in different countries for the process.

POULTRY YARD.

The Ostrich Domesticated.

An English settler at the Cape of Good Hope gives this account of his ostrich stock in a private letter: "It is very clear that if I don't write to you I shall never get any more of your valuable hints, and perhaps you may be interested in hearing something of a new style of farming that I have lately taken to, and with success beyond my most sanguine expectations; it is ostrich farming. I have a flock, or herd, or covey, or whatever else you like to call it, of 25; they are perfectly tame, and will follow me all over the place; in fact, I feel sure that they were intended to be domesticated. I have only to get outside and whistle, and the whole troop comes as fast as their legs can carry them in hopes of getting some maize, which they are very fond of. They eat almost anything, but there is so much round the house and in the old lands that they scarcely require any artificial food; but I generally give them a feed of lucerne once a day, and they seem to relish it more than anything else. They are plucked first at about eight months old, and afterwards every seven months. The feathers are not of much value, but nevertheless return 25 per cent. per annum. The second plucking brings that up to 80 per cent, and the third about 110 or more. The feathers are then prime, and the yield from each bird, taking cocks and hens together, is about £9 or £10. The price of birds two months old is £9, and I intend to make up my number to 45 this season, and when they are full grown I expect to get £750 a year for their feathers alone, without counting increase. Wild birds are very scarce within the colony, and are only to be found in numbers far in the interior, where they are also rapidly decreasing. This accounts for the price of feathers. Of course, the demand is increasing throughout the world, so that it will be many years before the domesticated birds make any marked difference in the market. No stock gives so little trouble; they thrive where a donkey would find it hard lines to live."

EARLY CHICKENS.—It has often been repeated in various books on poultry that a pullet, in whatever circumstances, must begin to lay at a given age; but this we have found by special and systematic experiments is by no means the case, a difference of months being caused by the time of hatching. If the age of five months finds a pullet belonging to one of the more prolific breeds in the midst of warm weather—say August—eggs may be expected about that time; indeed, great care is needed if it is desired to prevent laying at such seasons. But birds hatched in May will complete their sixth month in October, and in very few cases may eggs be procured before Christmas, if even then, unless the feeding be unusually good. Still later hatched—let us suppose late in May or early in June—it will be as late as next spring before most of the pullets are producing eggs, and ere this occurs many of them will be at least nine months old. Nearly all fowls, however mismanaged and if not too old, will, so long as they are in tolerable health, lay freely in summer; but eggs are then cheap, and it is the winter that chiefly decides which side of the balance sheet shall preponderate. Eggs in winter mean profit, the want of them as clearly means loss. Pullets hatched early will moult early also, not only getting better and quicker through the process and having warm weather for it, but getting ready to commence laying in good time again. To say as some do, that no hens of any breed will lay in winter, is a mistake; we have often had Brahma hens recommence laying in November.—*Wright's New Illustrated Book on Poultry*.

GOUT OR RHEUMATISM IN FOWLS.—These two names are applied indifferently to an inflammation of the feet or the joints of the legs. The affected part will be reddened or swollen, and the bird will probably show signs of pain. The disease is probably caused by some fault in the digestive apparatus, but the trouble may be increased by exposing the fowl to cold and wet. There are several forms of these diseases besides the one described. In one, the only symptom may be a slight lameness, or with this the joints may be stiff and the toes bent up, or twisted to one side. The trouble called "cramp" is, perhaps, of a partly different nature, but this is not certain.

When the inflammation is very great, the bowels should be well opened with jalap or calomel. Twice a day may be given a pill containing half a grain of extract of colchicum. The bicarbonate of potash might prove a valuable remedy. Opium may also be administered in the same doses, or more, if necessary to soothe the pain. The local treatment consists in washing the affected parts in warm water, in which is dissolved potash; or, in case there is only a stiffness and no great amount of inflammation, some mustard may be added to the water. Oil of mustard is said to be of use internally, in this last case. Sweet oil has a favorable influence, in cases where there is much inflammation. The fowls should be removed to a warm, dry place, and be well fed.—*Poultry Record*.

SPANGLED POLAND FOWLS.—A correspondent at Tully, N. Y., asks "if a single comb in a Spangled Poland is a disqualification? A Spangled Poland wears a crest of feathers and not a comb."

BUGS, WORMS AND CHICKEN CHOLERA.—A correspondent of the *Prairie Farmer* says: "We have noticed that whenever the chickens follow the plow, and gorge themselves with bugs and worms, soon cholera breaks out among them. Our remedy is:—To one gallon of sour milk, add a tablespoonful of powdered alum, set it in shallow vessels, where the chickens can drink as often as they choose. We have used this remedy for the last three years, and none of our chickens die with cholera, when we attend to it in time."

FOOD FOR YOUNG GOSLINGS.—The *Collage Gardener* says that nothing is so good for goslings as grass; that is probably why so many are kept where there are commons. Oatmeal put in a pan of water is excellent food for them, and it is often wise to add some bran to it. Chickens should have bread and milk, chopped egg, cooked meat cut up fine, crumbs, sods of growing grass, fresh earth, and, in bad weather, beer.

THE COCHIN NOT DEGENERATED.—A veteran poultry breeder writes, the *London Field* that, in his opinion, "we do not possess any breed in a more primitive and less degenerated state than the Cochin; that the Cochin is one of the least, if not the least, domesticated fowls we possess."

ENGLAND IMPORTING EGGS.—It is stated that during the first three months of the present year, England imported £569,270 worth of eggs; during March, £310,455. We wonder, where from?

REMEDY FOR PIP.—Castor oil is called an excellent remedy. Give it every alternate day for a week.

CATTLE BREEDERS.

Retention of Placentæ.

I notice in the *N. Y. Tribune*, Prof. L. B. Arnold gives some little advice, principally of the "let alone" character, in regard to retention of the after-birth of cows. I know of a man who says he will warrant a peck of oats given to a cow in that difficulty to detach the placenta in forty-eight hours, and a few given daily a week or so before calving a sure preventive. I have tried the latter with success for some years—since possessing the theory. Rye is said to be a quickener of the procreative functions, and oats are said to be undeveloped rye. Certainly oats are very stimulating as horse feed, and may be the cause of that change in the animal system that is preparatory to new conception, just as some species of oak trees will not let go their old leaves till apparently pushed off by the new buds.

If these postulates are correct they explain some of the causes of abortion so much complained of through feeding rye or oat fodder where the grain is pretty fully developed.—*Cor. Mass. Ploughman*.

DIARRHEA IN CALVES.—Diarrhea in yearling animals exists as a symptom of disease rather than as a disease of itself. It may indicate the presence of worms or other irritants in the intestines, or it may accompany disorder of the liver or of the blood. Without knowing anything but the simple fact of the complaint it is difficult to say what would be the best treatment. It would be safe however, to give only the most digestible food and fresh green fodder. Good clover hay cut and mixed with some fine middlings or millstuff and a handful of linseed meal, and the whole scalded and given in moderate quantity when cold would be beneficial. Three ounces of epsom salts, two drams of carbonate of soda, and two drams of ground ginger may be given in a half pint of slightly warm water. After this has operated one ounce of tincture of rhubarb, an ounce of tincture of cardamom, with one dram of carbonate of soda may be given in half a pint of water, and a table spoonful of molasses, once a day for a few days.—*Agriculturist*.

STOCK AND ITS PROFITS.—In conversation with a well-to-do Bijou stock man we gather the following facts regarding his experience and its profits. He came to Colorado in 1872, borrowed five hundred dollars for ten years at 12 per cent. interest. With seventy dollars of this money he bought ten steer calves then about six months old. The calves now grown into cattle three years old, lacking about two months he has just driven to this city and sold to one of our stock men for three and a half cents per pound, amounting to \$535.01. These cattle have only cost him in cash paid out \$9.50 per head, and this includes the expense of herding. In addition to this he has fed them from grain of his own raising, five months. It will be seen that the cattle have paid off the loan of \$500 with a surplus of \$20, and this from an investment of only \$70, less than two and a half years since.—*Den. Tribune*.

MALE OR HEIFER CALVES.—The accident of a calf is one which we cannot control. Any person who offers to sell a secret whereby it may be controlled for \$1, or any other sum is either a knave or a fool. A breeder may very easily have ten calves this year to one b. calf, but next year the proportion will probably be reversed. From experience and observation as well as on general principles, we have no faith in any method or plan to produce either sex at will.

THE SWINE YARD.

Typhoid Fever in Pigs.

The *London, Eng., Agricultural Gazette* says: Typhoid fever of pigs is almost the only zymotic disease of the lower animals which has a distinct representative among the diseases of the human subject. In many cases the term typhoid is used to indicate any form of disease in which fever of a low kind is present; but in typhoid fever of the pigs the characteristic affection of the glands of the intestines is always well developed, as it is in man.

The malady which is known to stock owners as the "red disease," or "the soldier," is very widely spread in Europe, and sometimes prevails in an enzootic form, doing considerable damage in a district. In 1862 it broke out in various parts of Berkshire, and owing to the mischief which it caused at that time the attention of professional men was directed to it, and some important investigations were carried into effect with the view to determine its true nature.

Dr. Budd, of Clifton, succeeded in establishing the similarity, if not identity, of the disease in man and pig, and other inquirers ascertained the chief facts of its history and mode of propagation.

Contrary to the first impressions, which alleged a special susceptibility in Berkshire pigs, it was demonstrated that all breeds are alike liable to be attacked, but only in early life. From a few weeks to six months old all kinds of pigs are liable to typhoid fever. After the age of six months they appear to possess a remarkable power of resisting the disease; some older animals are of course attacked, but the rule is that the extreme susceptibility ceases after the pig has reached the age of six or eight months; were it not so, the losses from the disease would be more serious than they are.

Excepting age, there appear to be no modifying circumstances which exercise any particular influence. Temperature has little or nothing to do with the progress of the affection. In summer and winter the disease is equally rife, and equally fatal; and observation leads to the conclusion that the utmost care in the treatment of the animals does not preserve them from the ravages of the malady, nor does the susceptibility seem to be increased in animals which are systematically neglected. As we remarked before, the one essential is the typhoid germ; when that is planted in the organism the results follow in regular order, undisturbed by the external conditions of the animal's existence.—*Rural New Yorker*.

HOW TO FEED PIGS.—I used to keep them in my younger days, to furnish meat for my family and to sell to get a little spare cash. The kind with small bones, small ears and short nose, that with good keeping, at a year old would make about 325 pounds of pork, was my favorite (the first one I ever fattened weighing 260 pounds at eight months old). Milk and potatoes are the best food for pigs after they are weaned, to make them thrive; they also relish a few grains of corn at this time as well as a squirrel does a few nuts, as they grow along. In the season for it, they should be supplied daily with fresh green weeds or clover; a few green corn stalks are also good to feed them in their seasons and the slops and refuse of the kitchen with a little meal are also good. With this food they should be fed liberally, but not to surfeiting, and kept growing right along in a thrifty condition till about two months before killing time, during which they should be fed liberally with more concentrated and fattening food. Boiled pumpkins, thickened while hot with corn-meal, is excellent food for them, so also boiled sweet apples, thickened with meal, and so is scalded meal alone; and some people think that, for some days previous to slaughtering time, they should be fed with dry corn and pure cold water, as these make the meat harder and sweeter.—*R. Smith in Germantown Telegraph*.

AS TO PIGS AND PORK.—Pigs, unless greatly infested with trichinae, show no symptoms of the parasites during life. When badly infested they sometimes suffer from stiffness of the limbs and partial paralysis, but a pig estimated to have 60,000,000 of trichinae in its muscles has shown no symptoms during life. When the flesh has long been infested, the cysts or envelopes of the parasites may be seen upon close examination by the unaided eye as small white specks. Infested meat may be eaten with perfect safety if it has been exposed thoroughly to a heat of 212°, the temperature of boiling water. Only pork that is thoroughly cooked can be eaten with safety. The yellow color of the fat of pork is caused by a disordered condition of the animal's liver, consequent upon overfeeding during fattening. It is not considered unwholesome, and is a parallel case to that in which the flesh of sheep becomes yellow when the disease known as "rot," a liver or bilious disorder, is just beginning. In this condition they fatten very rapidly.—*American Agriculturist*.

If hogs are fed with plenty of salt and ashes, the worms hardly ever get the advantage of them. Sulphur and stone, coal and charcoal, are good preventives of disease in swine. Hogs are very fond of charcoal, and also of salt.

HORTICULTURE.

Summer Treatment of the Grape.

There are two classes of culturists who have very positive ideas of grape culture. One has a certain rule laid down by some excellent authority on grape-culture which must be followed to the very letter, and which calls for much pinching, pruning and training, exactly so; the other thinks nature knows what is best, and believes it wisest to let the grape grow as it will.

Our experience is between these two. Grapes do want some systematic care and culture, but what the details of this should be will depend more on circumstances than rules, and common sense to know how to adapt these circumstances to the wants of the vine will do more for the grape-grower than the best written treatise by the highest authority could do.

Supposing, for instance, that the vine has had some trimming in the winter, and that it is desirable to keep it within a certain limited space, we have to see that all the branches have a fair share of the light and air necessary to perfect themselves. A vine on a stake in vineyard or garden culture will therefore require different training and pruning from one on a trellis or on the side of a house. But it requires the consideration of no particular plan to understand that to have good, healthy foliage, and consequent strong, vigorous canes, each leaf must have full room to develop itself. So, if there be a heavy mass of foliage that will crowd one another and keep each shoot or leaf from growing as it should do, they should be thinned out till only just enough be left to cover up the occupied space.

What is true of leaves and branches is true of the fruit. In a state of nature the plant's object is to perfect seed. But we do not care about seed, we need pulp, or at least the delicious flesh which surrounds the seeds. By lessening the amount of seeds we increase the succulence of the berries left. Thinning the bunches then becomes one of the most beneficial practices in vine culture. As a general rule it is safe to cut off one-third of all the bunches formed. In regard to the shoots themselves it is a good rule to leave no more grow than we want to remain; but superfluous ones should be taken off before they have made much growth. It is a great shock to the plant to have them pulled out after they have made a considerable length of wood and much foliage. Again, some shoots will grow much more vigorously than others, and the object of the good cultivation is to have them all of a uniform thickness and strength from the base of the vine to its very top. This is regulated by pinching back. Those which show a disposition to be stronger than others are nipped off after they have extended some distance. How far they should go before their points are taken out depends on the strength. If very much stronger than others, they may perhaps be taken out altogether before they have grown much. If only of moderate strength, say shorten after they have advanced two or three feet, and so on according to vigor.

We cannot call these rules, for so much depends on the judgment—the good judgment—of the cultivator; but they may serve as hints for the successful summer culture of the grape-vine.—*Germantown Telegraph*.

FRUIT AND HEALTH.—Dr. Hunt said at a recent meeting of the Warsaw Horticultural Society, that "an absence of fruit implied doctors' bills." We have urged for many years the importance of a regular supply of ripe fruit to prevent disease, and insisted that the best medicine chest which an emigrating family could carry to a newly-settled country, would be a box of early bearing fruit trees, currant, gooseberry and strawberry bushes, and strawberry plants. We knew a family who moved to the West, and took with them a large supply of dried fruits, which lasted them throughout the first summer. None of them were sick, although disease prevailed all about them that year; but the next year, with more comforts and less privations, but with no fruit, they suffered much from sickness. Other Western residents have told us that so long as they could have ripe fruit, they have been free from all diseases resulting from malaria.—*Homestead*.

PLANTS FOR THE MAILS.—Prof. Thurber, in discussing the topic of sending plants through the mails, calls attention to the fact that there is greater danger arising from the presence of too much moisture than too little. The best packing material is sphagnum or bog moss, and this should be just so damp only as to be elastic to the touch. Plants packed in this, if not too damp, will remain for weeks uninjured; that is, if the plants are at rest. Another thing is to pack close. If sending by mail, take a piece of strong brown paper, lay the just damp, not wet, moss upon it, put the plants on the moss, and more moss over the plants; then begin at one end of the paper and roll up hard, secure with a string, and then put another paper over for direction. So in packing boxes, use the moss just damp, and have the box full and crammed down hard, so that there can be no possibility of moving or shaking in transit.

The Cherry Orchards of Sonoma.

Pepper's cherry orchard is about six miles northwest of Petaluma. It consists of nearly 600 bearing trees, and in 1872 produced more fruit than any other orchard in the State. In that year Mr. Pepper shipped to San Francisco 800 boxes of cherries, of 25 pounds each, and last year his shipments were about 700 boxes. This year the crop is considerably below the average in quantity, which is attributed to the cold, wet and otherwise inferior weather early in the spring, causing the blossoms to wither, and the fruit to fall from the tree when it began to form. The quality, however, is better than usual. Mr. Pepper set out his orchard in 1860, and has given much attention to cherry culture since that time. The principal varieties which he cultivates, and which he finds best suited to his locality, are the Black Tartarian, the May Duke and the Napoleon Bigarreau. W. Cassidy's orchard is situated near the northwestern boundary of this city; was set out in 1861, and commenced bearing in 1864. It consists of about 400 acres, of which 300 bear fruit this year. In ordinary seasons the product is about eight tons, equivalent to 640 boxes of 25 pounds each. As in the case of Mr. Pepper's orchard, the crop this year is lighter, but of better quality than usual. The principal varieties cultivated are the Governor Wood, the Black Tartarian and Napoleon Bigarreau, the first named being the most hardy and productive. Since the orchard commenced bearing, not more than two or three per cent. of the trees have died per year. The cherry season here lasts about six weeks, and the dates at which the first shipments were made by Mr. Cassidy, for three years past, were as follows: 1872, May 22d; 1873, May 14th; 1874, May 22d. On Mr. Pepper's place, less than six miles distant, the time at which the fruit begins to ripen is always about one week later. The first that ripen are the White Heart and the Early Purple, and the last the Napoleon Bigarreau and the Late Duke, the last of which are generally ready for market from the 1st to the 10th of July.—*Petaluma Argus*, May 29th.

THE APIARY.

The Sale of Honey.

Has it never occurred to your mind that one very important branch of the honey interest has been strangely neglected; i. e., its sale? To me it seems unaccountable that this part of the business has received so little attention. I have been more impressed with this fact since reading, recently, the circular of a dealer who says that when he commenced the business eight years ago, honey was a drug in the market, with no quotable value, and since he has taught the people how to use it its production and consumption has increased ten fold, etc. While it is not necessary to endorse his statements, they go to show how shamefully neglected the honey market has been when people's ignorance of it will permit such an assumption. It is said that the pickles, etc., produced by Cross & Blackwell have made an hundred millionaires, and that Bass' ale has made an army of rich men, and yet here is an article, a taste for which does not have to be cultivated, but is liked by almost every man, woman and child, because of its genuine toothsome qualities, whose sale one man can dare to claim a monopoly.

We want more "exclusive" dealers; if one man can do so much, why shouldn't the exertions of a thousand redound to the apiarian's interests. Surely the old adage holds true in this case, that "there are as good fish in the sea as were ever caught." Honey is an article of merit, and should command not beg for a price.—*Cor. Bee Keepers' Magazine*.

BEES AND GRAPES.—Chas. Dodant, who has cultivated bees near the hills of Burgundy, says that it is well established that bees are unable to cut the skin of grapes. "In order to ascertain the fact, the most juicy and sugared grapes, pears, sweet cherries, plums, apricots, etc., were put inside the hives; never have the bees attacked them if they were not previously scratched. The experiment was repeatedly made; it was discovered also that the first cutting was made by a kind of wasp, or by birds, or caused by the rain falling when the fruit was ripe."—*Rural New Yorker*.

The best districts for bees are those from which the timber has not been removed. The yield of honey in the mountainous part of Kentucky, is more abundant than in the blue grass region, where white clover abounds, which has generally been supposed to be one of the best honey plants, but which has proved of late years unreliable.

PURITY OF ITALIAN BEES.—A bee keeper says that the purity of Italian bees is determined by noting that the worker bees have three distinct yellow bands, and the drones are distinctly marked with yellow on their backs and sides.—*Rural New Yorker*.

No other branch of industry can be named in which there need be so little loss of material employed, or which so completely derives its profits from the vast and exhaustless domains of nature, as bee culture.

The word honey is undoubtedly derived from the Hebrew *ghoney*, which means delight; an appropriate name.

MISCELLANEOUS.

Cleaning Water Mains.

The following description of the means employed in cleaning out the water mains supplying the city of Brisbane, Australia, will be of interest to all who are connected with public water-works in this country. The main pipe supplying water to the city of Brisbane is 8 in. in diameter for 5 miles, and 9 in. for 2½ miles. Shortly after its completion it was found that, in consequence of the high temperature and the small quantity of mineral salts, the interior of the pipe became covered with moss, especially for the first half mile; and this, with the corrosion of the metal along the whole length, not only greatly diminished the quantity of water conveyed, but also deteriorated the quality, as portions of the incrustation became detached, and, floating down the main, caused much inconvenience to consumers, and even choked the service pipes. The scour valves, which had originally been placed at the lower points on the line of main, proved inadequate to the removal of the deposit, as it adhered to the surface of the iron, and therefore, the officer in charge of the works, suggested that it would be desirable to scour the interior of the main by the use of a machine to be propelled through by the pressure of the water. The subject being one of great importance, and involving much difficulty from the deficiency of precedents, several examinations were made of different parts of the main where it was accessible by the valves, and it was found that the incrustation was as much as 2 in. thick in parts of bottom of the pipes, and that for the whole length the metal was very rough from corrosion. The engineer having been authorized to carry out his suggestion, proceeded to construct a suitable machine for scraping the interior of the pipe, and after several experiments on different forms, completed a very efficient machine tube, which consists of a central shaft of 1 in. gaspipe 3 ft. 4 in. in length, with ferrule junction for the convenience of introduction into the openings of the main. Attached to this central shaft are a number of steel springs 1 in. wide, and 1-10th in. thick, inclined about 30 deg., so as to press on the sides of the pipe, and act both as scrapers, and to support the shaft in the center. At about equal intervals on the central shaft are fixed four pistons, each formed of a disc of India-rubber, one half in. thick, and supported in front by eight radiating plates, or flat arms, attached by hinge joints, so as to fold back on meeting any obstruction or irregularity of the internal surface of the main, any leakage of one piston under such circumstances being met by the other three, while circumference of each piston and its radiating plates also act in a very effectual manner to remove the softer deposit. For the insertion of the scraper, special castings were fitted at intervals of about one mile in the main pipe, each having a plate bolted on, and covering an aperture 2½ ft. long, and the same width as the diameter of the pipe. The object of having several openings is to afford convenient means of removing impurities, and allowing of short portions being cleaned without interfering with the supply to the city. The effect of the scraper has been very satisfactory, as it has increased the delivery of the main; while the quality of the water is so greatly improved that it is now used for manufacturing purposes, for which it was previously unfit through impurity.

Mammoth Cotton Press.

The new press of the Standard Compress Co., of New York, is an immense press, weight 100 tons, with 1,600 tons pressure, costing \$80,000, calculated to squeeze a bale of cotton or hay almost out of existence. The machine will press cotton or hay to any size required or desired, to 9½ inches for an ordinary bale of cotton of 500 pounds, or two ordinary bales of hay of 250 pounds each. In applying the iron ties it is almost impossible to get them tight, and the result is that the bale expands some six inches, measured at the thickest part, after withdrawal from the press. But once it expands the ties to their limit, the size is fixed not to exceed 18 inches. This press has a great advantage by reason of the uniformity in size of the bales after they are pressed. In railroad packing it has been found that a 28-foot car is entirely filled with 16,000 pounds of cotton, while its capacity for weight is 22,000 pounds. If cotton can be pressed in this way, cars will employ all their capacity when they carry cotton or hay, and be enabled to do it cheaper than now. In regard to ocean forwarding, the custom is to pack cotton as light, bulky freight. By crowding it into half the space, the carrying capacity is doubled, and the result will probably be a greater amount of such forwarding across the ocean by steam vessels, instead of the slower method of forwarding by sail. Two bales of hay, measuring in width on top of each other six feet and two inches, were unhooped and thrown together into the compress. In a moment they were hooped and taken out as one bale, and the whole mass, after expansion to the ties, measured only 20 inches at the thickest part. Cotton or hay may be thus pressed at the rate of a bale a minute, and put in such shape that a sailing vessel, instead of ballasting, may with perfect safety carry her full complement of cargo in cotton or hay.

BIRMINGHAM makes about 1,000,000,000 steel pens annually.

The Magnetic Metals.

It is well known that, beside iron, there are a few other metals possessing magnetic properties, viz., nickel and cobalt in a strong degree; manganese and chromium in a feeble one. In the *Philosophical Magazine* we find a remarkable article on this subject, by Mr. W. F. Barrett, F. C. S., in which he endeavors to point out the similarity of these metals to each other, in their physical and chemical properties. Thus, as to specific gravity, that of the 38 known metals ranges from lithium 0.50 to platinum 21.5, a difference of nearly 21; whereas those of the three strongly magnetic ones are, iron, 7.8; nickel, 8.3; cobalt, 8.5, where the extreme difference is only 0.7. Their specific heat is nearly identical, their atomic one is the same, so, also, their conductivity for sound, heat and electricity. Their dilation by caloric and the amount they lengthen by mechanical strain are also identical. The enormous cohesive power of iron, nickel and cobalt in the solid state signalizes these substances as the most tenacious of metals, and their melting point is only exceeded by the platinum group of metals. They are not volatile at the temperature of the hottest furnace, but only by the electric spark, when they yield very similar spectra. As to their chemical properties, the combining weight of iron is 56.0; nickel, 58.5, and cobalt the same. Chemists class these three metals in the same group from the similarity of their chemical behavior, and also the identity of their combining energy or atomicity. What has been said concerning the likeness of iron, nickel and cobalt in many respects, hold true of manganese and chromium. The former has latterly been used to replace nickel in the alloy of German silver. The compounds of all these five metals are conspicuous for the brilliancy of their colors. This uniform coincidence suggests the practical inference that nickel and cobalt might be obtained in a malleable and ductile condition when submitted to a process similar to that by which wrought iron is produced.

A Stratified Atmosphere.

We have heretofore assumed that the gases which originally composed the aerial envelop of the earth took up separate positions therein, according to their specific gravities. This might seem to be controverted by experiments on the diffusion of gases, in which those of very different weights, as chlorine and hydrogen, will intimately commingle, even against gravity, when brought into contact. This may be true in the narrow compass of a laboratory experiment, and yet not apply to any considerable thickness of the gases. Such a diffusion of one mile in depth of chlorine, would be equal to lifting up to the hydrogen a shell of solid iron two feet thick. Whether we explain the distinguishing principle of the constitution of gases as a mutual repulsion of their molecules, or, according to a late theory, as an incessant motion and clashing of atoms, there is nothing in either to warrant the supposition of the lifting or overcoming any considerable weight in the diffusion of gases. Under the first theory diffusion to a limited extent would be accounted for by the small residuum of chemical or cohesive attraction that would remain between the atoms when separated as they are in gases; and under the last theory by the mechanical impulsion of the molecules, through their hitting against each other. Evidently it is a principle which operates only within narrow limits and in the lower temperatures of the gases. The sun gives no indications of such a commingling of its gaseous elements. Spectrum analysis, when applied to its outer edges, shows first hydrogen, then the vapors of sodium and magnesium, and lastly those of calcium and iron. The same fact and order of position are found to exist in the more condensed layers of the sun spots.—*Popular Science Monthly*.

PAPER BAGS.—Not many years ago these articles, so necessary in every description of retail business, were generally made by the consumer, and were but rarely purchased. Now the reverse is the case. They are but seldom made by the person using them, and, in consequence, a great trade is done in them, many persons being wholly employed in the business. Many patents have been taken out to produce them by machinery. They are thus made not only of the ordinary old-fashioned shape, but also with square bottoms, with rounded bottoms, with gusset-sides. They are also made in endless tubes, and cut off in lengths. Perhaps the latest invention is that of Mr. Law, of Chatham, N. Y., and is described as "a mechanical device for making paper bags in one piece from a roll of paper." The paper is folded in the direction of its length from the two sides, so that the edges overlap one another about an inch in the center, the edges being pasted together. The paper is drawn through a folding machine, with the seam on the upper side, centrally, by a pair of rollers, which feed it along to the devices for forming the bottom of the bag. The feed-rollers then stop until the bottom is formed and the bag cut off the required length, when they again feed it forward, pushing out of the machine the bag already formed, and so on, making a bag at every revolution of the machine.

TALLOW may be bleached by prolonged exposure to sun or daylight. This is in fact the way in which tallow candle manufacturers bleach and improve their freshly made and very yellow looking candles.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

Patrons who are subscribers to the RURAL PRESS should pay their subscriptions promptly in order to secure club rates.

California State Grange.

OFFICERS:

Master—J. M. HAMILTON, Guenoc, Lake Co.
Overseer—O. L. ABBOTT, Santa Barbara.
Lecturer—J. W. A. WRIGHT, Borden, Fresno Co.
Steward—N. L. ALLEN, Salinas, Monterey Co.
Assistant Steward—WM. M. JACKSON, Woodland, Yolo Co.
Chaplain—I. G. GARDNER, Grayson.
Treasurer—W. A. FISHER, Napa City, Napa Co.
Secretary—W. H. BAXTER, 320 California street, S. F.
Keeper—R. R. HOOK, Waterford, Stanislaus Co.
Ceres—MRS. G. W. DAVIS, Santa Rosa, Sonoma Co.
Pomona—MRS. S. C. BAXTER, Napa City, Napa Co.
Flora—MRS. R. S. HEGLER, Bodega, Sonoma Co.
Lody Assistant Steward—MRS. S. M. GARDNER, Grayson, Stanislaus Co.

Executive Committee:

J. M. HAMILTON, W. M., Chairman, of Guenoc, Lake Co.
I. G. GARDNER, Grayson, Stanislaus Co.
J. C. MERRILL, Seld, Mono Co.
H. E. JOLLY, Merced, Merced Co.
THOS. A. GAREY, Los Angeles, Los Angeles Co.
G. W. COLBY, Nord, Butte Co.
A. B. NALLY, Windsor, Sonoma Co.

List of Organizing Deputies.

COUNTY.	DEPUTY.	POST OFFICE.
Alameda.	A. T. Dewey.	Oakland or San F'co.
Butte.	Wm. M. Thorp.	Chico.
Butte.	G. W. Colby.	Nord.
Colusa.	J. J. Hook.	Grand Island.
Contra Costa.	G. G. Dean.	Antioch.
Lake.	J. M. Hamilton.	Guenoc.
Los Angeles.	Thos. A. Garey.	Los Angeles.
Merced.	H. B. Jolley.	Merced City.
Monterey.	J. D. Fowler.	Hollister.
Napa.	W. H. Baxter, (Gen'l Dep.).	San Francisco.
Sacramento.	W. S. Manlove.	Sacramento.
San Francisco.	I. G. Gardner.	General Deputy.
San Francisco.	John Hegler.	Ellis.
San Joaquin.	Il. B. Sailer.	Moro.
San Luis Obispo.	Geo. W. Motherhead.	Pescadero.
San Mateo.	R. V. Weeks.	San Jose.
Santa Clara.	W. G. Henning.	Suisun.
Solano.	R. C. Haile.	Dixon.
Sonoma.	J. C. Merryfield.	Santa Rosa.
Sonoma.	Geo. W. Davis.	Windsor.
Stanislaus.	A. B. Nally.	Modesto.
Yolo.	J. D. Spencer.	Woodland.
Los Angeles.	Wm. M. Jackson.	Los Angeles.
Santa Barbara.	Thos. A. Garey.	Santa Barbara.
Ventura.	O. L. Abbott.	San Buenaventura.

Farmers desiring to organize Granges, can apply to J. M. Hamilton, (W. Master), Guenoc, Lake Co.; W. H. Baxter, (W. Sec'y), 320 California St., S. F.; J. W. A. Wright, (W. Lecturer), Borden, Fresno Co.; or to the nearest Deputy to their locality. Thos. H. Merry, (W. Ex-Lecturer) of Healdsburg, is also deputized to organize Granges.

The Farmers in the Mountains.

The farmers in the mountains and foothills, although a little tardy, seem now to be waking up in earnest to their interests, and are determined, hereafter, to have a full hand with their brethren in the valleys in the regulation of their business, and in determining the prices of such articles of merchandise or produce as they may have to buy or sell. The Placerville Herald, in speaking for the farmers in the foothills of Placer county, says: "It is a well-known fact that our farmers have been compelled, for many years, to sell their grain for just what the merchant chose to give them, while, upon the other hand, they have to pay the merchant's price for what they have to buy."

The farmers of the mountain State of Nevada are also waking up to their interests, as we judge by the warm reception they are giving to Worthy Master Hamilton, who is now engaged in organizing Granges in that State. Though he has but just arrived there we are already advised of the formation of three Granges, and many more localities are waiting for his arrival.

The farmers in Mono county are also waiting anxiously for the presence of a deputy who can initiate the work in that distant and isolated portion of the State.

Arizona has also long been anxious to enter upon the movement, and is waiting patiently for some missionary who can bear thither the word and work of the Order.

FREIGHTS FROM VENTURA COUNTY.—Important reductions in wharfage upon grain shipments from Ventura county have been made the present season. Heretofore the charge has been \$1.75 per ton. The wharf owners have now agreed to reduce to \$1, and as there will be fully 40,000 tons to ship, this decrease will effect a saving to the farmers of that county of not less than \$30,000. This result has been brought about mainly through the Grange combination, and an effort is now to be made to secure a reduction in the cost of freight from that point to this city. The Grangers propose to charter sailing vessels in this city to transport their wheat, unless the steamship companies make some concession. It is in such matters as this that the united action of the farmers is beginning to be felt where it never has been felt before, and where it would not now be brought to bear, were it not for the Grange organization.

AVOID INTERNAL DISCORDS.—A Michigan Patron urges brethren to be "Blind to all opinions in discord with the general wishes of the Grange." He adds: "We are strong enough to meet and have no fears of our outside foes. But there is another, the most dangerous of all foes, namely—internal discord, differences of opinion which have a tendency to break down the unity of action necessary to success." This advice is given because of opposition in some of the Granges to county purchasing agents, and because of the tendency to centralize power, etc.

County Councils.

The branch of the organization of the Patrons of Husbandry, known as County or District Councils, is evidently destined to act an important part in that organization. To use the expression of a cotemporary, they are destined to become "the main stay and workshop of the Order." We have already some 14 or 15 Councils organized in California, and several others, we believe, in contemplation. The importance of these organizations is beginning to be more fully recognized, both here and in the States, and their utility and management largely considered by our cotemporaries. We herein reproduce a few thoughts and suggestions similar to those which have been presented elsewhere.

State organizations are too unwieldy to work rapidly, and too diversified in their interests to meet the local wants and necessities of the farming community. But with live Subordinate Granges, keeping up the true spirit of the Order by a proper cultivation of its social features, and sending their wisest, truest and most efficient men to plan and counsel in the County or District Council, for its special locality, we have just the organization needed to sustain the Order, to relieve the necessities of the agriculturist, and to carry out the plans for building up all the various interests of the farming community.

The Order has entered upon an untried work—a work of vast magnitude and importance, such a one as has never yet been attempted by any class or any guild; and it would be folly to deny that our work has yet approached anything like perfection. We are still sadly deficient in many things; many of our plans fail—many of our ideas may be crude or impractical. We have hardly yet reached the touchstone of experience. Wise and prudent men are needed in all our Councils. We have such, but they are generally retiring and modest. They must be sought out and pressed into service.

The necessity of secrecy in our operations does not admit of indiscriminate publication, through the press, of the plans and work of our different Councils, for general guidance and instruction. Yet such information is desirable. One Council may have better plans than another—the information of which, if disseminated, may save much experimenting. In view of such possibilities, neighboring Councils should be more frequently visited and interviewed, and their plans be considered and compared. If no other benefit could be thus derived, a simple, fraternal interchange of opinions and good wishes would amply repay the trouble and expense of such visits—even if they should be quite frequent and general.

Our Order is yet only feeling its way along, and it needs all the light that can be eliminated by the contact of mind with mind. It is an easy matter to thus send delegates from one Council to another, and much disastrous experimenting may thus be saved. Every Grange in a district should be represented at every meeting of its Council, and the very best men should be selected for such work. Men who have shown themselves incompetent to transact their own business should be avoided in such choice. Our Councils should be thoroughly competent, working bodies. In them none should be found but sound men—men who love the Order and its principles, and who will work for its prosperity.

LATE DECISIONS BY THE MASTER OF THE NATIONAL GRANGE.—Hon. D. W. Adams, Master of the National Grange, says: "On all questions involving points of order, the Grange may appeal from the Master to the house; but on all questions of constitutional law the Master's decision is final, subject, however, to an appeal to the Master of the State or the National Grange. In the subordinate Granges, a motion to adjourn is not in order, but the Master should close as soon as the time has arrived, or the business finished. The Grange should fix a rule never to hold a meeting after ten o'clock. The Grange may close, after initiation in any degree of any kind at one meeting. It should commence with the first and run through to the fourth and commence again. No business except initiation can be done at other than the regular meetings, and regular meetings are those specified in the by-laws as such. There should be a short recess at every meeting. A tie vote decides a question lost. No member should be allowed to enter or leave by the Steward or Gate Keeper during the opening or closing ceremonies."

DABBING.—Much complaint is made by newspaper men and politicians because the farmers are "dabbling in railway legislation." Well, what of it? The Chicago Industrial Age answers the question thusly: "Have not 'the farmers of this country'—who furnish four-fifths of the freightage of the country—as good a right to 'dabble in railway legislation' as newspaper editors, who furnish four-fifths of the dead-weights who use and support railway monopolies?"

THE FARMER AND THE MANUFACTURER.—When the manufacturer can sell his goods directly to the people who use them, without the intervention of any third person, the former is able to make a large saving in his purchases, while the latter receives a better price for what he produces. Therefore if the farmers succeed in their present efforts, the manufacturers will also be greatly benefited.

Co-operation Among Farmers.

One of the most important developments which is growing out of the present Grange movement, is the tendency to embark in co-operative enterprises of various kinds. This is a natural outgrowth of the Order, which is essentially co-operative of itself. In addition to manufacturing and other enterprises already successfully established, we are constantly hearing of new projects set on foot in various parts of the Western and Northwestern States.

Very soon after the present farmers' movement was inaugurated, and so soon as it had developed into a fixed and permanent institution, the expediency and necessity for co-operation in the purchase and sale, in a small way, of farm and household articles from large dealers, became abundantly apparent. The success which attended these preliminary steps naturally led to an extension of the system, until the plan of dealing direct with the manufacturers was adopted, to save the commissions of middlemen; and sales were made on such a large scale that cars were chartered for their exclusive transportation, at a still further saving in the important matter of freight. This direct inroad into the privileges and profits of the middlemen, by which the very existence of their trade was threatened, very naturally provoked efforts on their part to close the doors of the manufacturing against any direct trade with consumers. The rebuffs with which the Patrons met by reason of this move led to a still further extension of the principle, and co-operative manufacturing were established, to provide the farmers with such implements as the established manufacturers refused to furnish. From this it was but a step to the organization of farmers' insurance companies, farmers' banks, elevators, shipping agencies, etc. The result of these movements in the single State of Illinois, thus far, has lately been enumerated by the Chicago Age, as follows:

In Insurance there are three co-operative companies.

Elevators and grain warehouses, twenty.

Manufacturing establishments, thirty.

Grist mills, eight.

Packing houses, three.

Co-operative associations, eight.

Grange stores, sixteen.

In some of their business movements, of course, the experiments have not been as satisfactory as could be wished. In some instances the farmers have been imposed upon by insincere and selfish men, who have led them into trouble. On several occasions the Age has counseled its readers to go slow, but sure. To take no false steps, but look the ground well over before they invested, and to trust no man in manufacturing or mercantile business that they do not know all about, and know him to be both morally and mentally competent for the post for which he is mentioned.

The above schedule shows an amount nearly equal to five millions of dollars, which the farmers have put into the co-operative movement in sums of twenty-five dollars and upwards.

We have no means of reaching the extent of similar operations in other States, but the aggregate must be enormous, and the saving to the farmers beyond all computation. The Bureau of Agriculture at Washington has roughly estimated the saving to the Western farmer, through the economic features of the Grange, to be from \$6,000,000 to \$7,000,000; and this is but a beginning of the immense advantages already realized and to be derived from the practice of superior economy, the abandonment of the vicious credit system, and the fostering of a sharp competition in trade.

IT ENRICHES, ELEVATES AND IMPROVES.—The Omaha Republican takes the following cheering view of the farmers' movement: "From the present appearance it seems safe to conclude that the formation of the Grangers will do more to build up, educate and enrich our State and the West than any other action of the people that has taken place since the first plow was sent through the prairie soil. The one great result is to keep money in the country. To make the balance of the trade from the east to the west instead of from the west to the east. Those who are looking for a failure will look in vain. Success cannot but attend a movement that enriches, elevates and improves."

THE FARMERS IN THE POLITICAL FIELD.—The farmers of Indiana assembled in convention June 10th, and resolved henceforth to support the most capable candidates for political offices, without regard to party. They also declared in favor of a single term of office, and made nominations for State officers. This, though a farmers' movement, is in no sense of the word a Grangers' movement, although the Grangers will no doubt very generally support the ticket put in nomination.

ACKNOWLEDGMENT.—M. D. Whitmore, Chairman of the Patrons of Husbandry Relief Committee, of the State Grange of Louisiana, has acknowledged the receipt, from Secretary W. H. Baxter, of this State, of the first instalment (\$168.30) of contributions from the Patrons of this State, for the relief of their suffering brothers in Louisiana.

CHANGE OF SECRETARY.—Manuel Eyre has been elected Secretary of Napa Grange, in place of J. Walter Ward, who has resigned to accept a position in the office of the State Agency in this city.

Sutter Mill and Pilot Hill Granges, El Dorado County.

EDITORS PRESS:—Noticing with each issue interesting notices from the different Granges throughout our State, narrating their progress, condition and other items connected with their organization, I think it no more than equitable to at least inform the Patrons through the columns of your paper that there really exists a Grange at this locality, known by the historical name of Sutter Mill Grange. Though but young in the grand constellation of Granges that are now brightening up the skies of the Farmer's Cause, we are nevertheless already experiencing the wholesome benefit of that sociability and mutual enjoyment that has hitherto, from the non-cooperation of the agricultural masses, kept us comparatively strangers to our own social interests and financial benefits. Owing to the fact that we received our dispensation but a few days ago, we have not done much in the way of adding members; but from the present outlook, and the apparent deep interest evinced by agriculturists to join our Grange, I am quite confident that as soon as we have everything thoroughly arranged and the "field prepared for labor," we shall be able to start with a class of at least eight or ten persons. This communication would scarce be of interest did I neglect to give a brief and hurried account of the visit of this Grange to the old Pioneer Grange of this State, Pilot Hill, No. 1, located at the village of Pilot Hill, about ten miles northwest of this place. Pursuant to arrangements, on Saturday, May 30th, about twenty members of this Grange took their departure from here in vehicles and on horseback, and arrived, after a pleasant ride of some two and a half hours, at Pilot Hill, where we were kindly and cordially welcomed by the host of brethren of that Grange. After sufficiently refreshing ourselves we proceeded to the Hall, where we had the pleasure of seeing the initiation of several candidates. The work of the different degrees was then exemplified for the benefit of Sutter Mill Grange, in a manner highly creditable to the officers and members of Pilot Hill Grange. The guests were then invited to the feast, and a happier entertainment was hardly a possibility. Of wholesome edibles, there was all that the most fastidious epicure could wish, and right heartily did the brethren and sisters enjoy the occasion. Appropriate toasts were proposed by Worthy Master Brown and Secretary Bayley, of Pilot Hill Grange, and pleasantly responded to by Worthy Master Christie and Bro. O'Brien, Secretary of our Grange; the W. O. and W. C., being called upon, were unable to respond; for "their hearts were full," in deep contemplation of the magnificent spread before them. The feast being concluded and the brethren and sisters wishing to return, the W. M. closed the Grange, when after a right hearty farewell between the Granges, we departed. In conclusion, I would say, that for a hospitable, generous, whole-souled people, commend me to Pilot Hill Grange, No. 1. PATRON.

CARPENTERIA GRANGE, SANTA BARBARA CO.—Thia Grange held a harvest feast on the 4th inst., after the initiation into the fourth degree of a class of eight. About 200 persons—members and invited guests—were present, and the occasion was a very interesting one. Amid the substantial upon the tables, the adornments were by no means forgotten. A bouquet flanked each plate, while directly over the center of the table, which was arranged in the form of a cross, was suspended a massive and beautiful hanging basket, which formed a striking contrast with a splendid, white pyramid-shaped cake, which was placed beneath it. This cake had a history. It was obtained two years ago at the donation party of Rev. Mr. Huff, by the late Robert McAllister, who subsequently was elected Steward of Carpenteria Grange. Just before his death he desired that this cake should be eaten at the next harvest feast of the Grange. His request was complied with. After the feast Judge Hill, of Montecito, by special invitation, delivered a speech on Local Option. His remarks were listened to with much attention, and were well received.

SAN LUIS OBISPO COUNTY.—J. C. Baker writes, under date of June 6th, as follows: Our Grange (Cambria) has 97 members, and is still gaining. We are to have a harvest feast on the 7th of July. Our County Council also meets on that day. Our quicksilver mine are looking up. It is reported that negotiations have just been concluded for the sale of another mine for the sum of \$47,000. Grain here is looking finely, and barley is safe; it will do to cut in a week from this time. Grasshoppers are doing some damage to late grain and vegetables. Efforts are being made to secure the construction of a direct road from this point (Cambria) to Pluto, only 28 miles from here on the overland stage road. The present round-about road to that point is 98 miles. With that road completed we can reach San Francisco by land in 24 hours. It now takes 36 hours to reach your city by steamer.

THE GRANGERS AND THE WHEAT MONOPOLISTS.—One of the strongest evidences that the Grangers are seriously affecting the schemes of the San Francisco wheat monopolists, says the Los Angeles Herald, is seen in the fact that the Commercial Herald is denouncing them with the senseless vituperation of a vulgar parrot, that speaks only what its master dictates.

Agriculture in Nevada.

Letter from Brother Hamilton—No. 2.

EDITORS PRESS:—I organized Eagle Valley Grange, No. 2, yesterday, with 17 charter members. I have been here since Saturday, and will leave this morning for Genoa. My advent into Nevada, for the purpose of establishing our Order, has been the subject of a good deal of comment, and a variety of surmises have been indulged in as to the ultimate result. I have found the agriculturists, so far, well posted in regard to our objects and purposes; and they manifest a quiet determination to aid and assist us in our great work of reform. Vegetation is backward in this valley—more so, I am told, than usual. A *Washoe zephyr* has been blowing with but little intermission since I came; the mountain tops around the valley are still white with snow.

On the ranch of Brother Lake, to which I referred in my last communication, there are about 150 acres of natural meadow, on which is now growing a fine crop of timothy and clover, and 250 acres of alfalfa, most of it as fine as I ever saw in California. Mr. Lake expects to cut in three crops from his alfalfa ground, this summer, five tons of hay per acre, for which he finds ready sale at \$15 per ton in the field. His timothy and clover, also, will be very heavy; of this he will cut but one crop, then pasture for the rest of the season. He also has a number of acres of potatoes, which do very well. His fruit and ornamental trees, shrubbery and vegetables, although later than usual, are growing nicely; and this all on ground which four years ago was covered with sage brush and rocks, and looked just as barren and desolate as any of the land along the Truckee river. Water for irrigating is taken from the river at different points above the town, and is really worth more to Truckee valley than placers of gold. Without the water, this could never be anything else than a barren, desolate spot; with it, the dry and stony waste will be transformed into one vast field, covered with as rich verdure as almost any spot on earth can show—grass from which five tons of hay to the acre may be made annually. Beautiful homes will spring up, decked with shrubbery of every form; and here fruits of all kinds suitable to the climate can be grown in great perfection, as is clearly shown by those who have tried it. There is now growing within the limits of Truckee valley about 1,500 acres of alfalfa, and the ground is now being prepared to seed as much as 1,000 acres more. But a few years will elapse until the whole of this valley, that is not natural meadow, will be covered with this wonderful grass, which here appears to thrive best on the driest, poorest, stoniest soil.

Virginia, Washoe and Carson afford a market so far for all the hay which has been for sale, and the supply has never been equal to the demand. Ten years or less from this time, I am satisfied, will show all this section of country, which formerly was the home only of the antelope and sage hen, covered with flocks of sheep and herds of cattle, and producing wool and meat enough to enrich all who are so fortunate as to be owners of the soil. Yards and lots in Reno were pointed out to me, now covered with a most luxurious growth of alfalfa and flowers and vegetables and trees, which but three or four years ago were completely covered with rocks and gravel, and on which there was not the slightest sign of vegetation, except the everlasting sage brush. The rocks and stones hauled off from these places still remain piled up where they were removed to, and serve as monuments of the energy and perseverance and foresight of those who are now reaping the benefit of their own labor.

Yours fraternally, J. M. HAMILTON.
Carson City, June 10, 1874.

STANISLAUS COUNTY COUNCIL.—Vital E. Bangs, Secretary of this Council, writes as follows: I notice in your published list of Council Masters and Secretaries, that Deputy J. D. Spencer is given as the Master *pro tem* of Stanislaus County Council; this is true as regards the first convention of Council delegates; but subsequently, and when the time arrived for permanent organization, Bro. Spencer positively declined the nomination for the position of Master. Bro. R. R. Warder occupies that important position now in our Council.

DON'T GO TO LAW.—Every Patron who calls his fellow farmer "brother," must, before going to law, go to his Grange and there try to settle amicably with his brother. Of all the various classes of middlemen there is none in which there is found such a superabundance as in the profession of law. Were the principles of the Grange carried out by the community generally, there would not be found more than one lawyer where there are now 100. The saving to the people, in such an event, would be almost beyond computation.

BE EVER ALERT.—Keep the watch-fires burning brightly. Don't hesitate to be on hand at every meeting of your Order. The most active and dangerous enemies of the Order are engaged in their business of laying and executing plans for your entanglement in the dangerous toils of political and partisan strife. They are trying their old games, and unless you are on hand constantly watching and warding, they may do you or the Order injury.—*Am. Patron*.

THE GRANGERS' UNION has leased the San Joaquin warehouse, at Stockton, for a term of three years, with the privilege of five years.

New Granges.

EAGLE VALLEY GRANGE, No. 2, STATE OF NEVADA, was organized by Worthy Master Hamilton, of this State, on the 9th inst., with the following list of officers: G. W. Chedig, M.; M. C. Gardner, O.; A. D. Treadway, L.; S. A. Nevers, C.; O. A. F. Gilbert, Sec'y; M. Y. Stewart, T.; J. T. Griffiths, S.; J. A. Lovejoy, A. S.; J. M. Gatewood, G. K.; Mrs. H. M. Gardner, Pomona; Mrs. L. M. Lovejoy, Flora; Mrs. E. J. Dow, Ceres; Mrs. Eliza Nevers, L. A. S.

CARSON VALLEY GRANGE, No. 3, GENOA, STATE OF NEVADA, was organized by Bro. Hamilton, on the 10th instant, with 20 charter members and following list of officers: R. J. Livingston, M.; P. W. Vansickle, O.; S. Singleton, L.; W. F. Bull, C.; J. S. Child, Sec'y; A. P. Brockhiss, T.; Hugh Park, S.; William Hill, A. S.; John Gardner, G. K.; Mrs. Margaret Cook, Flora; Mrs. Mary McCue, Pomona; Mrs. Isabella Livingston, Ceres; Mrs. Amelia Harvey, L. A. S.

BERRYESSA GRANGE, MONTICELLO, NAPA CO., was organized June 12th by General Deputy W. H. Baxter, with thirty charter and two paying members. J. W. Smittle was chosen Master, and O. Schetter, Sec'y.

SOUTH SUTTER GRANGE, PLEASANT GROVE, SUTTER CO., was organized June 13th by Deputy A. D. Neher, of Placer county, with 28 charter members. Thomas Boyd was elected Master, and Alexander Donaldson, Sec'y.

GOOD ADVICE.—An exchange gives the following good and appropriate advice: "Let the Patron guard well the outer gate of his lips and the inner gate of his heart."

A LARGE CLASS.—Laurel Grange, Monroe county, Oregon, lately initiated a class of thirty-six to the 1st degree.

San Jose Farmers' Club.

The Club met at the usual hour, on Saturday, the 13th inst., and was called to order by president Casey.

In the matter of selecting a question for next Saturday it was resolved that the question now before the Club be postponed and that the Club hold no more meetings until the first Saturday after the 4th of July. This action is taken on account of the local option meetings occupying the hall until that time.

It was stated that in several of Mr. Ware's fields the grain under the live-oak trees looked much better than that exposed entirely to the sun, that on the south side of the tree being much better than that on the north side.

Mr. Hobson said that the reason of that was probably that at some time when the field was pastured the stock had herded in the shade of the tree.

Mr. Erskson spoke of Mr. Ballou's opinion that the new worm that had made its appearance in the orchards last spring was due to close planting, and said that during the past week he had visited the orchards of Mr. Morrill and of Mr. Burrell, in the mountainous west of town, and found that the same enemy had been depredating on trees planted forty feet apart.

It was suggested that perhaps the season in that locality being about a month later than in the valley, the damp cloudy weather held on after the time for the appearance of the worm, and served their purpose the same as the shade caused by close planting does in the valley.

Mr. Holloway said he was of the opinion that spent lime from the gas works might be a remedy for the squash worm. He said he had killed off all the squash bugs proper on his vines, but in the meantime the little striped bug, called "lady bug," made its appearance, and he treated them to a sprinkling of spent lime. It effectually dispersed the "lady bug," but whether he had killed all the squash bugs prior to administering the lime, or whether the lime cleaned them out, he couldn't say. At any rate they didn't appear afterwards. Ad-journed.—*Mercury*.

THE DISTRICT OF COLUMBIA INVESTIGATING COMMITTEE have finished their work and submitted their report. The report is pronounced to be most scathing on the work of the "Washington Ring," which squandered enormous amounts of public money for private gain, and ran up the indebtedness of the District to some \$20,000,000. Certain modifications of letting public contracts are recommended, which it is hoped will secure a more honest and economical administration of affairs hereafter. The report is said to be complete and exhaustive, and it is asserted there will be no whitewashing or covering up of favorites, and much less of shifting the responsibility upon subordinates.

RUST.—The damp, heavy atmosphere which prevailed during one or two days of the first week in June, is said to have produced rust in some wheat fields. A gentleman from Sonoma county informs us that fields on his ranch which in the early part of the week gave promise of yielding forty bushels of good wheat to the acre were, within five days, so affected by rust as to necessitate cutting for hay; and this too, when he had an abundance of hay without it.

GRUB OR FOOT-ROT IN SHEEP.—To treat this malady, take a box, 16 feet long and three feet wide, about, put in dry, fresh-slacked lime, and run the sheep through it every other day for two weeks, or until a cure is effected. It is a never-failing cure.—*Live Stock Journal*.

THE DAIRY.

WHAT IS A GOOD COW?—The *Mirror and Farmer* says: Every farmer ought to know just what a good cow is; that is, how much a cow ought to yield, in order to save her from the butcher. In the large dairies in Vermont they call a cow that will make three 50-pound tubs of butter a year an average cow, and one that will make four tubs a good one. A single cow on good feed ought to do better than this even. One of the employes of the *Mirror* has a native cow which, during the 12 months ending April 1st, supplied a family of five with milk, butter and cream, and surplus enough to amount to \$67.50, the milk being sold at five cents per quart and the butter at 30 and 34 cents per pound. The cow will give, on good feed, 20 quarts of strained milk per day. When dried, March 10th, she was giving four quarts per day, her feed being hay and two quarts of cob meal. She dropped her calf April 1st, 1873, and another, March 30th, 1874. For such a cow a man had better give \$150 than to take the gift of a poor one. Our own idea is that a cow from which 200 pounds of butter cannot be made in a year should not be tolerated around any man's barn.

GILT-EDGED BUTTER.—In making fancy butter there are three essentials—color, texture and flavor. "The color must be a rich golden; the texture firm, tenacious, waxy; and that nutty flavor and smell which impart so high a degree of pleasure when eating it." Butter of the very highest character will bring \$1 a pound readily. A Philadelphia maker who receives this price gave Mr. J. B. Lyman these facts as to his management: He feeds on clover or early mown hay; cuts fine, moistens, and mixes in corn-meal and wheaten shorts, feeds often, and a little at a time; uses no roots except carrots; keeps his pasture free from weeds; keeps the temperature of the milk-room at fifty-eight degrees; skims clean; stirs the cream in the cream-pot; churns once a week; just before the butter gathers he puts in a bucketful of ice-cold water in the churn; in working, he works out all the buttermilk without the use of the hand, absorbing the drops with a fine linen cloth wrung from cold water, and at the second working handles delicately, with fingers as cold as may be; salts nearly an ounce to the pound; packs in one-pound balls.

EFFECTS OF DISEASED MILK.—According to a statement published in the *New York Times*, M. Cheveau has recently made several observations of the action upon healthy calves of milk from cows suffering from tuberculosis or phthisis. The calves were perfectly healthy, and after sixty days' feeding they were slaughtered. They were then found seriously diseased; numerous tubercles were found throughout the lymphatic system, and the lungs were full of caseous deposits. Similar investigations by Dr. Klebs, a German physician, resulted similarly, and he concludes that the infection first attacks the intestines, then the liver and the spleen, and finally the lungs. Vigorous organisms may resist the infection or overcome its effects, but the virus is contained in the milk of diseased cows in proportion to their condition. Scrofula is thus communicated to a healthy animal by a diseased nurse. The virus is contained in the serum of the milk and is not destroyed by boiling.

DAIRY STATISTICS.—According to the figures of the Secretary of the Chamber of Commerce of New York city, the total production of cheese in the United States in 1873 was 200,000,000 pounds, and of butter, 650,000,000 pounds. Of the cheese, the State of New York produced 90,000,000 pounds, or 45 per cent., leaving for other states a production of 110,000,000 pounds. The foreign exports last year were 90,000,000 pounds of cheese. Of the 650,000,000 pounds of butter produced in the entire country, the State of New York produced to the extent of 180,000,000. January 1 to April 18, 1874, the aggregate receipts were 11,149,422 bushels, which, compared with the average receipts, the same periods, 1871-3, inclusive, show a falling off to the extent of pounds, or nearly 28 per cent.

CAN'T FIND HIM.—Who? Why, the man that makes poor butter. We have hunted high and low for that man, but he has not shown his face. Every man makes the best butter in the State, and would black the eye of the man who says he don't. But, somehow, there is a wonderful difference in butter. We have it all grades and shades, from the sweet, rich, palatable, golden hues, that is as tempting as are the twenty dollar pieces behind the counter of a bank, to the cheesy-green and white colors of a pot of soap grease, with a smell about as inviting as that of a barrel of whale oil, and a taste—well, we don't know the taste—we have not been able to get that far along yet.—*Prairie Farmer*.

SHARP PRACTICE.—Several tubs of butter shipped from Copenhagen to New York have been returned. The honest Lewis county farmer who manufactured the butter is too enterprising for those simple Yorkers. In the center of each tub were packed oyster cans filled with salt and other materials of about the same weight as butter. The local buyer did not discover the cheat, until, testing a lot from the same dairy a few days ago, his trier struck the foreign substance. Communicating with the New York house, other tubs were found in similar condition, and were returned.

THE VINEYARD.

Grapes.

From a somewhat extended experience in the cultivation of grapes, and from careful observation of the growth and quantities of the numerous varieties recommended, we have reached the conclusion that the number which can be successfully raised in the New England and Northern States is quite small. We selected several years ago four varieties, which we regarded as best suited to our climate, and placed them together in a favorable locality for field culture. The varieties we selected were the Concord, Hartford Prolific, Delaware and Northern Muscadine. Our object was to note the time of ripening, the comparative hardiness, prolific character, and quality of each kind when grown on the same field and subjected to corresponding treatment. The Concord is the grape of the four varieties which has most fully met our wants or expectations. It has ripened at about the same time with the Hartford, is a better grape, and the fruit does not fall from the stem as does that. The Delaware is too tender, and very liable to mildew. This year it suffered from three different species of fungi, one of which attacks the under, another the upper surface of the leaf, and still another the berry. The Northern Muscadine is a foxy grape, not worth cultivating. We raised, the present year, from less than a third of an acre, over 3,000 pounds of Concord, most of which ripened very fairly, although the season has been exceedingly unfavorable.

We are fully convinced of another fact regarding the fertilization of the grape, which is of the highest importance. Animal excrement or stable manure we regard as unsuited to its successful cultivation; or, at least, it is far better to employ the fertilizing agents, which are so largely found in the plant-structure and in the fruit. Potash, phosphoric acid and lime are great food staples which the grape demands, and they cannot flourish unless these elements are abundantly supplied. We fertilize our vineyards and grape borders with unleached ashes and dissolved bones, and obtain most abundant returns.—*Dr. Nichols*.

One Way of Propagating Grape Vines.

Prepare the cuttings as soon as possible, any time when the vines are not frozen, in this manner: Cut off square and close to the lower bud and about half an inch above the upper one. Leave the cutting from two to four buds long. Either tie in bunches or pack loose in sand or damp sawdust, in the cellar.

Prepare your land (which should face the south) this month by spading or subsoiling at least eighteen inches deep. As soon as it will do to work in the spring, spade it over again and pulverize it well. Then get some boards ten or twelve inches wide, lay one east and west across the south end of the bed. Take your spade and throw out a trench close to the edge of the board at an angle of 45°, top to the north. Set the cuttings in this trench, leaving the top end even with the head of the bed close to the north side and four inches apart; draw the earth back to them, then pull the board, south over the tops of the cuttings two inches and let it remain there. Now you have one row planted. Proceed in like manner till all are planted. It is very hard to stand on the board while digging the trench and setting the cuttings. As soon as the top buds have swelled and part of them burst, stake the board up edgewise, leaning a little to the north so as to shade the tender vine. The rows should be two feet apart and the bed should be hoed over one inch deep once a week.

My object in using the board is that it keeps the top bud dormant until the roots start and by shading there is no danger from sun scalding. In this manner I have raised No. 1 Delaware vines, not losing ten per cent. of the cuttings, and thousands of Concord with roots six and eight ft. long. I have not obtained a patent, and don't intend to.—*Cor. Fruit Recorder*.

VENANGO GRAPE.—This is a comparatively new grape, and so far as tried has been quite satisfactory. Mr. G. W. Ditzler, of Oldham county, Ky., a few days since placed upon our table some samples of the Venango grape, which are very fine. The fruit is large, about the size of the Concord, bunches large and compact, flavor sweet, about equal to the Delaware, color light amber, and the only fault is its thickness of skin, which is a recommendation as a shipping grape. Mr. Ditzler has been growing grapes on the elevated points near the Ohio for a number of years, some ten miles above Louisville, and he considers the Venango one of the best grapes that he cultivates, and he finds a ready sale for it at about \$7 or \$8 per box. At the Louisville fair last year, experienced judges awarded the Venango grape sweepstakes premium. This shows that it is held in high esteem by grape growers.—*Southern Agriculturist*.

DUCKS IN A VINEYARD.—It is mentioned in the *Grape Culturist* that a large vineyardist in Illinois keeps each season not less than 100 ducks constantly among the vines. He says it is wonderful with what diligence they dart after all kinds of bugs, thrips, flies and small snails, and he considers them among the best of insect exterminators.



Through Life.

We slight the gifts that every season bears,
And let them fall unheeded from our grasp,
In our great eagerness to reach and clasp
The promised treasures of the coming years.

Or else we mourn some great good passed away,
And in the shadow of our grief shut in,
Refuse the lesser good we yet might win,
The offered peace and gladness of to-day.

So through the chambers of our life we pass,
And leave them one by one, and never stay,
Not knowing how much pleasantness there was
In each, until the closing of the door
Has sounded through the house, and died away,
And in our hearts we sigh, "For evermore."

Cheerfulness.

The world goes up and the world goes down,
And the sunshine follows the rain;
And yesterday's sneer and yesterday's frown
Can never come over again—
Sweet wife;
No, never come over again.

For woman is warm, though man be cold,
And the night will hallow the day;
Till the heart which at even was weary and old
Can rise in the morning gay—
Sweet wife;
To its work in the morning gay.

—C. Kingsley.

Civil, but not Servile.

[For the Press by Mrs. I. H. NICHOLS.]

And so Mrs. Mountain "cannot quite agree with Mrs. Nichols," in the matter of putty. Well, it may be fortunate that we disagree in something, for now we can pull caps and mend the torn frills with the beautiful illusions in which Mrs. N. delights equally with Mrs. M., and thus add to the zest of our charming RURAL entertainments.

Putty and Pin-cushions!

Pin-cushions indeed! Think of our dear Mountain being pin-cushioned with all the keen, fine points of her farm house chat!

"What are we in the world for if not to take a hand in the never ending struggle of right with wrong?" What indeed! But then in this struggle the putty must first set in the matrix of eternal right, or—hard pushed—it will only bring from the encounter the impress of aggressive wrong.

"Anne" and "S. W."

But that he is already done brown, I would throw a boe-cake at that San Diego bachelor for calling out such a rebuke to the womanly sympathies of our circle. To excuse myself in the matter, I may confess, that I feared the fate of Tarpeia for "S. W." Such a shower of "gems" and "brown loaves" might well smother his culinary ambition and suggest that "old saw"—"Too many cooks spoil the broth." Besides, I had a fancy that his best resort might be in the maiden sympathies of "Anne."

But how associations do make us to differ in our estimates of matters and things!

Mrs. M. speaks with a poet's fervor of the "sacred and beautiful uses of domestic putty." Now to most minds the "uses of domestic putty" suggest only broken china and glass-ware. And but for a cherished memory of the long ago—the prefixing of "sacred and beautiful" to the uses of putty, would have stirred the humorous in my composition to its depths. That memory being apropos to the subject in discussion, I will recall it here:

The season was June; the place a shaded country road at the foot of a spur of the Green mountain range, in southern Vermont. Between this road and a considerable branch of the Connecticut river, in a small enclosure overlooking the broad, grassy meadow, stood a little white-washed cottage in which—all by themselves—lived an aged pair, reduced—many years since—from comparative wealth by the reckless extravagance of an only son, who had early found a drunkard's grave. In trips to our market town, I had often made the expense of thirst to get speech and sight of this venerable couple who, leaning lovingly on God and each other, seemed set apart from the world—

As "in it, but not of it."

To pass this cottage I must keep the old road—a new one having been opened that diverted most of the travel to the other side of the stream. I took the old road on this beautiful June afternoon, to give the friend by my side an opportunity to take away with her to her distant home, the sweet picture of those united lives, that in bereavement and toil and sacrifice, had ebbed and flowed only to cast treasure on the shifting sands of time. We paused at the ride gate to take in the scene and its surroundings. In the vine-shaded door-way sat the aged pair. The old man's hands were busy with his basket work, his thoughts evidently intent on the contents of the weekly paper from which the old lady was reading, in low monotonous tones—fit accompaniment to the hum of the honey bees in the little garden at the back of the cottage. All the surroundings were neat and well kept, and the poor, faded and patched garments were scrupulously clean. More than seventy summers had flowered and fruited; more than seventy winters frosted and consumed their scanty hoards. The step had grown slow and hesitating; the wavy brown hair had become silvered and thin; in the blue eyes the shadows of past sorrows seemed fading into the

"Sweet Bye and Bye."

And anon pleasant thoughts rippled in smiles over the faces from which neither age nor disappointment had stolen the cheerful lines and rosy hue of health.

The click of the gate gave notice of our presence, and begging a drink from the sparkling spring at the house corner, we fell into a pleasant chat. The quaint old goblet, from which I had drunk many a time before, was brought out, and my friend—curious in the antique—could not refrain from remarking upon its peculiar form and the rare skill which had reconstructed the vessel from a score of irregular fragments into which it had been broken while the old people were yet young and prosperous. Putty and patience had mended the broken goblet.

"You see," said the old man with moistened eyes and an appealing glance at the old wife—"we set a store by that glass. We pledged each other on our wedding day to fill it for ourselves and for the friend or stranger within our gate, with water only. On each anniversary of our wedding day we have renewed our pledge and thanked God for unbroken faith in Him and each other." "Yes," murmured the old lady, as if thinking aloud—"God and each other." "But," queried my friend, who was interested in the question of equal rights—"do you mean us to understand that you have had no differences; no need on your part to exercise authority, and no need on your wife's to submit her will to yours?" "Lord love you, my dear woman," exclaimed the old man, "I can't imagine how it would seem to want to exercise authority over Rachel! It must be a letting go of blessed trust. It would make two of us, Rachel—two." "Yes, John," responded the old lady, with the love-light in her eye, "the will that does the bidding of authority is slow and sore-footed. It can't serve like the love that don't wait for orders. No two can think alike always, ma'am, but love is a *petit jury* that always agrees, John says. And he's right, ma'am, in our case."

And now, reader, do you wonder that, that putty-patched goblet—like Moore's broken vase "in which roses had once been distilled"—lives in my memory, a sacred and beautiful memento of wedded love?

Says Emerson, "A friend is a person with whom I may be sincere. Before him I may think aloud. I am arrived at last in the presence of a man so real and equal, that I may drop even those undermost garments of dissimulation, courtesy and second thought, which men never put off, and may deal with him with the simplicity and wholeness with which one chemical atom meets another."

This, it seems to me, is a happy presentation of the relations that obtain between the parties to a marriage that meets the Divine requirement. Each is to the other

"A Presence so Real and Equal."

That thought meets thought without concealment and without conscious self-questionings, for each is to the other a Court of Appeal, whose decisions—sought in loving confidence—are affirmations rather than decrees.

To deal with each other "with the simplicity and wholeness with which one chemical atom meets another," is a condition essential to happiness in the marriage relation. Seldom would those moths of discontent—business perplexities—eat away the delicate fabric of mutual confidence and consign the firm to bankruptcy, if husband and wife dealt with each other with simplicity and wholeness of thought and purpose—reserving nothing in their consideration of mutual interests.

Said a gentleman who was for many years High Sheriff in my native county,—"I have been struck with the fact, that in every business failure within my official knowledge, the wife had been kept in ignorance of her husband's affairs. And I am fully persuaded, that in nine cases in ten where men fail in business, they might have succeeded or would have retreated in good time had their wives been taken into their counsels. For most women, even if they have had no business training, see too much of home at stake to encourage extravagant outlays and speculative ventures." This man practiced as he taught. He was a nobler and more genial pattern of a man, his wife a larger, nobler souled woman for the discipline of mutual confidences in all that pertained to their mutual interests. Mutual confidence in outside affairs become a habit that encourages and sustains free communication in all that affects the inner mutual and individual life. The influence of such relations between the father and mother, is seen in the affectionateness and unselfishness of the children. It partially supplies the lack of outside society, and with plenty of books and papers, read aloud and discussed in the family circle—no home can be lonely except in bereavement or irremediable misfortune.

It is characteristic of deep feeling in some natures to be reticent; happy for such if they wed with souls that—as Ward Beecher expresses—"slop over." Otherwise they are doomed to perpetual unrest; and often—failing to estab-

lish generous, whole-souled confidences—the sweet, timid fountain of affection becomes hermetically sealed to the being, who—of all the world—could have brought it gushing and sparkling into the sunshine.

Imperceptible Presence.

The moment we cross the threshold of a dwelling, we find the housewife represented by her mode of housekeeping. While we sit in the parlor waiting the presence of the mistress, we study the outlines of her character even in this limited portion of her dominion.

Not alone in the parlor can we estimate justly her inferior or superior talent for home thriftiness. Kitchen and pantry, closet and cupboard, alike manifest her aptness or incapacity for the position of mistress. Above all, we quickly note the individuality in the arrangement of a room. Chairs and sofas are never placed by rule, if a lady has an original mind.

If all the arrangements about her home are complete; if they exhibit order, taste and elegance; if thought has wrought out the aspirations of the heart in the pictures that suggest refinement; if vines trailing from dainty vases tempt the imagination to perpetual summer; if gleams of sunshine falling here and there on the softly tinted carpet, intimate warmth of feeling—we drop into an easy arm chair and a restfulness creeps over us.

The plain cottage with its low ceilings and diminutive windows, may be a very ideal of poetic fancy. Indeed, the rich have all the appurtenances of wealth to make a creation with, while the humble housewife in a little cottage must create and carry out her designs unaided. Rugged exteriors must be toned down to beautiful conceptions, and then poets will sing of love in a cottage, and tried votaries of style will sigh for the love, if not for the cottage.—*Rural Home.*

Modesty of Genius a Mistake.

The modesty of genius has become proverbial; and yet how few men of genius are really modest! They seem so often, but it is because of the self-discipline and of the difference between their possibility and performance. Men of superior ability cannot fail to recognize it. The very character of their minds, their power of observation and analysis, must furnish comparison and introspection. What enables them to understand others compels them to understand themselves. No man of genius, or even of average cleverness, unless he lives a wholly secluded life, can fail to see such a difference as exists between himself and those who surround him. He must soon see of necessity how much superior he is to the average order of intellect.

One of the principal weaknesses of men of genius is insubordinate vanity—a weakness they share with fools. It may be safely stated when men believe intensely in themselves, that they belong to one or the other class—generally the latter. The genius has self-trust because he measures himself against others; the fool, because he has no comprehension of his fellows and no standard of merit above himself.

What man of eminence in any field of labor or of thought who has come down to us was modest?

The great warriors, too numerous to mention, have been made drunk with self-love, and have actually fancied themselves Godlike in their power. Napoleon, first of all captains, hardly knew, until after Waterloo, whether he or the Almighty controlled the universe. Wellington every way his inferior, and only a little more than a competent general, with a dogged obstinacy and lucky opportunities, went to the grave with the conviction that Caesar was only an orderly sergeant compared to him.

SOUL POVERTY. Sometimes, when we are not as quiet as we should be, we are filled with fear on account of our soul poverty. What a poor thing I am; how little grace I have; how weak in prayer; how slow in service; how frequently depressed; how easily tossed to and fro. How shall I hope to hold on to the end? Here is the answer to it:—"I shall be anointed with fresh oil." I am poor, but I shall receive my daily pension; I am weak, and I have no strength in reserve, but my strength is laid up in God.—*Spurgeon.*

An Illinois woman, when they first began to have Congressmen-at-large out there, hearing the fact alluded to, straightway rushed into the kitchen, exclaiming, "Sarah Jane, don't leave the clothes out to-night, for there's a Congressman at large!"

As two children were playing together, little Jane got angry and pouted. "Johnny said to her, 'Look out, Jane, or I'll take a seat up there on your lips.'" "Then," replied Jane, quite enured of her pouts, "I'll laugh, and you'll fall off."

JOHN RANDOLPH met a personal enemy in the street one day, who refused to give him half the sidewalk, saying that he never turned out for a race. "I do," said Randolph, stepping aside and politely raising his hat. "Pass on."

A WINTER asks in an agricultural paper if any one can inform him of the best way to start a nursery. Certainly, get married.

A ST LOUIS widow has nine girls, and an old Mormon offers to take the whole family to his bosom at one fell stroke.

The Temperance Muddlement.

Was there ever such a muddle? The women are praying the rum-sellers out of their business. Some persons are applauding and other persons are condemning their efforts. Some Christian ministers are quoting Scripture to show that Christ manufactured, and that the Book commends, an intoxicating beverage. Other Christian ministers are quoting Christ and the Bible to prove exactly the contrary. Medical men are writing *pro* and *con* concerning the uses and abuses of alcohol with renewed vigor. Professors of medical colleges are informing the people, through the media of the newspapers, that grog is good—good medicine, good drink, and good food—or, at least, a substitute for victuals. Other professors of other medical colleges are warning the people, through the columns of the same newspapers, that grog is neither medicine, drink, food, nor substitute for victuals. Family physicians of great learning and large experience assure their patrons that alcohol, employed in moderation, is useful. Other family physicians, of equal reputation and standing, declare that all use is abuse. Was there ever another muddle like unto the alcoholic?

Alcohol is the mystery of mysteries. Its place in nature seems to be past all finding out. The problems of pabulum, spontaneous generation, pre-historic man, or cremation vs. inhumation, are as nothing compared with it. Though its nature is simple enough—carbon, oxygen, and hydrogen—its properties puzzle doctors of divinity, doctors of medicine, and doctors of every other name and vocation.

Authors on toxicology declare alcohol to be a "caustic and irritant poison." Authors on materia medica affirm it to be a "supporter of vitality." Authors on pathology name a score of specific diseases which it produces, to say nothing of its general effect of *alcoholismus*. Authors on therapeutics tell us it is an indispensable medicament in cases of prostration and debility. Authors on physiology make it out to be everything or nothing, according to their standpoint of observation, as the rural schoolmaster was willing to teach that the earth was round or flat, just as the people pleased.

The people drink alcohol and become puffers, sots, vagabonds, maniacs, murderers. People drink it, and while they gibber and stagger declare they could not live without it. Temperance orators trace its history for four thousand years, and assert that vice, crime and social desolation have ever blackened its pathway. Yet temperance orators get sick, and the temperance doctors prescribe alcohol to restore them to health. Statisticians tell us that alcohol is the chief agent in filling our prisons and penitentiaries, and the newspapers report murders every day in the year because of it; yet medical men administer a hundred thousand doses, and non-professional persons take a million of drinks daily. Arithmeticians calculate that money enough is expended for intoxicating drinks to pay our national debt in less than ten years; yet newspapers and politicians commend its manufacture and traffic as great and important industries.

Is there no way of getting at the truth of the uses and abuses of alcohol? Is this forever to remain the only problem that cannot be handled logically or scientifically? Can not our learned men find some reliable basis on which the subject can be rationally investigated, and its truthfulness demonstrated? Can not the principles of physiology, the laws of vitality, or the suggestions of common sense be applied to alcohol as to all other things under the sun?

There is a ray of hope for us. The *National Temperance Advocate* offers a premium of \$500 for the solution of this momentous problem. The sum is little enough, and so would \$5,000 be. Liquor drinking costs the good people of the United States \$2,000 an hour. \$500 pays the bill of intemperance for just fifteen minutes. If the alcoholic muddle could be unuddled, and the truth placed on a scientific and universally-accepted basis by means of a \$5,000,000 essay, the premium would be cheaper than water at a dollar an oceanful. The liquor interest of the country would raise \$5,000,000 in a week if it were necessary to prevent its business from being prayed or legislated out of existence.

Pity it is that only a paltry \$500 can be offered on the other side.

But we may hope that this sum will answer the purpose. Truth and victory are not always on the side of majorities and dollars. A higher motive power than any sum of money can represent may enlist the brains and pens that will exercise the demon forever. There is some way of finding it. May there be 500 competitors for the \$500 prize, and all of the best thoughts of the best writers treasured in a book that shall be a light to the world for all the ages to come.—*B. T. Thrall, in Phrenological Journal.*

No Norwegian girl is allowed to have a bean until she can make bread and knit socks. The adoption of the Norwegian fashion in this country might lead to some interesting improvements in door locks and window-fastenings.

MOTTO for tea merchants—Honest-tea is the best policy.

MANY of the richest planters of Jamaica live on coffee grounds.

A WOMAN'S pride and a sailors guide—A needle.

THE most profitable tree for hotel-keepers—the ash.

Alcohol as Food.

A popular medical writer makes the following practical points:

Liquor fattens; whisky is a good tonic; biters aid digestion. These are the statements made every day with considerable confidence, and in a manner well calculated to impose on a certain class of minds; hence, it is well that the friends of true temperance should have at hand the weapons of their warfare against the liquor traffic. If alcohol is food, why not give it to our horses?

If liquor fattens, why not give to our beef cattle, or turkeys, and our pigs a good dram of it night and morning?

If whisky is a good tonic, that is, gives a good appetite, why is it that so many whisky-drinkers, the men who are always full and never empty, eat so little, and, on the contrary, almost live on whisky? Give them plenty of whisky, and they want nothing else but leisure to drink it.

If "biters" aid digestion, why is it that those who take them all the time are never well?

But suppose that in some cases spirits do fatten, it is a watery fat; gives no strength, but increases the inability to work, and the susceptibility to all prevalent diseases. In cholera and all epidemics the liquor drinkers are the first to die.

If liquor fattens, why is it that we see so many spindle-shanked drunkards? Whisky-drinkers are often long, lank and lean, with so little flesh on their bones that the skin seems almost to cling to them, and so tottering are they in their step that the wind is ready to blow them away at any moment, and so shabby do they become in the end, that it requires the strength and steadiness of both hands to carry a glass of grog to their lips.

A CAPITAL FABLE.—The hopelessness of accomplishing anything without "pluck" is illustrated by an old East India fable. A mouse that dwelt near the abode of a great magician was kept in such constant distress by its fears of a cat that the magician, taking pity of it, turned it into a cat itself. Immediately it began to suffer from the fear of a dog, so the magician turned it into a dog. Then it began to suffer from fear of a tiger, and the magician, in disgust, said:

"Be a mouse again. As you have only the heart of a mouse, it is impossible to help you by giving you the body of a noble animal."

And the poor creature again became a mouse. It is the same with a mouse-hearted man. He may be clothed with the powers and placed in the position of brave men but he will always act like a mouse; and public opinion is usually the great magician that finally says to such a person:

"Go back to your obscurity again. You have only the heart of a mouse; and it is useless to try to make a lion out of you."

THE EARTH'S TEMPERATURE.—We have always defended the idea that changes of temperature which different parts of the earth have undergone need not be explained by the hypothesis of a change in the position of the ecliptic, or the absurd notion of a change in the position of the terrestrial poles and equator, the latter being an assumption of which already Laplace proved the impossibility. Our theory has always been that a simple upheaval of say 4,300 feet (which is a trifle when compared with the earth's diameter of say 43,000,000 feet, being only its one-10,000th part) is sufficient to explain all changes in temperature, also that of the glacial period, which we hold not to have been universal, but local in different regions during different periods of time. We now see with satisfaction that Prof. Dana expresses the opinion that the Canadian water-shed must once have been 4,500 higher than at present, and that the transformation of northern Canada into a plateau as high as Mount Washington gives a sufficient explanation for the cause of the glacial period for the eastern half of North America. Prof. Dana thinks also that when this plateau subsided, it sank below its present level, and that this was followed by a return movement.—*Manufacturer and Builder*.

CASH INSTEAD OF CREDIT.—People who buy for cash always buy cheaper than those who buy on credit. They buy more closely, and select more carefully. Purchases which are paid for when they are made are limited more exactly to the purchaser's wants. There is nothing like having to count the money out when the article is bought, to make people economical. The amount of indebtedness incurred is not much considered when the pay-day is far off. Persons who do all their business on a cash basis know just where they stand and what they can afford; consequently they never find after-occasion for regretting, in a turn of time, that they have indulged in this luxury or that, which they would have foregone had they seen what was coming. Real wants are few, and can be gratified for cash; at all events they should always be limited to what can be paid for in cash. How much of anxiety, how many sleepless hours, how many heart-burnings, disappointments and regrets would be avoided if this rule were always strictly adhered to!

A DOCTOR spends his leisure hours in practicing on the cornet, and passers-by, thinking an amputation is going on inside, are deluded as to the number of the man's patients.

Young Folks' Column.

School "Called."

Don't you hear the children coming,
Coming into school?
Don't you hear the master drumming
On the window with his rule?
Master drumming, children coming
Into school?

Tip-toed figures reach the catch,
Tiny fingers click the latch;
Curly-headed girls throng in
Lily-free from toil and sin.
Breezy boys bolt in together,
Bringing breaths of wintry weather,
Bringing baskets Indian-checked,
Dinners in them sadly wrecked.
Ruddy-handed, mittens off,
Soldiers rush from the Malakoff—
Built of snow and marble white,
Bastions shining in the light,
Marked with many a dint and dot
Of the ice-cold cannon shot!
Hear the last assaulting shout!
See the gunners rally out—
Charge upon the battered door—
School is called, and battle o'er!

—Scribner.

Maxims for a Young Man.

Never be idle. If your hands cannot be usefully employed, attend to the cultivation of your mind.

Always speak the truth.

Keep good company or none.

Make few promises.

Live up to your engagements.

Keep your secrets, if you have any.

When you speak to a person, look him in the face.

Good company and good conversation are the very sinews of virtue.

Good character is above all things else.

Never listen to loose or idle conversation.

You had better be poisoned in blood than your principles.

Your character cannot be essentially injured except by your own acts.

If any one speaks evil of you, let your life be so virtuous that none will believe him.

Drink no intoxicating liquors.

Ever live, misfortunes excepted, within your income.

When you retire to bed, think over what you have done during the day.

Never speak lightly of religion.

Make no haste to be rich if you would prosper.

Small and steady gains give competency with tranquility of mind.

Never play at any kind of game.

Avoid temptation through fear that you may not withstand it.

Earn your money before you spend it.

Never run in debt unless you see a way to get out again.

Never borrow if you can possibly avoid it.

Be just before you are generous.

Keep yourself innocent, if you would be happy.

Save when you are young, to spend when you are old.

Never think that which you do for religion is time or money mispent.

Read some portions of the Bible every day.—*Counsels for Life*.

Putting Out a Fire.

Some little boys started out, two or three years ago, to spend a few days in the fields and woods. They had canvas for a tent and were going to camp out in the open air and live soldier fashion. They expected to have a great many fine adventures and to have a good time.

Well, one day a thoughtless little fellow among them set fire to a heap of dry leaves, which he gathered together, for the fun of seeing them burn. The wind was blowing, and the leaves blazed up better than he expected. It was a grand bonfire. Perhaps he made believe that it was a watch-fire.

But the wind blew toward a fence and a barn. So the fire soon began to spread that way, and the boys, all of them, were frightened and tried to put it out. They stamped with their feet, but the fire thought it was fine fun, and on it ran toward the fence and the barn faster than ever. The boys threw their hats in the fire, but the fire dodged under them and scampered in. It was a sharp race. It was fun for the fire, but it was fright for the boys.

They took off their coats and laid them on the fire. They hoped their coats would smother the fire. But they did not. The fire was much too smart now for that. The wind blew and the fire flew. The boys did not know what to do next. Some of them cried, and some of them ran off to call men that they saw passing. The men came, but before they got to the fire, the fire was out. How did it happen?

There were two little brothers among the boys who had learned to pray. Walter and Paul went off a little by themselves, and Walter said: "Paul, let's pray."

"Yes," said Paul.

The two little boys then knelt right down there on the ground, and asked God to put out the fire. Just at that moment the wind turned square about, and blew straight back the other way. The grass, leaves and twigs were all burned up already, and so the fire found nothing more to burn in that direction. So, of course, it had nothing to do but to go out. And out it went. And that was the way the fence and barn were saved.

Who put the fire out? Was it the boys?

MISCELLANEOUS.

Gun-Cotton.

Gun-cotton is produced by steeping cotton fibre in a mixture of nitric acid and oil of vitriol. The cotton does not sustain any change in appearance by this treatment, but it increases considerably in weight. The cotton, in fact, parts with a quantity of water, and absorbs in its stead the elements of the nitric acid, which are much heavier than the water displaced. In this way the cotton is impregnated with a large amount of oxygen, which is thus ready, on the application of heat, to form gaseous compounds with the carbon of the cotton.

When this explosive substance is made according to the Abel process, it possesses three characteristics which render it peculiarly adapted to military engineering operations. It can be stored and transported in the wet condition—that is, saturated with moisture—in which state it is absolutely unflammable. While in this wet state it will explode with terrific violence if a small portion of dry gun-cotton be detonated in contact with it. Lastly, it may freely be brought under fire without fear of accidental explosion.

One of the characteristics of gun-cotton which contributes to its applicability to military purposes is that it may be freely brought under fire without fear of accidental explosion; that is to say, a package of compressed gun-cotton would not explode if struck by a rifle-bullet. If the gun-cotton were dry, the heat caused by the impact of the bullet would set it on fire, and it would then merely burn away with more or less fierceness, according to the amount of gun-cotton in the package. But if the gun-cotton were damp, the impact of the bullet would have no more effect than it would have on wood, earth, or any like inert substance. In the case of nitro-glycerine compounds, however, exposure to musketry-fire would be attended by far more serious results. Under these circumstances, and at all ordinary infantry ranges, a package of dynamite or lithofractor will explode with considerable violence.—*London Times*.

VENTRILLOQUISM EASILY LEARNED.—According to a writer in the *Chicago Advocate*, the ventriloquist's art is as easily learned as falling off a log. He maintains that there is no difficulty in acquiring the power. In the first place, he says, speak any word or sentence in your own natural tone, then open your mouth and fix your jaws fast, as though trying to hinder any one from opening them further or shutting them, draw the tongue back in a ball, speak the same word, and the sound, instead of being formed in the mouth, will be formed in the pharynx. Great attention must be paid to holding the jaw rigid. The sound will then be found to imitate a voice from the other side of the door when it is closed, or under a floor, or through a wall. To imitate a sound behind a door partly open, the voice must not be altered from the original note or pitch, but be made in another part of the mouth. This is done by closing the lips tight, and drawing one corner of the mouth downward or towards the ear. Then let the lips open at that corner only, the other part to remain closed. Next breathe, as it were, the words out of the orifice formed. Do not speak the words distinctly, but expel the breath in short puffs at each word, and as loud as possible. By so doing you produce the illusion in the minds of your listeners that they hear the same voice which they heard when the door was closed, but more distinctly and nearer on account of the door being open. The lips must always be used when the ventriloquist wishes it to appear that the sound comes through an obstacle, but from some one close at hand.

BLEACHING SHELLAC.—Shellac may be bleached by dissolving it in boiling caustic potash lye, filtering, and then passing chlorine gas through it till the gum is entirely precipitated. The precipitate should be well washed with hot water. While soft it may be modeled into sticks, which, when thrown into cold water, will harden. Varnishes made with gum thus purified should not be used on cabinet work inlaid with brass, as it acts chemically upon brass. Shellac may also be bleached by dissolving it in 85 per cent. alcohol, in the ordinary manner, making the solution rather thin, and then adding animal charcoal, until the whole forms a thin paste. It should then be exposed to the sun for a fortnight, or longer, if, when a small sample is filtered, the solution is not of a light yellowish brown color, and does not give a fine clean polish on light-colored woods. If, however, it is found to be sufficiently bleached by such a trial, the whole may be filtered. A second treatment of the charcoal with alcohol will recover more of the gum, a portion of which will of course be wasted in the process. If the operation be well performed and the solution be used sufficiently thin, its color will be so slight as not to perceptibly stain the lightest colored woods.—*Artisan*.

THE big steam hammer at the Royal Arsenal at Woolwich, has a falling power of forty tons, and is driven by steam from the top. It has a striking fall of fifteen feet, three inches. The hammer is forty-five feet in height, and covers a base of about 120 feet square. Above the ground it weighs 500 tons, and the iron used in the foundation below weighs 665 tons. The hammer cost altogether about £50,000.

Nothing Like Leather.

There are people who think that leather is used for boots, shoes and gloves only, others better informed, know that it is also used for harness, carriage tops, belting, valises and trunks, but then their information about its use stops. We can inform the latter, that at present, leather jewelry is manufactured on a large scale in Vienna, also leather flowers and fruits, as clusters of grapes, etc., embellished picture frames, brackets, work-boxes, also Paris fancy articles and bijouterie.

The people of Northern Europe, as Russia and Sweden, use leather as the chief material for clothing, while leather tapestry, a century ago so much in vogue, is getting in the fashion again. For furniture coverings it is much better than rush, velvet plush or silk, as it does not wear out. The Hessian soldiers during the 30 years' war, wore cuirasses of leather, while the French gunboat Provence, used during the Crimean war, was plated with leather, but it was found rather expensive. The natives of the Arctic Regions, navigate in leather canoes, while our Patent Office can boast of a dozen expired patents for portable leather boats. There is a leather gun in the arsenal of Copenhagen, Denmark, left from a battery of 12, which Charles XII. brought from Sweden, to attack Copenhagen. It consists of a smooth light steel tube, many times tightly wound round spirally with tough leather straps two inches wide, the whole wound with a single piece of smooth leather, giving it at a distance the appearance of an old bronze piece; this gun weighs less than one-third of ordinary guns, and the battery was intended to cross the ice, and well adapted for that purpose, being literally and really a light artillery.—*Manufacturer and Builder*.

HOW TO REPAIR LEAKY ROOFS.—Melt together in an iron pot, two parts by weight, of common pitch and one part of gutta-percha. This forms a homogeneous fluid much more manageable than gutta-percha alone. To repair gutters, roofs or other surfaces, carefully clean out of the cracks all earthy matters, slightly warm the edges with a plumber's soldering iron, then pour the cement in a fluid state while hot, finishing up by going over the cement with a moderately hot iron, so as to make a good connection and a smooth joint. The above will repair zinc, lead, or iron, and is a good cement for aquariums.

FIXING SLATES.—Slates, instead of being nailed to the roof, may be fastened by movable hooks, about two inches long, which are soldered to conically formed zinc plates, four to six inches long. The slates are thus kept securely between the hook and zinc plate, and can be removed simply, with the greatest facility, by turning the hook. Thus one or more of the plates can be taken out for repair, or new ones inserted, without interfering with the rest. The method is said to make a roof watertight.—*Scientific American*.

SUBSTITUTE FOR BRISTLES.—The fibrous bark of the sugar palm (*arenga saccharia*) proves to be a good substitute for bristles and animal and human hair. The treatment is simple. The bark is first immersed in water and boiled for some time in an alkaline solution; the fibers are then soaked in an emulsion of fat, alkali and water for about 12 hours, after which time they are sufficiently hard and elastic for the above named use.

TO RENDER WOVEN FABRICS NON-INFLAMMABLE.—M. Patera proposes, instead of sodic tungstate, a mixture of four parts borax with three parts magnesian sulphate. One hundred grammes of the mixture are to be dissolved in 300 to 400 cubic centimetres of water, and in this solution the fabrics are placed until soaked, then wrung out, dried, and ironed. Another mixture proposed for the purpose is that of ammoniac sulphate and gypsum.

A REDDISH BROWN PAINT FOR WOOD.—The wood is first washed with a solution of 1 lb. cupric sulphate in 1 gallon of water, and then with ½ lb. potassium ferrocyanide dissolved in 1 gallon of water. The resulting brown cupric ferrocyanide withstands the weather, and is not attacked by insects. It may be covered, if desired, with a coat of linseed oil varnish.

IT has been discovered that a small cylindrical point of steel when made to rotate upon glass in such a manner that its longitudinal axis shall make an angle of 45 deg. with the surface of the glass, approaches in effect so nearly to that of the real diamond, that it is a very cheap and effective substitute as a glass-cutter.

FOR BURNS.—BEST AND QUICKEST.—Oil, if you have it,—linseed, almond, olive, or any other—linseed is best. Pour it over, then sprinkle a thick coating of flour; then lay over a coat of cotton-batting, or wadding. If you have no oil at hand, apply the flour at once without it.

PROF. HIRZEL, of Leipsic, recommends as a lute for covering the corks of vessels containing volatile substances, as benzole, light petroleum, etc., a mixture of finely ground litharge and concentrated glycerine. Common glycerine, if concentrated, will answer the purpose.

IT is a well-known fact that gum-arabic will not cause some kind of blotting-paper to adhere. This may be remedied by adding to eight ounces of the concentrated solution, sixteen grains of aluminum sulphate. Alum answers also, but not as well.



PUBLISHED BY
DEWEY & CO.

A. T. DEWEY. W. B. EWER. G. H. STRONG. J. L. BOONE.
PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 338 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance—For one year \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week. 1 month. 3 months. 1 year.
Per line.....25 .80 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing in extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:
Saturday, June 20, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Short-Horns as Milkers; Local Option in San Francisco; Crops in England; California Birds; Swamp Land Disaster, 385. The Coming Hop Crop; Too Much Scrub Stock; More Worms on the Grapes; The Mixed Farming Fallacy, 392. California Currants; A Family Quarrel; The Human Frame; Groove Ring Fruit Jar; Harrow and Clod-Breaker; How to Kill Tobacco Worms; The Local Option Law, 393. Patents and Inventions, 396.

ILLUSTRATIONS.—The California Water Thrush, 385. Groove Ring Fruit Jar; Harrow and Clod-Breaker, 393.

DOMESTIC ECONOMY.—Bread with Potato Yeast; Corn Bread, Etc.; To Roast a Quarter of Lamb, 386.

POULTRY YARD.—The Ostrich Domesticated; Early Chickens; Gout or Rheumatism in Fowls; Spangled Poland Fowls; Bugs, Worms and Chicken Cholera; Food for Young Goslings; The Cochon not Degenerated, 386.

CATTLE BREEDERS.—Retention of Placenta; Diarrhea in Calves; Stock and its Profits; Male or Heifer Calves, 386.

THE SWINE YARD.—Typhoid Fever in Pigs; How to Feed Pigs; As to Pigs and Pork, 386.

HORTICULTURE.—Summer Treatment of the Grape; Fruit and Health; Plants for the Mails; The Cherry Orchards of Sonoma, 387.

THE APIARY.—The Sale of Honey; Bees and Grapes; Privity of Italian Bees, 387.

PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings, Etc., 389-9.

SHEEP AND WOOL.—Experiment with Sheep in Germany; The Gad-fly; Sheep of the Bible; Grub or Foot-Rot in Sheep, 389.

THE DAIRY.—What is a Good Cow? Effects of Diseased Milk; Sharp Practice; Can't Find Him; Dairy Statistics; Pounds of Milk for One of Butter; Milk Establishment in Switzerland; Gilt-Edged Butter; Another Good Yield, 389.

THE VINEYARD.—Grapes; One Way of Propagating Grape Vines; A New Medicine for Diseased Grape Vines; Venango Grape; Ducks in a Vineyard; Cheap Protection for Vines, 389.

HOME CIRCLE.—Through Life (Poetry); Cheerfulness (Poetry); Civil, but not Servile; Imperceptible Presence; Modesty of Gentile a Mistake; Soul Poverty; The Temperance Muddlement, 390. Alcohol as Food; A Capital Failure; The Earth's Temperature; Cash instead of Credit, 391.

YOUNG FOLKS' COLUMN.—School "Called" (Poetry); Maxims for a Young Man; Putting Out a Fire, 391.

AGRICULTURAL NOTES from various countries in California, 396.

MISCELLANEOUS.—Electricity vs. Thieves; Tin-foil Decorative Painting, 386. Cleaning Water Mains; Mammoth Cotton Press; The Magnetic Metal; A Stratified Atmosphere; Paper Bags, 387. Gun-Cotton; Ventriloquism Easily Learned; Bleaching Shells; Nothing Like Leather; How to Repair Leaky Roofs; Fixing Slaters; Substitute for Bristles; To Render Woven Fabrics Non-Inflammable; A Reddish Brown Pain for Wood; For Burns—Best and Quickest, 391. The Partnership Publication Law; Raising Sunk Ship; Nickel Plating; Agassiz' Successor; Green Tea for Lamb; Hint to Bee Fanciers, 394.

The Coming Hop Crop.

The season thus far has been very favorable to hops, and the vines now present a more advanced growth than at this time last year. The crop gives promise of great abundance. The period of danger, however, has not yet arrived. This crop is never safe until it is harvested; for it is when the blossom is nearly ready for picking that the hop-lice make their appearance; and it is also about the same season that the honey-dew comes on the leaves and blights both vine and blossom. In regard to the latter pest we anticipate the best results from the purity of our atmosphere; especially at night, when honey-dew generally makes its appearance; but we cannot hope to escape, for many years, the presence of the hop-lice. We would urge our hop-growing friends to use promptness, by all means, in picking. After the blossoms are fully formed, every day's delay in picking depreciates their marketable value. Not only is their attractiveness diminished by loss of color, but the oil of the blossom wastes, and their strength is thus sacrificed. Be sure and begin in time, and use all available means to get through in time, commencing on that part of the yard in which the blossoms are most matured.

Too Much Scrub Stock.

Only a superficial glance at the present condition of farming in California is needed to convince the observer that we can no longer afford to keep the herds of unproductive stock that have thus far overrun the country. They are the Goths and Vandals of the agricultural districts; consuming the substance of our fields and stables to the exclusion of the more civilized and productive races.

A good time to form a proper estimate of the extent and value of this stock, or rather of its want of value, is when it is being driven up into the mountains in early summer, or back into the valley at the beginning of winter. Let the observer take his position in some of the foot-hill villages, at either of the above named times, and he will see, any day in the week, large herds of horses and cattle that are being driven into new pastures. These herds of four-footed barbarians range from tens to thousands in numbers. They may all be justly classed as poor substitutes for cattle and horses. Their condition as to flesh and healthfulness is not especially pitiable; for they apparently have enough to eat; more than their earnings will ever pay for; but their general character is deplorable. Oxen, well advanced in years, and that ought to have broken up fifty acres of soil in their day, have never had a yoke upon their necks. Cows three or four months of age that still depend upon the maternal udder for a large share of their sustenance. Cows "of all sorts and sizes," and, we might almost add, "of all ages, sexes and conditions," that have never done more than to fill the pitcher or can of the herder or miner, who milks what he wants at odd times, and nothing more. These comprise the stock which is pouposely estimated as so many "head of cattle."

But these can at some time be converted into beef; they are therefore as nothing in their worthlessness compared with the horses that accompany them. This stock of horses is of course young; for when they have passed their second year they are supposed to be old enough to ride "to town;" and are accordingly mustered into service; but these bands of valueless colts comprise the rising generation of California horses. Here we see premature age and overgrown boobyism; small weak necks bending under weight of ponderous heads; and manifesting in their ambling, uncertain gait, a lack of the spirit of a good horse, but not of the viciousness of the bad one. Popular moralists are particularly fond of deploring the condition and prospects of young California, in the human flesh; showing the untrustworthiness of the hands that are soon to take the reins—metaphorically speaking; but there is quite as little to be expected of the animals that in a few years are to be at the other end of these reins.

But, in reality, three-fourths of them will never know anything but the bridle-rein, for no larger portion of them will ever be broke to harness. The rest will be "kept for saddle horses;" which means that a man or boy will, on several occasions during each season, perform a "bare-back" feat on one of them. And the few that are honored with the title of "working horses" are led forth as sacrifices; two or three years of farm work unfitting them for further service. Horses of this grade range in price from fifteen to fifty dollars only; so that the wear and tear of horse flesh is of no consideration; a broken down animal being so easily replaced. A fresh horse is accordingly pressed into the service for a campaign or two; the broken down one taking his final position among the worthless things that are to be "traded off." This low estimate of the value of horses renders the owners less considerate of the efficiency of the animal. If two horses cannot perform any given task, why, put on a third one; and in situations where four should be amply sufficient, he thinks he can afford six; for horses, you know, are exceedingly cheap in California.

It takes but little money, it is true, to buy these horses and cattle, but it is "mighty" hard for those who do business in this way to get even that little. The country never could afford to keep this stock; and as the value of land increases, and the price of merchantable feed advances, it becomes an extravagance that demands immediate curtailment.

The reader is not to suppose that these hordes of valueless stock range only in those districts where they "can pick their own living," and where land is equally as valueless. We have known cases, in the foothills especially, where the land was divided up into small ranches, and where each owner of these hundred-acre ranches would have a score of four-footed bummers hanging about his premises. They would, with four of the "working" portion of these horses, draw a cord of wood to town, and with a portion of its proceeds purchase a bale of hay to take back to the ranch that had been grazed to death; while with another portion of the wood sale they would perhaps buy a roll or two of butter; while that portion of their stock which they call their "milk cows," exceeds in number those of their households.

If all this stock were shovled out of the country, and its place supplied with half the number of good working and dairy stock, it would afford the friends of California ample cause for rejoicing. The cleaning out of this trash should commence at once. Let each owner of it begin to curtail in this matter. It is really becoming a matter of prudence if not of necessity. The extent of grazing land is becoming limited in

many places where this stock has formerly ranged, and merchantable feed is becoming more expensive. We have only a moderate yield of hay from the crop of the present season, while the country at large is particularly well cleaned out of old hay.

We hear sometimes of people being worth their weight in gold; it would be well for the owners of stock to look to it that they do not keep horses and cattle that are not worth their weight in hay.

More Worms on the Grapes.

In the *RURAL PRESS* of a recent date we gave an account, furnished by a correspondent, of a devastating worm which had made its appearance upon the grape vines in certain portions of the State; and in that account we acknowledged our inability to define its position in the catalogue of fruit-pests; having no further acquaintance with it than the report our correspondent furnished. We then requested information on the subject from the readers of the *Press*, but have thus far received none. Mr. Crane has our thanks for the following notice of the worm, which is undoubtedly the same as that described by our former correspondent. Mr. C. and all others who are afflicted with the presence of this new and unwelcome visitor, have our sympathies, but we have little fear that it will take up its abiding place with us. We confidently hope that this may be among the hordes of vermin that depart as suddenly and unceremoniously as they came:

Mr. Crane says: Some four days since I casually discovered a young vine denuded of its leaves, and suspecting the little black grub, that troubled us some last year, had returned, I commenced a search, and soon discovered that we were being invaded by a more formidable foe. Well-grown, two-year old vines were found on the south margin of the vineyard adjoining a volunteer meadow, stripped of their leaves with from three to a dozen worms or caterpillars, large and long as a lady's finger, but vastly less inviting to the eye, lazily resting on the naked canes, or looking around to see if their job was finished. When arriving at the latter conclusion, like respectable workers, they would hunt for a new one and find it at the next vine.

They seem to ignore the existence of all else of a green growth, except grape vines and alfalfa clover. I understand that my neighbors down the valley are much more abundantly blessed with these visitors than we are here. While I do not complain of this partiality, I want to get you to tell us how long this state of things will last. I have searched the "Naturalists' Library," "Cuvier's Animal Kingdom" and everything, in short, accessible in Entomology, but I cannot find where those bold invaders come from, where they are going, or when—the last question being just now the most interesting.

I find plenty of pictures in the books representing their anatomical formation exactly—three pair of legs near the head, four pair near the center of the two, and a half to three and a half inches' length of body, with a prehensile apparatus at the extreme hinder end, about as strong as a pair of pincers, by which they cling while working destruction with the other end, and a young unicorn's horn growing upward and obliquely backward a posteriori.

The color of these fellows is not of every hue, from "snowy white to sooty," but of every intermediate shade from that of a peach tree leaf to the color of an "American citizen of African descent" and "ring streaked and speckled" like Jacob's cattle; but I have seen none with the spiral streaks, like the paintings in the books.

Now, I suppose, that these fellows will, *poco tiempo*, as Don would say, take on a sort of physical metempsychosis, develop wings and fly away; and I respectfully and rather anxiously request that in this week's *Press* you will tell us how long it will be first.

I have about a hundred of the rascals in jail; am feeding them as our lamented friend Provost fed his silk worms, and intend to find out what they are aiming at.

If no blight destroys our grape crop we shall make a vastly larger one than ever before.

LEARNING TO FARM.—The *New York World* says: Again and again—and especially at this season of the year—do young men ask advice of agricultural editors as to the best way to learn farming. The answer in all cases is simple and brief: Go to work on the best farm and under the best farmer you can find who will accept your services. There is no other way—no schools nor system of study that will so quickly make a farmer of a young man; but he should not neglect to study. Every agency that he can employ to give him a better insight into the scientific features of husbandry should be employed; even when his bones ache with the labor of the day, his mind may work; and two hours daily given to wise reading or study, will enable him to accumulate a vast amount of theoretical as well as practical information from the recorded experience of others.

PLASTER-OF-PARIS for picture frames is mixed up with weak alum water, or a solution of one ounce of gum-arabic to the pint of water. It is applied as usual, and moulded when soft. When dry, it has a hard and smooth surface, ready for bronzing.

The reported discovery of immense deposits of guano in Southern Peru is confirmed.

The "Mixed Farming" Fallacy.

Where may we expect to find the realistic and the practical, if not in agriculture? It is to farming that people turn when they wish to escape the vexations, uncertainties and fallacies of other pursuits; but it does not by any means provide the anticipated escape. The supposed substantial and reliable points are really as unsubstantial and unreliable as the basis of other useful callings; and Utopia is as hard to find in the country as in the city. Farming people, men and women, understand this perfectly well. It is only the Utopian visionary theorists who hang about the outskirts of farm life who indulge in such fancies.

Apparently about the only preparation for the approaching agricultural millennium, is the inauguration of a "mixed system of farming." According to the creed of this faith a farmer must produce all that he consumes; and if generally adopted he will probably be expected to consume all that he produces; for in this latter agricultural world the farmer buyeth not, neither does he sell, but is like unto the inhabitants of Utopias generally. The division of labor, by which so much has been gained in the way of economy and increased production, is supposed to be inapplicable here; and the varieties of the climate, soil, etc., according to locality, must in each particular locality be made to conform to the various wants and caprices of each neighborhood or district.

The romantic isolation of farming—"the world forgetting, by the world forgot"—is one of the silliest follies of orthodox sentimentalism. There have been instances, as we all know, where agriculture, like other callings and industries, has taken to itself idols and made unwarrantable sacrifices to them. But are they not now receiving an idol under the name of mixed farming? Where whole farming communities, comprising perhaps one of our largest States, invest all their means in one product, to the exclusion, almost, of every other, it simply takes the form of a business mistake, and is easily corrected. But where one particular class endeavor to maintain an independence of all other classes, only considering their wants in what they produce, striving to produce all they want, and enjoying in anticipation the supposed sad plight of other classes, when wanting the one thing which they produce, it becomes a social fault, manifestly having its origin in a feeling which borders closely upon Pharisaism. It is an error of slow growth, and one which will be as readily corrected as the mistake which led them to the over-production of one thing to the neglect of others.

The almost primitive system of early American farming under which the people in the country spun their own wool, wove it into cloth for their own wear, and acknowledged no wants but such as their own production would supply, was not founded on arbitrary isolation; it was governed by necessity, the condition of the markets being as primitive as that of farming. The commercial aspect of agriculture, however, has become clearly defined, and the same laws that govern the supply and demand of other merchantable articles control the labors of farming communities. Agriculture, in yielding to the inevitable laws of trade, is all the time becoming more fluctuating; and for those who follow it to refuse to submit to the variations in prices, or to fail to adapt their labors to the peculiar advantages of their particular localities, would demonstrate them "goers backwards" most effectually.

It is quite the fashion to exhibit—whether felt or not—a degree of disgust at the idea of farmers in any locality purchasing anything that they can possibly produce; but they deserve more credit for yielding precedence in certain productions, to those whose situation gives them a decided advantage, and giving their attention more to those products which they can raise cheaper and better than their neighbors. The sharp things that are uttered about farmers in this connection do not cut half as deep as they are supposed to. They have reasons for pursuing this course, which are sufficient in their estimation. They are not going to pull against the current to obtain the applause of the idle spectators on the shore, especially when the current runs in the direction that their interests point.

Agriculture assumes an offensive, and even a ludicrous figure, when she gathers up her skirts in the fear of contamination by the presence of her supposed less pure neighbors, declaring that she will neither borrow nor lend. This monastic life is hardly suited to our people and to the present time. She would be benefited every way, and especially financially, by a more extended intercourse with other industries, with trade, and with the arts also. And we may expect to witness, as a result of this intimacy, a still greater tendency to give more consideration to what a fluctuating and varying market wants, than to providing for that metaphorical "rainy day," by hoarding up "a little of this and a little of that." The practical farmer is aware that the best provision against a rainy day is a little available coin, made from a market whose wants, and humors even, must be closely watched and properly gratified.

Farmers, in giving more attention than formerly to trade, commerce and banking, are not neglecting the wants of their own house or stables; but if they can buy one thing cheaper than they can raise it, and can grow another thing cheaper than the men who supply them with the first, why both they and their neighbors will confine themselves, in a measure, to their specialties, at the risk of denunciation by the rigid apostles of mixed farming.

California Currants.

It is well known that Eastern people hear nothing of currants in California, consequently they are quite apt to make up their minds that there is a vacancy here in our list of fruits. But the reason why our Eastern neighbors were not aware of the currant being among our fruits, was, that the position which it holds on the hill is so unimportant—merely supernumerary—that it was not considered worth mentioning. Visitors from the East, who go through our markets at the present time—and there is nothing in California more attractive to visitors, or that occasions more astonishing reports on their return, than the fruit and vegetable markets of San Francisco—must be convinced of their error in regard to the absence of currants in California. They will also see that this is fully up to our standard of fruits in every respect. The citizens of San Francisco, especially those who came here from the East several years ago, when all the gardens then were overrun with currants, will perhaps hardly realize that this fruit is considered unworthy of notice. But they should consider that since they left those gardens of sour currants and diminutive gooseberries, the "currant-worm" has visited these regions, and effected an almost entire extermination of these fruits. Consequently, they are now appreciated, whereas, they were formerly only tolerated. A man scarcely knows what the love of country is, until he is called upon to fight for his country. The same law governs his feelings in regard to his individual home, and even its minute surroundings. People in fighting against the currant-worm, soon found themselves fighting for the currant-bush. They began to respect it, and on the disappearance of the devastating worm, after a lapse of several years, they gave the currant the care and consideration which it needed, and really deserved. In return for this increased attention, this fruit has improved greatly in size and general merit; and now, instead of being looked upon as the black sheep in the family of fruits, it is proudly brought forth with other members of the family, to receive its share of compliments.

It is possible that the people of California will need a visit from the currant-worm to make them properly appreciate the currant fruit. We sincerely hope that this visit will be long deferred; but these hopes, we confess, do not extend to a final escape. By the by, how is it that the English black currant is scarcely known in our markets? In the East it is already admitted as a standard on the list of small fruits, though fifteen years ago it was only cultivated there by a few English or Scotch gardeners, seemingly more from a love of country than a liking for the currant. It needs, it is true, to acquire a taste for it; but when once acquired it will have it if it can be obtained. The flavor being extremely peculiar nothing will supply its place. It is adaptable to many uses, and is not only harmless, but it is acknowledged to be decidedly medicinal.

Yes, we have currants in great abundance; red raspberries only in tempting quantities at present; while the early peach already presents to the mouth of the fruit-eater an agreeable enticing wedge for the feasting of many weeks duration which is to follow.

A Family Quarrel.

The managers of agricultural fairs in New York are far ahead of those of our own State in the season's work. Our fairs are not yet announced; while the programmes of the two great agricultural fairs of New York, that of the State society and that of the Western New York society also, are already perfected; and the dates, or date of their occurrence, are duly announced. Here is where the joke comes in. A sectional feud has been brewing for several seasons, among the members of the New York State Agricultural Society, in regard to locating the annual fairs of the society. The strife is between the eastern and western sections of the State, and has resulted in the organizing of a Western New York Agricultural Society, independent of, if not in direct opposition to that of the State society. Those members of the present society who resided in "the populous East," were not disposed to accept the advice—"go west, young man"—when they wanted to see or be seen at the annual fairs; while those "in the rural districts" of the State were ambitious to show their eastern friends that they could stand alone. Still the friends thus separated could not remain asunder. They have both advertised their fairs to come off at the same time—the third week in September—and at the same place, Rochester. With the means, pluckiness and pugnacity of the helligerent parties, the two agricultural fairs will probably constitute the most entertaining affair that has come off lately.

It is to be hoped that when the directors of our California agricultural societies do arouse themselves for the coming fair season, they will wake up better natured than those naughty boys away off in New York, and that we shall at last have peace.

HAIRY VS. WOOLLY SHEEP.—Wool grows upon many animals; but there is but one species of sheep that bears wool alone, and that is found among the Spanish Merino race.

The Human Frame.

The Heart.

In this article we propose to take up the human organization and learn something of it; leaving comparative anatomy and physiology to future papers. First, then, let us get a correct idea of the position and functions of some of the more important organs of our bodies. The heart lies partly behind and to the left of the sternum, or "breast bone;" extending from the level of the third rib downward to a point an inch to the right of, and an inch below the left nipple; and never, under any circumstances, "coming up in the throat," or wandering around anywhere else. It is almost, if not entirely, destitute of nerves of ordinary sensation; its movements being regulated by means of motor nerves and the great sympathetic system, and so can not be felt under ordinary conditions at all. It can suffer violent inflammation without the possessor being aware of it, or feeling any sensation of pain; the increased frequency and power of the palpitations against the parietes of the chest first calling attention to it by means of the nerves in those parts. In rare diseases it becomes the actual seat of pain; but most of the sensations referred to it come



GROOVE RING FRUIT JAR.

from other parts—usually the stomach. "Heart-burn," a fair case in point, being a burning sensation at the pyloric orifice of the stomach, caused by a species of dyspepsia. It is diseased much less frequently than is generally supposed, being guarded by every means of protection it was possible for Nature to throw around it. Being a muscular organ, it of course must be subject to the general laws of muscular nutrition; hence in feeble or wasted conditions of the body, it partakes of the general weakness and struggles violently or palpitates under muscular efforts which require increased action of it, but such palpitations are no evidence of disease. Dyspepsia is peculiarly subject to palpitations and heart-burns, and imagine they are suffering under some disease of the heart, when properly restored nutrition is all that is required to remove their unpleasant symptoms. Still the heart is not invulnerable to disease, and we should avoid any unnecessary taxation of its powers. All extremely violent or long continued exertion taxes its powers very much, and ought never to be indulged in unnecessarily. It is said that the Cornwall miners, who are accustomed to climb long series of ladders after a fatiguing day's work, are very subject to an insufficiency, or "leaking" as they term it, of the valves of the heart. And inflammatory rheumatism, if treated harshly, may fly to the heart, causing quick death, or leaving inflammatory deposits which ever after obstruct the proper working of the valves. Remember in rheumatism as in all other diseases, the nearer the surface you keep your trouble, the more easily handled and harmless it is. Wounds of the heart of any magnitude are necessarily fatal.

The Groove Ring Fruit Jar.

As the season is now at hand for putting up fruit, growers and families generally are casting about for the most approved can or jar in which to preserve the more perishable products of the orchard and garden. We herewith present one which is said to possess many features of superiority. It is cheap, easily sealed and as readily opened for use. Its construction and use will be readily seen by examining the accompanying illustration. The cover is made of tin, and fits into the grooves as shown, where it is easily made air-tight by pouring in the sealing wax. The device shown upon the left is placed over the top of the bottle, after sealing, to prevent the raising of the cover from expansion of the air within the jar. Being made of glass, it is not liable to the serious objections rightly urged against the use of tin for such purposes. It is said to cost one-fourth less than any self-sealing jar in the market, and is extremely simple in construction and use. It is devoid of springs, rubbers, etc.—the latter being considered an important matter, in having no rubber to taint the fruit. It is, moreover, a California manufacture, immense quantities of them being turned out at the San Francisco Glass Works in this city. People desiring anything in this line will do well to examine its merits for themselves.

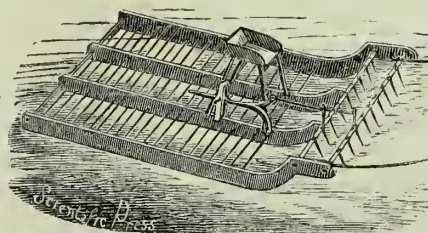
Harrow and Clod-Breaker.

We give herewith a representation of a new Clod-Breaker, recently introduced into Oregon, where it is said to be giving good satisfaction. This instrument has been devised with the view of meeting an urgent want of the tillers of the soil everywhere, but more especially soils of a heavy character, like the adobe soils of California. Referring to the accompanying cut, it will be seen that the implement is composed of two parallel bars or boards, united at each end so as to form a conveniently shaped frame. The boards or bars are curved upwards, at the forward end like the runners of a sled, so that they will not push the earth before them. Transversely across the frame, is a series of iron bars or stout iron wire stretched parallel with each other, thus forming one or more inclined drops which will so ride upon the clods as to cut or crush them into pieces. To further aid in this work, a double row of teeth, something like harrow teeth, are arranged in front, as shown, and slightly curved near the point, so as to give them a lifting action, by which the clods are brought to the surface, and thus within the action of the parallel bars which subsequently pass over them. A seat may be mounted upon the top, as shown, for the driver, whose weight may be added when needed, for the greater effectiveness of the machine.

This implement, we are informed, has been duly tested by those who are well qualified to judge of its merits; and the claims of the inventor, Addo Borchers, of Salem, Oregon, have been fully endorsed. The invention was patented through the MINING AND SCIENTIFIC PRESS Patent Agency. As Mr. Borchers is about to change his residence to this city, any letters in relation to the above will reach him if forwarded to this office.

HOW TO KILL TOBACCO WORMS.—A late issue of the New York Tobacco Leaf publishes a long article, from which this is condensed, on the use of cobalt and jimson (or Jamestown) weed as a certain exterminator of the tobacco fly, and earnestly recommends tobacco growers to use the remedy. The mode of using it is as follows:

Plant the jimson in spots through and around the field, three or four plants in a clump, about the time the tobacco plants are set out. When the jimson blooms, put two or three drops of cobalt solution in each bloom every evening; the fly will suck the poison, which is certain death. Cobalt can be procured from almost any drug store; dissolve one ounce in something more than a pint of water, put into a corked bottle, with a quill inserted in the cork. Every morning after using the solution, the blooms charged the evening before should be pinched off, or the poison will reach the stalk and kill the weed. The Tobacco Leaf recommends that in every neighborhood, farmers club together and agree to use the remedy. The result will be, in a very few seasons, if



HARROW AND CLOD BREAKER.

faithfully used, that every such neighborhood will be comparatively free from the pest known as the tobacco worm. Tobacco planters in Kentucky, and the West generally, would do well to act on the suggestion. The idea is not new, having been earnestly recommended in 1869 by the Agricultural Bureau.

WHERE THE COTTON GOES.—England has now 36,000,000 spindles in her mills, with nearly 400,000 looms, and 650,000 workmen. Next come the United States, with 8,000,000 spindles; France, 5,700,000; the German Zollverein, 4,300,000, of which Alsace possesses, 1,700,000; Russia, 2,000,000; Switzerland, 1,800,000; Austria, 1,403,000; Spain, 1,400,000; Belgium, 600,000; Italy, 500,000, and over 2,000,000 for other countries. According to the report of M. Alcan, made in 1867, the number of spindles used in cotton spinning was 58,850,000, which number has increased now to 63,700,000. Estimating the amount of capital invested at \$10 in gold per spindle, we find that \$637,000,000 is invested in the industry, and some \$160,000,000 is annually paid to 1,200,000 workmen.

BET SUGAR IN FRANCE.—The amount of juice expressed in France from beets, for manufacturing into sugar, for the year ending in October, 1873, at which time the grinding for that year's crop is being prepared for, is represented to be 485,746,810 gallons, being less than that of the previous year, by 38,642,523 gallons. In 1872, the density of the juice was 3.9, while that of 1873, was 4. The sugar produced in 1873, was 224,268,210 pounds, less by nearly 20,000,000 pounds, than in 1872. French sugars are also stated to have become a formidable rival to Austrian sugars. It is not improbable that beet sugar will yet drive cane sugar from the market, unless the planters of cane devise some means to reduce the cost of cultivation.

The Local Option Law.

In view of the large interest which has recently attached to the question of Local Option, and the importance that it should be carefully considered and fully understood, we give the law in full. Thus far, we believe, somewhere between forty and fifty elections have been held under the law, about thirty of which have resulted in favor of Local Option. By reference to another column it will be seen that the preliminary steps are being taken to call an election for this city. The law reads as follows:

SECTION 1. From and after the passage of this Act, whenever one-fourth of the legal voters of any township, incorporated city, or town, shall petition the Board of Supervisors of such county, or the county wherein such township, incorporated city, or town is situated, to call a special election, to vote upon the question of "Liquor License," or "No Liquor License," the Board of Supervisors of the county receiving said petition, shall within one month after said petition is filed with the clerk of said Board, make proclamation for the holding of said election in the township, incorporated city, or town, as may be asked for in such petition.

SEC. 2. The Board of Supervisors shall, by such proclamation, require an election to be held within such township, incorporated city, or town, as the case may be, on a day to be designated by such Board, and within thirty days from and after the day of issuance of said proclamation. Such proclamation shall be published in a newspaper printed in the township, city, or town in which said election is to be held, if there be one published therein, otherwise in a newspaper to be designated by such Board of Supervisors. Such a proclamation shall be published once a week for at least three weeks previous to said election.

SEC. 3. Said election shall be conducted and governed by the General Election Laws of this State, so far as the same are applicable thereto, provided that copies of the Great Register need not be used, and section 1,056 of the Political Code shall not apply to or affect such elections. [Concerning proclamation by the Supervisors.]

SEC. 4. The tickets to be voted at such election shall contain the words "For License," or "Against License." If a majority of the votes cast at such election "For License" or "Against License," shall contain the words "Against License," then it shall not be lawful for any Court, Board or officer to issue any license for the sale of any spirituous, vinous, malt or intoxicating liquors in said township, city or town, wherein said election may have been held, at any time after the determination of the result of said election, provided that nothing contained in the provisions of this Act shall prevent the issuing of license to druggists for the sale of liquors for medicinal and manufacturing purposes.

SEC. 5. The Board of Supervisors shall meet as a Board within ten days after such election, for the purpose of canvassing the returns and determining the results.

SEC. 6. If at any such elections the majority of the votes cast "For License" and "Against License" shall be "Against License," then from and after the result of said election shall have been determined by the Board of Supervisors, it shall be unlawful for any person to sell or dispose of any spirituous, vinous, malt, or other intoxicating liquors in such township, incorporated city, or town at any time thereafter, until at any election, as above provided, a majority vote in favor of such license.

SEC. 7. No election shall be held under this Act oftener than once in two years.

SEC. 8. Any person who shall sell or give, or offer to sell or give, any spirituous, vinous, malt, or intoxicating liquors, in quantities less than five gallons, within any township, incorporated city, or town, contrary to the provisions of this Act, shall be guilty of misdemeanor, and for every such offense shall pay a fine not exceeding twenty-five dollars for the first offense, and not less than fifty or more than one hundred dollars for each subsequent offense, and be imprisoned in the county jail until such fine shall be paid at the rate of one day's imprisonment for each dollar fine.

SEC. 9. All fines collected under this Act shall be paid into the County School Fund of the county wherein collected.

SEC. 10. It shall be the duty of the County Judge to call the attention of every Grand Jury to the provisions of this Act.

SEC. 11. This Act shall take effect immediately.

LULL IN THE POTATO BLIGHT PANIC.—It is possible that farmers are too busy with haying and harvesting to give any attention to their potato fields; or, what is more probable, the blight may not have been as serious as was feared. Whatever the cause may be, but little is now heard in regard to it. This is certainly a favorable indication; and if the blight is merely suspended temporarily, there is cause for rejoicing; for every week of undisturbed growth which the potato crop now obtains is an important step gained towards a successful result.

REMEDY FOR MANGE IN SWINE.—First, wash the hog well in soapuds; then to one pint of lard, while hot, add one ounce of carbolic acid, stirring it until it is cool. Rub the hog two or three times with this, and give yourself no uneasiness about the mange.

The Partnership Publication Law.

The announcement that an amendment of the civil code provided that firms not publishing the names and address of their partners, could not maintain any action at law, has taken the commercial community somewhat by surprise, and as there are 18,000 firms in San Francisco, and 30,000 in the State who will be thus obliged to patronize the newspapers unwillingly, the latter will for awhile reap a goodly harvest. The simplest form of statement covering four lines is sufficient to comply with the law of which the following are the provisions:

2,466—Except as otherwise provided in the next section, every partnership transacting business in this State under a fictitious name, or a designation not showing the names of the persons interested be partners in such business, must file with the clerk of the county in which its principal place of business is situated a certificate stating the names in full of all the members of such partnership, and their places of residence, and publish the same once a week for four successive weeks, in a newspaper published in the county, if there be one, and if there be none in such county, then in a newspaper published in an adjoining county.

2,467—A commercial or banking partnership, established and transacting business in a place without the United States, may, without filing the certificate or making the publication prescribed in the last section, use in this State the partnership name used by it there, although it be fictitious, or do not show the names of the persons interested as partners in such business.

2,468. The certificate filed with the Clerk, as provided in section 2,466, must be signed by the partners, and acknowledged before some officer authorized to take the acknowledgement of conveyances of real property. Where the partnership is hereafter formed, the certificate must be filed, and the publication designated in that section must be made within one month after the formation of partnership, or within one month from the time designated in the agreement of its members for the commencement of the partnership; where the partnership has been heretofore formed, the certificate must be filed and the publication made within six months after the passage of this Act. Persons doing business as partners contrary to the provisions of this article shall not maintain any action upon or on account of any contracts made or transactions had in their partnership name, in any court of this State, until they have first filed the certificate and made the publication on herein required.

2,469. On every change in the members of a partnership transacting business in this State under a fictitious name, or a designation which does not show the names of the persons interested as partners in its business, except in the case mentioned in section 2,467, a new certificate must be filed with the County Clerk and a new publication made, as required by this article, on the formation of such partnership.

2,470. Every county clerk must keep a register of the names of firms and persons mentioned in the certificates filed with him, pursuant to this article, entering in alphabetical order the name of every such partnership, and of each partnership there in.

The firm of A. L. Baneroff & Co. was the first to comply with the law.

The form recommended by Hon. J. W. Dwinelle is as follows:

CERTIFICATE OF PARTNERSHIP.—We certify that we constitute a partnership, transacting business in this State; its principal place of business is San Francisco, California; its name is Kinross & Co.; the full names and residence of its members are signed hereunto. May 23, 1874.

JOHN HENRY RUSSELL, of San Francisco, California.
GEORGE WILLIAM JONES, of San Francisco, California.
RICHARD NEALS, of New York City.

RAISING SUNKEN SHIPS.—At a meeting of the Inventors' Institute, London, a paper was read by Mr. T. Vafea, on raising sunken ships or vessels, and also prevention of foundering of same. The main features of the plan were, first closing hermetically the hatches, port-holes, and all other openings in the deck or upper or side parts of the sunken ship, and after having so closed the opening to pump down air to the bottom of the ship through tube or tubes which are inserted either through the bottom of the ship's hull, or through the ship's deck, each tube being passed down close to the bottom of the ship. The air thus introduced into the bottom of the ship rises by itself inside of the ship towards the underside of the deck, and not being able to escape presses the water contained in the ship down and out of the ship through the hole made by accident, or through holes made in the ship's bottom to allow of such escape of water. The vessel by this means will be rendered buoyant, and cause the same to rise to the surface. To prevent foundering of ships, or reduce the risk to a minimum, the ships are provided with air-tight covers, which, when fixed over the openings in the ships, confine the air therein, and keep the ship always buoyant by preventing the entrance of water.

The principle of dephosphorizing iron by the Jacobi process, consists in dissolving out the phosphoric impurities of the ores by treating them with sulphurous acid, the wash-water being utilized to extract therefrom the phosphate of lime.

CARMINE acid, according to Guignet, gives a black lake with lime, the combination formed differing in respect to color from all the other lakes formed with this substance.

Nickel Plating.

Mr. S. P. Sharples, Massachusetts State assayer, gives a brief description of the process of nickel plating. The patent is still before the courts, and no decision has been reached in regard to it. The double sulphate of nickel and ammonium, which is the salt that is generally used, may now be had in commerce almost pure. Cast nickel plates for anodes may be obtained from the same source; the anodes should considerably exceed in size the articles to be covered with nickel. Any common form of battery may be used. The battery power must not be too strong, or the deposited nickel will be black. A strong solution of the sulphate is made and placed in any suitable vessel; a glazed stoneware pot answers very well if the articles to be covered are small. Across the top of this are placed two heavy copper wires, to one of which the articles to be covered are suspended, to the other the anode. The wire leading from the zinc of the battery must then be connected with the wire from which the articles are suspended, the other battery wire being connected with the anode. In order to prepare the articles for coating, they must be well cleaned by first scrubbing them with caustic soda or potash, to remove any grease, and then dipping them for an instant in *aqua regia* and afterwards washing thoroughly with water, taking care that the hand does not come in contact with any part of them. This is accomplished by fastening a flexible copper wire around them, and handling them by means of it. The wire serves afterwards to suspend them in the bath. If the articles are made of iron or steel, they must be first covered with a thin coat of copper. This is best done by the cyanide bath, which is prepared by dissolving precipitated oxide of copper in cyanide of potassium. A copper plate is used as an anode. After they are removed from the copper bath, they must be washed quickly with water and placed in the nickel bath; if allowed to dry or become tarnished, the nickel will not adhere. Great care must be used through the whole process to keep all grease, dust, or other dirt from the articles to be covered, or else the result will be unsatisfactory. The whole process is one of the most difficult that is used in the arts, it being far easier to gild, silver, or copper an article than to nickel it; but if due care be taken the result will amply pay for the trouble.

AGASSIZ' SUCCESSOR.—The London correspondent of the *Cincinnati Commercial* says he heard an "eminent man of science" in that city, an intimate friend of Huxley, remark that Harvard College couldn't find any living man except Huxley, capable of carrying on the work from the point where Agassiz had left it. When asked if he thought Huxley would refuse the offer, the same gentleman responded: "I'm not so sure of that. It doesn't make much difference with such a man as that from what spot on the earth he speaks—the world will hear him. They would have to make it worth his while—I mean in money; for to him money means the furtherance of knowledge and the increase of opportunity. It would not be very difficult for the Americans to supply him with larger means for the accomplishment of his aims than England does, and if so I believe he would go."

GREEN TEA FOR LAMBS.—The *Vermont Farmer*, in answer to an inquiry from a correspondent, for something to cause an early movement of the bowels in lambs just dropped that are to be fed on cow's milk, recommends giving them green tea of commerce, as tending to brighten their tea, while it seems to lack its usual astringent effect. The *Western Rural* does not take much stock in the assertion that green tea, *Then viridis*, would have no astringent effect upon lambs. That it will stimulate them there is no doubt, and that a warm drink if it were only water, would have the effect to move the bowels, is equally plain. Indeed, filling the stomach with any natural food will have this effect of moving the bowels, and in case it were necessary to stimulate weak lambs, we should advise a little sound ale in preference to other stimulants.—*Western Rural*.

HINT TO BEE FANCIERS.—A correspondent of an English rural publication relates a case from his experience which may be useful to other fanciers. Taking possession of new premises he placed his beehive where it would be least in the way of his alterations and improvements. But he soon found he could no longer go among the bees with impunity. They became unaccustomed to seeing human beings; "relapsed into the condition of savages." Thus it appears that folks who would keep bees, must place them where they will be accustomed to people passing and repassing, while those who hide them away as creatures unworthy of their confidence will "find them a little difficult to manage."

Last year at this time, and earlier in the spring, there was a general complaint among the bee-men of Central New York that the unfavorable winter and disease had thinned their choice apiaries to a very alarming extent, in many cases entirely destroying their stock of bees. It is gratifying to learn, however, the present spring, that bees never wintered better than during the past winter months. But the spring has been unusually backward, and bees have kept well housed, although their supply of honey has enabled them to thrive and multiply even earlier than usual.—*Ex.*

Fourth Year of the Pacific Rural Press.

The publishers of this journal design making its weekly issues during its fourth year (1874) still more acceptable and valuable than those of the past.

A Farmer's Paper Always.

The *RURAL PRESS*—established Jan. 1870, has been thoroughly a farmer's paper—"first, last, and always." Its success in popularity and rapidly increasing circulation has exceeded that of any other weekly on the coast.

Neither Politics or Creeds.

We refer with satisfaction to the independent, chaste and useful character of our reading matter and the absence from our columns of questionable and demoralizing advertisements.

We shall strive to make it an ever welcome visitor to those who desire to constantly

Improve the Heart and Mind.

And shall give a larger space to our HOME CIRCLE department, which from the first has been a popular feature of the *RURAL*.

Our aim is to gather information from all reliable sources, in the varied forms in which it is to be obtained. Our work is to divest our gleanings of all superfluities; condense such information as is of most importance to our special class of readers—give it to those in the plainest and fewest words possible,—saving their time by our labor.

Our Leading Departments

Will be continued under the following heads:

The Home Circle,	The Horse,
Young Folk's Column,	The Swine Yard,
Short Stories,	Sciculture,
Home and Farm,	The Vegetable Garden,
Useful Information,	The Flower Garden,
Domestic Economy,	The Vineyard,
Good Health,	The Orchard,
The Dairy,	Tropical Fruits,
The Apiary,	Small Fruits,
Poultry Notes,	The Cereals,
Horned Stock,	Pasturage, etc.,
Sheep and Wool,	Fertilizers,
Goats,	Miscellaneous.

Practical Farmers

Know how important it is that the above subjects should be treated from a local standpoint—that generally the farming tactics of the East will not do for this coast, that agriculture, in its infancy here, can derive greater benefits from an exchange of experience through the columns of the press than in older fields. Constantly observing and studying developments in the special field we represent, we can be expected to give truer information on agricultural subjects, than more general writers at home or abroad.

Our Traveling Correspondents

Will do much service by gathering a large amount of interesting information from various parts of the Coast, which, but for their research and practiced observation might never be placed on record or reach the eye of the reading public. Of our many

Local Correspondents

We have particular reason to be proud. No paper on this Coast—old or new—has ever been so highly favored with volunteer contributions. They are talented, reliable, independent and generous representatives of an intelligent and enterprising people, noble types of good humor, unselfishness and true progress.

Short Stories.

Original and selected, will hereafter appear in each number. Their selection, we trust, will be such as to render them popular and unobjectionable to all. In addition to a large number of

Fine Engravings.

Representing Choice Stock, Farm Products, Scenery, Remarkable Productions, Improvements in Farming Implements and Machinery, Works of Art and the Beautiful in Nature, we shall from time to time present the modest

Faces of Prominent Farmers

Who, as pioneers in the development of agriculture on this Coast, or as active laborers in the "Farmers' Cause," are worthy of the distinction they enjoy, and the favor with which they are looked upon by our many readers at home and abroad.

Engravings (costing thousands of dollars originally) are inserted in our columns during a single year. They afford instant and perpetual impressions often more perfect and real than words can convey.

Patrons of Husbandry.

We shall continue to give our weekly summary of matters connected with the interest and progress of this growing and important movement. We shall aim to give information as fresh as possible in this department. Its readers are aware that the *RURAL* has been in the lead in calling farmers to organize. We shall continue to work zealously with the Granges for the noble objects of the Order.

The present is an **Important Period** in the history of our Coast. The coming 12 months promise greater developments in its agricultural progress than has been experienced in any previous year. Agriculturists are alive to improvements in every direction, and those who would keep up with the spirit of the times should certainly read the *RURAL PRESS*.

The S. F. Market Reports

Will receive greater attention in the department of DOMESTIC PRODUCE than that of any other weekly journal. We shall spare no pains to render the reports as reliable and complete as possible. By the employment of our special reporter we hope to make this very important part of our paper one of its best and most satisfactory features.

Kind Words and Acts

Have done much to build up in this isolated and sparsely settled coast so large and complete an agricultural journal as the *PACIFIC RURAL PRESS*. We commence the new year with a regular circulation of

Over 5,000 Copies.

A far greater issue than that of any weekly on this Coast, independent of a daily publication. If our friends will continue to "help us help ourselves," we hope to reach a circulation of 8,000 this year, and do a correspondingly greater service of good. While we have the greatest advantages and can make, by far the best weekly for

Agriculturists on This Side of the Continent. We cannot expect one-half so large a circulation as journals in older and more populous districts. Consequently readers cannot rightly expect such a paper here at Eastern rates.

No Premiums But a Good Paper

Do we offer. A flashy chrome (or cheap map), with an ill suited paper, will hardly satisfy the farmers of this Coast, whose time is too precious for trifling. To many of you the benefit of a reliable and valuable paper should reach a hundred fold its cost, while to all a poor journal would be dear at any price.

Sample Copies Furnished Free

On receipt of stamp for postage. **Agents are Wanted** Who will do more or less active canvassing. To such we will furnish free samples and pay liberally for their services.

Terms of Subscription:

One year (payable in advance)	\$4.00
Six months	2.25
To Granges and Farmers' Clubs, furnishing club lists, \$3 per annum.	

DEWEY & CO., Publishers.

Office, No. 338 Montgomery street, San Francisco.

POISON! POISON!

WAKELEE'S PATENTED

Granulated Squirrel Exterminator.

A NEW AND MOST DESTRUCTIVE POISON FOR THE WORST PEST OF CALIFORNIA.

For years the farmers of the Pacific Coast have been spending money in experimenting to find a safe, cheap and efficient way of ridding their grain-fields of their worst enemy, THE SQUIRRELS, which destroy Millions of Dollars' worth of grain every year; and unless a strong and combined effort is made to kill them off, they will become more numerous every year.

Wakelee's Granulated Squirrel Exterminator is just the thing the farmers of California have been looking for. It is sure DEATH. One or two grains of it will kill a Squirrel so quick that if it is five feet from his hole it dies before it gets there. The Poison is put up dry and in granular form, and easily handled; in one pound tins, at \$1 per pound. It goes a great way, as 10 to 15 grains of it are sufficient to place at each hole. Also successfully used for killing Gophers and Rats. It has been thoroughly tested in different parts of the country, and gave universal satisfaction. It is kept and sold by druggists and dealers generally through the country. The following are some of my testimonials, viz.:

SANTA CLARA, April 20th, 1874.

H. P. WAKELEE, Esq.—Your Squirrel Exterminator was used according to your directions, on my *quail farm* with excellent success, and in my estimation is just the thing the farmers want to kill their Squirrels.

J. R. ARGUELLO.

SAN LEANDRO, Cal., April 3d, 1874.

H. P. WAKELEE, Esq.—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,

J. M. ESTUDILLO.

DOUGHERTY STATION, Alameda Co., Cal.
MR. H. P. WAKELEE, San Francisco: I have used your Squirrel Poison and found it to be just what you claim for it. It is sure death. Yours,

C. M. DOUGHERTY.

HEALD'S BUSINESS COLLEGE
BRYANT & STRATTON
24 POST ST. SAN FRANCISCO

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars.

E. P. HEALD,

246-M President Business College, San Francisco.

NOTICE.

To Farmers and Grangers.

LAIRD'S PATENT SEAMLESS BAG.

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

107-3m 304 California Street.

FACTORY CHURNS.

At the urgent request of some of the prominent Dairymen of the country, we have designed and made two sizes of FACTORY CHURNS which we believe to be every way adapted to the wants of Butter Factories and large Dairies where power is used.

THE NEW NO. 8

Is intended to churn from 50 to 75 gallons of cream, and the No. 9 from 75 to 150 gallons at a time.

They are just the article needed, and may be obtained through any of our agents or directly from us. Prices and details sent on application to the Sole Manufacturers,

PORTER BLANCHARD'S SONS,

m30-4t Concord, N. H.

PACIFIC POTTERY,

Depot—No. 3 California St., San Francisco.

N. CLARK & CO.

Manufacturers of

EARTHEN AND STONEWARE,

WATER AND SEWERAGE PIPE.

Our Vitrified Iron Stone Pipe has been thoroughly tested on private estates and public works, and its merits are fully endorsed by the leading Architects of the State.

J. B. OWENS, Agent.

m9-hp-3m

THE ALDEN

Fruit Preserving Company OF CALIFORNIA.

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.

W. M. WHERRY, Vice-President.

FRANK PYLE, Sec'y and Supt.

BANK OF CALIFORNIA, Treasurer.

117-6m

LANDS & HOMES FOR SALE**RANCHOS****FOR SALE ON A LONG TIME.**

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,
542 MARKET STREET,
N. E. Cor. Montgomery.

ap25-tf

RARE CHANCE.**Fruit Garden and Homestead for Sale.**

About 30 miles from Stockton, a fine Fruit Garden of 2½ acres of land, with good house of six rooms. Garden contains about 200 Fruit Trees of choice kinds, such as Peach, Pear, Plum, Pomegranate, Blue and White Fig, Black Limes, Apples, Grapes and Orange, Almond and Black Walnut. A nice place and an abundant harvest of fruit. Good market. A rare chance to step into a good homestead and profitable business. Title perfect. Warranted deed. Price, \$1,000. For further particulars, inquire at this office. 22v7-5t

FARM FOR SALE.

165 Acres ½ mile from the town of Windsor; 1 mile from depot; 2½ miles from the famous Russian river. The place is beautifully situated; land all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and outhouses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2,500 cords of black oak timber; and wood brings \$5 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to JOSEPH DIMMICK, P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$10 per acre. apt4-tf

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,
ap18-tf 329 Montgomery street, San Francisco.

FOR SALE.**100 Acres of Good Land,**

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-tf **P. H. SUMNER.**

DAIRY RANCH FOR SALE,

Near San Luis Obispo, well stocked and fenced, with fine improvements. Plenty of wood and water.

Apply to **T. H. HATCH & CO.,**
320 Front street, San Francisco.

Or, **R. M. PRESTON,** Old Creek, San Luis Obispo.
20v7-3m

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4.

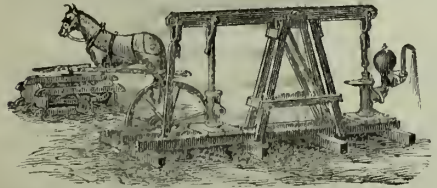
Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

VINE AND FRUIT GROWERS,

TO RAISE LARGE CROPS

YOU MUST IRRIGATE.
To irrigate successfully, you must have the power that does not give out when the wind fails.

Laufkotter Bros. & Churchman's Horse-Power,



PATENTED FEBRUARY 13TH, 1871.
Never fails to supply more water than four or five Windmills, even supposing you had all the wind you want. It is also suitable for running light machinery, such as Barley Crackers, Corn Shellers, Fanning Mills, Grain Separators, or for Sawing Wood. They are never failing, cannot get out of order, easily worked, substantial, and always give satisfaction wherever they have been used. One horse can easily work two-inch pumps, with a continuous flow of water. Force Pumps, from 3,000 to 10,000 gallons per hour. WINDMILLS of all kinds manufactured to order. Wells Bored, Windmills and Horse-Powers set in any part of the State, and repairing of all kinds done.
Manufactured and for sale by

LAUFKOTTER BROS.,
20v7-2m-3m Cor. J and 10th Sts., Sacramento.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address, **W. H. & G. B. PEPPER,**
21v6-1y Petaluma, Sonoma Co., Cal.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles

DOWN WITH MONOPOLY.**The Grangers' Favorite**

AND

CHAMPION OF THE WORLD.**Wheeler & Wilson**

IMPROVED

DRAW-FEED SEWING MACHINE!

IS THE ONLY LOCK-STITCH WITHOUT A SHUTTLE.

IS NOISELESS, SEWS FASTER, RUNS LIGHTER, AND HAS GREATER MECHANICAL SIMPLICITY THAN ANY OTHER MACHINE IN THE WORLD.

THE WINNER AT

LONDON,

PARIS,

VIENNA,

1862

1867

1873

DISTINGUISHED HONORS.

WORLD'S EXPOSITION,
VIENNA, NOV. 1, 1873.
"The Emperor of Austria has conferred the Imperial Order of Francis Joseph on the Hon. Nathaniel Wheeler, President of the celebrated Wheeler & Wilson Sewing Machine Company of New York."

The BEST is the CHEAPEST. Buy no Machine until you have seen the New "DRAW-FEED WHEELER & WILSON." It will last a lifetime. Every Purchaser made a perfect operator.

ALL MACHINES GUARANTEED.

SOLD ON EASY TERMS.

SPECIAL ATTENTION GIVEN TO ORDERS SENT TO

E. W. HARRAL, General Agent,

427 Montgomery Street,

SAN FRANCISCO.

20v7-1am-4m-11p

Shipping---Vessels Up.**FARMERS' LINE.****FOR LONDON DIRECT**

THE MAGNIFICENT A 1 CLIPPER SHIP,
MONETA,
621 Tons,
W. SINCLAIR.....Master.

FOR LIVERPOOL DIRECT.

The magnificent A 1 Clipper Ship,
SEA WITCH,
1288 Tons,
BAKER.....Master.

These fine vessels have nearly full cargoes engaged and will have very quick dispatch. Freights taken in lots to suit shippers.

Will be followed by the splendid A 1 Iron Ship
GLENGARRY,
1769 Tons,

Due here in May; or by other first-class vessels. Liberal advances made on shipments of produce consigned to our Liverpool house, Messrs. Robert Rodgers & Co. RODGERS, MEYER & CO.
18v7-3m

IMPORTANT TO FARMERS!**X Line to Liverpool.**

DIRECT.

The New A 1 Clipper Ship

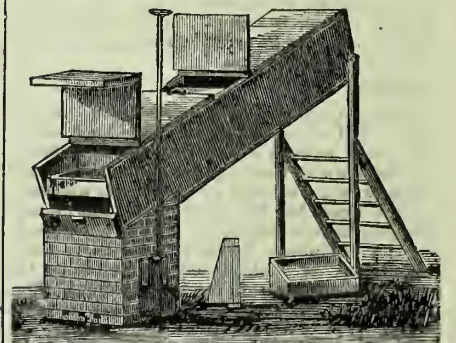
FRIEDLANDER.....1,638 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

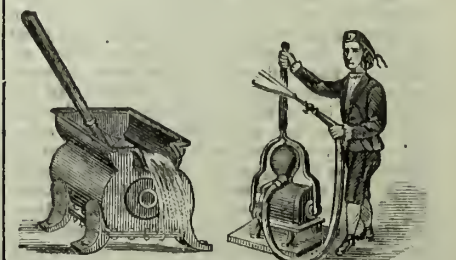
Apply to **E. E. MORGAN'S SONS,**

320 California Street,
San Francisco.

Ryder's American Fruit Drier.

This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent,
306 California street, San Francisco

THE CELEBRATED**SLUTHOUR PUMP,**

Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING AND THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from ½ to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.

Agents for Eastern Manufacturers, 306 California street, San Francisco.

Brittan, Holbrook & Co., Importers of

Stoves and Metals, Tinners' Goods, Tools and Machines, 111 and 113 California, 17 and 19 Davis streets, San Francisco, and 178 J street, Sacramento.

FARMERS write for your paper.

AGRICULTURAL NOTES.

ALAMEDA.

PLEASANTON ITEMS.—*Livermore Enterprise*, June 13: The farmers in this vicinity are nearly all making hay. The wheat crop never looked more promising. It was apprehended that the cloudy, misty weather of last week would bring rust, but so far I hear of none. We have two dairies close to town and fresh butter is plenty. Mr. J. F. Black has one of nearly one hundred milch cows. The vineyards of Mr. Neal and J. W. Kottlinger give promise of a fine yield of grapes. Mr. Cannon's apple and peach trees are also full to excess. This vicinity will produce fine fruit in course of time.

COLUSA.

HARVESTING.—*Colusa Sun*, June 13: On our trip across the valley to the mines this week, we noticed several headers running in different fields gathering in the grain. All the grain is said to be extraordinarily full and heavy. We noticed more extremely late grain than we had an idea had been put in. This looks green and nice yet, but much of it is very thin. Good judges estimate that the sown grain and volunteer taken together will average twenty-five bushels per acre, the county over. This is an extraordinary average. There are many fields of wheat that will make full fifty bushels, and some possibly more.

NORTH WINDS.—We have been remarkably free from north winds this season, and we were in hopes that we might escape their damaging effects, but on Tuesday a norther sprung up and we noticed that it threshed out a great deal of wheat, and on yesterday the wind blew a perfect gale from the north, and the damage to the wheat crop of this county could not have been less than half a million of dollars by it. The Sonora wheat is the most liable to damage from the wind after it is ripe. In this connection, we would remind farmers of the fact that bearded wheat—the Proper for instance—does not shell out as badly as the smooth varieties. It produces better, also.

EL DORADO.

PILOT HILL ITEMS.—*Mountain Democrat*, June 13: The farmers in this vicinity are smiling and happy. The hay crop is good and fruit prospects were never better. Most of the farmers and their families in this vicinity are members of the Pilot Hill Grange, No. 1, Patrons of Husbandry.

FRESNO.

FRESNO COUNTY ITEMS.—*Mariposa Gazette*, June 13: Over one hundred thousand sheep have been already driven into the mountains, but the snow is keeping them from their usual summer range; so says an old friend, who adds a good word for the fertile soil, fine climate (barring high winds on the plains), good facilities for irrigation, fat cattle and sheep, and a population of which good, whole-souled fellows constitute an important element. The new county buildings in Fresno will be completed next spring. Crops throughout the county are a decided success.

LAKE.

FRUIT PROSPECTS.—*Bee*, June 13: Mr. Bell, of Scott's valley, informs us that there is every prospect of a good crop of fruit this season. His peach and plum trees are well loaded, and the fruit promises to be large.

MERCED.

HARVESTING.—*Merced Tribune*, June 13: Harvesting has commenced in earnest, and large quantities of agricultural implements are daily consigned to this point to meet the demands of our farmers. One drawback likely to occur is the already apparent scarcity of labor. In this connection, some of the drones who have been loafing around town for the past six months, gaining a livelihood, the Lord only knows how, would do well to shoulder a pitchfork, and, for once, astonish themselves and the rest of mankind, by earning an honest living.

WORMS.—*Napa Reporter*, June 13: A worm, resembling the tobacco worm, has made its appearance in many portions of our valley in great numbers. In cornfields, it pays its entire attention to the wild weeds in the fence corners, preferring the wire-weed and alfalfa. In the vineyards it has attacked, it does not feed on the old vines, but goes after the young ones, eating every leaf and the buds at the top of the shoots, not touching the bunches of grapes. It has been seen as near Napa as the residence of F. E. Hartwell, Esq., and above St. Helena. At Mr. Benson's, near Oakville, on Saturday, the vines were entirely cleared of these pests, but on Tuesday five or six were to be seen on each vine. Mr. Allan Waite, a resident of that vicinity, watched them off a small patch of 200 vines close to his house during the day, but during two nights they stripped his vines completely. They were in Dr. Crane's vineyard on the west of the county road on Monday, only a few having crossed the road. On the same day many of them were seen crossing the county road in many places between Napa and Yountville from the west to the east side. Up to Monday night, neither Mr. Pellet's nor any vineyard on the east side had been attacked, though on Tuesday they were to be found in that of Mr. H. L. Amstutz. Great danger is not anticipated from their inroads, as they appear in places and do not advance like the army worm, though they may be the forerunner of that to-be-dreaded invader. They are a sleek worm, about four inches long, with a horn pointing outwards, near their lower extremity. They feed rapidly and voraciously, and are of several different colors, but all of about the

same size. Some shake them off the vines and tramp on them, while others dispose of them by cutting with a common pair of shears, this method, considering the tenacity with which they cling to the vines, being much quicker than pulling them off with the hand. Although considerable alarm is felt as to the injury they effect, we do not apprehend much damage to the grape crop from their depredations, unless they show themselves in more formidable numbers than they did at the beginning of the week. Still, we should advise a careful watch of the vineyards, and that measures be taken for their extermination the moment they appear.

PLACER.

GRAIN PROSPECTS.—*Placer Herald*, June 13: As we passed along the railroad, a few days ago, we noticed the hay, grain, fruit and vegetable crops, in most places, between here and Dutch Flat, are looking thrifty, and promise a heavy yield. A sight at the growing crops of this country, at this season of the year, is all that is needed by the stranger to convince him that Placer is only second to ancient Paradise. If half the money was spent in advertising and puffing up Placer county that is spent in blowing on Los Angeles, and other southern counties, we would soon be overrun with population; and the wealth that this county would be made to produce would astonish the world.

SANTA CLARA.

HARVESTING.—*Gilroy Advocate*, June 13: The barley crop of this portion of the valley is nearly all harvested, and many have had their headers running in their wheat fields during the present week. The yield is satisfactory to the farmers so far as we have heard, and now their only uneasiness is in regard to prices and the expense of moving the grain crop to a foreign market.

SAN BENITO.

SAN BENITO TOBACCO.—*San Benito Advance*, June 15: Our neighboring town, Gilroy, is deriving a reputation for the production and manufacture of superior tobacco and cigars and the enterprising spirit of the Consolidated Tobacco Company is being rewarded with a success that promises to Gilroy a lasting celebrity as the pioneer town insulating one of the most important industries of California. Mr. Culp has just returned from the Eastern States, where he succeeded in taking large orders, through the fame of the tobacco, cured by his process, having preceded him. The San Felipe ranch, part of which is in San Benito county, seems peculiarly adapted for the nurture, growth and perfection of the tobacco plant. The average yield is larger than in any tobacco State in America. Fifteen hundred pounds of Havana tobacco, or twenty five hundred pounds of any other class, is produced to the acre, one setting of the plant bearing three crops a year. But the situation and soil of these tobacco fields are not superior to other sites in this valley. Within a circuit of five miles around Hollister, there are more than 1,000 acres of excellent tobacco land, which could be profitably cultivated, if farmers would awake to the advantage and value of such an enterprise. An example of what can be done is before us on Frank Martin's ranch on the San Benito, about three miles from Hollister. He has cultivated the weed for several years, and is satisfied from experience that the soil and climate of San Benito matures tobacco equal in quality and flavor to the best in the world. His experience and judgement are valuable, as he has devoted many years to the cultivation and curing of tobacco in the States. This year the plants on his plantation cover from 35 to 40 acres. They look healthy, and when cut and cured, will give a total crop of over 30 tons. Three-quarters of this amount is Havana tobacco. It will be ready to cut about the first of July and again about the middle of September. The second cutting is the crop of suckers which shoot up from the roots of the original plants. A spacious bar or drying house has been erected on the premises. It is 100 feet square and furnished with racks and customary apparatus for the curing process. Enough prepared tobacco is now in store to employ 20 men at cigar making for one year, and the manufacture of cigars will be commenced on the premises about the 20th of June. Mr. Martin promises that the "San Benito Cigar" shall be tested in all the little towns of California, and shall win its way into public favor on its own merits. Success should follow this interest, and it can only be a question of time when other tobacco plantations will be started in other parts of the country. The lands along the margin of the San Benito river and the rich soil of San Juan are especially adapted to the cultivation of tobacco. As it is one of the most profitable and staple products grown, its cultivation would add materially to the growing prosperity of San Benito county, and give it rank as one of the chief tobacco sections of California.

SANTA CRUZ.

PAJARO.—*Watsonville Pajaronian*, June 13: The weather has been gorgeous for the past week, and the heavy crops can almost be seen to grow. The community seems more cheerful, the farmers jolly in the contemplation of their future prospects, and we hear no word of potato blight here, or smut, or weevil or rust attacking grain, and reapers are busy in all sections cutting the heavy fields of hay. In the mean time the fruit crop promises a most liberal yield, and only in isolated cases is there complaint regarding parasites, which are deleterious to fruit trees. We often hear this truth uttered here: "There is no more beautiful or productive locality in the world than the famous Pajaro valley."

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

(FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.)

By Special Dispatch, Dated Washington, D. C., June 16th, 1874.

FOR WEEK ENDING JUNE 2, 1874.

STENCH TRAP.—John P. Schmitz, S. F., Cal.
CHOPPING BLOCK.—Henry Anderson, S. F., Cal.

PROCESS IN THE MANUFACTURE OF ARTIFICIAL STONE.—Gilbert S. Dean, S. F., Cal.

PROCESS OF PRODUCING PHOTOGRAPHIC PICTURES.—James M. Pimental, S. F., Cal.

HYDRAULIC LIFTING JACK.—Anthony J. Ojeda, S. F., Cal.

UNLOADING HEADER WAGONS.—Henry Klehn, Crow's Landing, Cal.

HARROW.—William H. Wolfe, Santa Clara, Cal.

SCRAPER.—Edward H. Farmer, Chas. Remington and Joseph Dismock, S. F., Cal.

STAGE SCENERY AND SHIFTING DEVICES.—Henry F. Parsons, Los Angeles, Cal.

"The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. NOTE.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

TREADWELL & CO.

We certify that the partnership of Treadwell & Co., doing business in San Francisco, California, is composed of Leonard L. Treadwell and James F. Place, who both reside in the city and county of San Francisco, and William O. M. Berry, who resides in Oakland, Alameda county, California.

San Francisco, Cal., May 26th, 1874.

LEONARD L. TREADWELL,
JAS. F. PLACE,
WM. O. M. BERRY.

STATE OF CALIFORNIA,
CITY AND COUNTY OF SAN FRANCISCO.

On this May 27th, 1874, before me Henry C. Blake, a Notary Public, in and for said city and county, personally appeared Leonard L. Treadwell, James F. Place and William O. M. Berry, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

HENRY C. BLAKE, Notary Public.

Road Making and Ditching Machine.

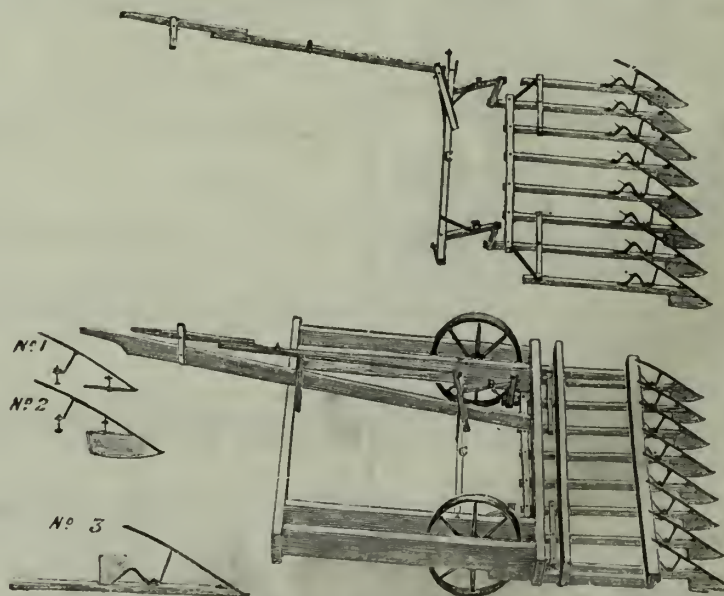
CHICO, June 11, 1874.
Messrs. WIESTER & Co.—Gentlemen: The Road Road Scraper is a most useful invention. The more I use it the better I like it. In a word, I have come to regard it indispensable, and to go back now to the use of the shovel or the common scraper to make turnpikes or road grades of any kind would seem like returning to the sickle or cradle to harvest grain with.

Yours truly, JOHN BIDWELL.

Our best dairy women say that the ease with which the Blanchard Churn is operated and cleaned is a great thing in its favor. We should think so. It is the most simple and effective churn made. They are made only by Porter Blanchard's Sons, Copcord, N. H.

DR. E. J. FRASER, Homoeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No. 305 Kearny street, northwest corner of Bush. 6v7-3m

W. M. JACKSON'S PATENT GRAIN LIFTER.



This is the only Lifter that has enabled the Header to cut all kinds of lodged grain. It has been in use several years and gives entire satisfaction, not only in cutting lodged grain, but in saving crinkled or straw fallen grain. The Lifter can be had by addressing W. M. JACKSON, Woodland. The price will be SIXTY DOLLARS for ten-foot headers; SEVENTY DOLLARS for twelve-foot headers. I will sell them to dealers when ordered the same as heretofore; also to the Grange Agent as a dealer.

W. M. JACKSON,
Woodland, Cal.

Magnetic Spring House at Vine Hill, EIGHT MILES FROM SANTA CRUZ, ON THE SAN JOSE ROAD.

The above house has been built for the benefit of Invalids, Hunters, Pleasure Seekers and those seeking recreation generally. The spring water is heavily charged with magnetism, charging knives at times so as to pick up a needle. Water has effected wonderful cures in Neuralgia, Kidney Disease and affections of the optic nerve. A splendid view of Monterey Bay can be had from the house. Guest giving me a call can rely upon it that no pains will be spared to make their stay an agreeable one. Board, \$2 a day or \$10 a week. Hot and cold baths, 25c each.

25v7-3m C. G. FISK, Proprietor.

FARMING LAND, TO LEASE ON SHARES. 1,000 ACRES.

Or any part of same, being leaved and of similar character to that of SHERMAN ISLAND. Apply to

W. T. S. RYER.

No. 230 Pine street,.....SAN FRANCISCO, CAL.

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Cellar. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to

B. F. CLAYTON, San Jose.

Or C. J. CLAYTON, Clayton, Contra Costa Co., Cal.

10v7-6m

FEED-CUTTER ROLLERS

Covered and made new in the best manner at usual rates, at H. ROYER'S Belt Factory, 437 Brannan St.

19v7-3m

California Farmers' Mutual Fire Insurance Association.

A meeting of the stockholders of the California Farmers' Mutual Fire Insurance Association will be held at the office of the Secretary, at 320 California street, room 12, on Saturday, June 20, at 2 o'clock P. M., to adopt a code of By-Laws for the government of said association. By order of the acting President, J. D. BLANCHARD.

19v7-6m

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,

MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and

Kearny, SAN FRANCISCO.

21v7-1v

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.

Write for Catalogue to

22v6-1v

ELWOOD COOPER,
President Board of Directors.

For the very best Photographs go to BRAD LEY & RULOFSON'S GALLERY, with an "Elevato" 429 Montgomery street, San Francisco. 2v7-6m

S. F. MARKET REPORT.

At Wholesale when not Otherwise Indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, June 17, 1874.

The harvest season is fast approaching, and already grain is beginning to be cut in some sections. It will be some little time yet before it is handled in large quantities in this city, however. As yet the shipping in the bay hardly seems ample for moving the expected crops, but doubtless the harbor will present a livelier appearance when the many vessels now on the way have arrived. The tone of the market is yet one of uncertainty. Advances as to the exact yields of this, as well as other States and countries, are not sufficiently definite to enable dealers to estimate with any degree of precision the probabilities, though the idea seems to prevail generally that prices cannot be expected to rule very high—at least not early in the season.

Fresh Fruits, Vegetables, Dairy Produce, etc., are moving freely, and at present command more attention than the more important crops.

Receipts.

Last week of California Produce were as follows: Flour, 4,220 barrels; Wheat, 32,400 bushels; Barley, 16,480 bushels; Beans, 1,540 sacks; Potatoes, 12,630 sacks; Peas, 2,700 sacks; Onions, 510 sacks; Hides, 2,854; Wool, 1,620 bales; Hay, 940 tons; Wine, 43,000 gallons; Brandy, 170 gallons; Oranges, 9,331; Lemons 16,000. It will be remarked that receipts of old Produce are much less than usual, the falling off being as customary at this season. In fact, there is little moving beyond the kinds already mentioned.

Barley.

A slight decline is noted. Brewing is in little request, and it is stated that the influence of the local option elections and sentiment is felt in this direction. Our quotations are for old. New Barley has been sold as low as \$1.17 for Coast Feed.

Beans.

Prices remain as before quoted. Receipts are quite as full as is desired.

Dairy Produce.

Butter is firmer, and an advance at 1c. is noted in Fresh of various grades. The best Point Reyes commands 33c. per lb. California Cheese is very dull, and transactions have been quite limited. Eastern Cheese holds its own very well.

Eggs.

Eggs are steady, at 27¢ per doz. for California. Faralones Eggs are being taken by restaurant keepers, etc., but are not dealt in by commission men generally.

Feed.

Middlings are buoyant, an advance of \$1.50 per ton has been made. Hay is very quiet, though receipts would not appear to be sufficient to bring down the market so low. Oil Cake Meal and Corn Meal are steady.

Flour.

Flour is inactive. The best terms secured for Extras are now \$5.75 per barrel. The last Oregon steamer brought 1,500 barrels.

Hops.

There is little or nothing being done at present in this city. Prices are low and virtually nominal. A New York telegram, dated June 15th, has the following: The market for the past few days has been characterized by increased dullness, and so far as values are concerned, there is little if any change to note. Fancy New York Hops are in some cases held at high figures, but in the absence of any demand it is not at all likely that prices will advance, and from general indications the tendency is really otherwise. California, 30¢ at 35¢.

Potatoes.

The apprehensions of an extended Potato blight having passed away, and the supplies of New being so full, the prices of "Spuds" have fallen off noticeably. Old Potatoes are hardly wanted at any figure, though when sold they bring 75c. Santa Barbara have declined 12¢, the abundance of more popular kinds having brought them down. The extremes for Half Moon Bay and Mission are \$1.50 and \$1.60 per cental, respectively.

Poultry.

Turkeys and Chickens are steady at the same low figures. Ducks have declined \$1 per dozen.

Seeds.

There is no change in Seeds, the trade being slack and the market consequently quiet.

Wool.

There is not the same excitement in the Wool market but terms obtained are very satisfactory. A sale of 100,000 lbs Spring was made yesterday at 18¢ 23c., much of the Wool being burry.

Wheat.

The crop of 1873 is very nearly exhausted. It is stated that the entire surplus does not reach 10,000 tons, a smaller stock than has been carried in corresponding periods for several years. The first of the new crop, from Sonora seed, arrived June 11th, and was taken at \$1.65 for export. The quotations for Old are variable and fluctuating. It would be difficult to obtain the top figure given in our table of prices.

RETAIL GROCERIES, ETC.

WEDNESDAY M., June 17, 1874.

Butter, Cal. choice	25	@	30	Can. Oysters, doz.	2.00	@	2.50
do common	22	@	25	Strap, S. F. Col'n.	35	@	40
Cheese, Cal. D.	15	@	19	Dried Apples	3	@	10
Lard, Cal. D.	12	@	15	Dried Apples	3	@	10
Flour, ex. fam. bl	75	@	80	Dried Apples	3	@	10
Corn Meal, bl	24	@	34	Dried Apples	3	@	10
Sugar, w. loaf	10	@	12	Dried Apples	3	@	10
do lb. brown	7	@	9	Dried Apples	3	@	10
Coffee, S. B. Boro's	25	@	30	Dried Apples	3	@	10
family gr. d.	25	@	30	Dried Apples	3	@	10
Coffee, green, bl.	24	@	35	Dried Apples	3	@	10
Tea, fine bl.	50	@	65	Dried Apples	3	@	10
Tea, fine, 1 lb.	50	@	65	Dried Apples	3	@	10
Candles, Adamant	17	@	25	Dried Apples	3	@	10
Soap, Cal. D.	10	@	12	Dried Apples	3	@	10
Per lb.	10	@	12	Dried Apples	3	@	10

FRUITS AND VEGETABLES.

WEDNESDAY M., June 17, 1874.

The Strawberry season is nearly over. Receipts are steadily falling off, and the canners are about through with the crop. Sandwich Island Bananas have lately been received, and are held at the high figure of \$2.40 per box. Pineapples are scarce. Apples are down to 8¢ 12¢. Raspberries are sold by first hands at 15¢ per lb. Plums range a little higher. Peaches of inferior quality have been sent in, and brought 25¢ per lb. In Vegetables, Peppers have fallen 50c; Tomatoes 10c, and Green Okra has advanced 10c; Green Corn is in better supply and down to 18¢ per dozen.

FRUIT MARKET.

Tahiti, Or. M	35	@	40	Apples, p. d.	8	@	10
Lorita, do	30	@	35	do, p. d.	8	@	10
Cal. do	30	@	35	do, p. d.	8	@	10
Limes, M.	15	@	20	do, p. d.	8	@	10
Cal. Lemons, M	30	@	35	do, p. d.	8	@	10
Australian do	30	@	35	do, p. d.	8	@	10
do per box	7	@	10	do, p. d.	8	@	10
Bananas, p. d.	10	@	15	do, p. d.	8	@	10
Cocconuts, p. d.	10	@	15	do, p. d.	8	@	10
Pineapples, p. d.	7	@	10	do, p. d.	8	@	10
Apples, p. d.	8	@	12	do, p. d.	8	@	10
Cherries, p. d.	10	@	15	do, p. d.	8	@	10
Blackberries, p. d.	10	@	15	do, p. d.	8	@	10
do wild	10	@	15	do, p. d.	8	@	10
Strawberries, p. d.	10	@	15	do, p. d.	8	@	10
Gooseberries, p. d.	10	@	15	do, p. d.	8	@	10
Currents, p. d.	10	@	15	do, p. d.	8	@	10
Apricots, p. d.	10	@	15	do, p. d.	8	@	10
Plums, p. d.	10	@	15	do, p. d.	8	@	10
Peaches, p. d.	10	@	15	do, p. d.	8	@	10
Pears, Ealing	10	@	15	do, p. d.	8	@	10
do Cooking	10	@	15	do, p. d.	8	@	10
do Bartlett	10	@	15	do, p. d.	8	@	10
Crab Apples	10	@	15	do, p. d.	8	@	10
Nectarines	10	@	15	do, p. d.	8	@	10
Watmel, p. d.	10	@	15	do, p. d.	8	@	10
Canoe Apples	10	@	15	do, p. d.	8	@	10
Pomegranates, p. d.	10	@	15	do, p. d.	8	@	10
Figs	10	@	15	do, p. d.	8	@	10
Grapes, Bl. Hg	10	@	15	do, p. d.	8	@	10
do Muscat	10	@	15	do, p. d.	8	@	10
do Malvose	10	@	15	do, p. d.	8	@	10
do Sweetw.	10	@	15	do, p. d.	8	@	10
do Mission	10	@	15	do, p. d.	8	@	10
do Rose of Peru	10	@	15	do, p. d.	8	@	10
do Tokay	10	@	15	do, p. d.	8	@	10
do Morocco	10	@	15	do, p. d.	8	@	10

DRIED FRUIT.

Apples, p. d.	8	@	10	Asparagus, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8
do, p. d.	8	@	10	do, p. d.	7	@	8

VEGETABLES.

Asparagus, p. d.	7	@	8	Carrots, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15
do, p. d.	7	@	8	do, p. d.	10	@	15

FRUITS, ETC., PRESERVED BY THE

Apples, p. d.	8	@	10	Apples, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10
do, p. d.	8	@	10	do, p. d.	8	@	10

GENERAL MERCHANDISE.

WEDNESDAY M., June 17, 1874.

Coffees are weaker. A considerable reduction has been made in the prices of nearly all kinds of Oils. Syrups are also lower.

BAIRS.

Eng. stand, W. H.	12	@	13	Atlan, W. Lead	7	@	12
Cal. Machine	12	@	13	Whiting	2	@	2
Gilroy E.	12	@	13	Putty	4	@	5
do, 22x36, do W.	12	@	13	Chalk	2	@	2
do, 22x36, do W.	12	@	13	White	2	@	2
do, 22x36, do W.	12	@	13	White	2	@	2
do, 22x36, do W.	12	@	13	White	2	@	2
do, 22x36, do W.	12	@	13	White	2	@	2
do, 22x36, do W.	12	@	13	White	2	@	2
do, 22x36, do W.	12	@	13	White	2	@	2

PAINTS.

China No. 1	6	@	6	China No. 1	6	@	6
do, 2	5	@	5	China No. 1	6	@	6
Japan	5	@	5	China No. 1	6	@	6
Siam Cleaned	7	@	7	China No. 1	6	@	6
Patna	6	@	6	China No. 1	6	@	6
Carolina	10	@	10	China No. 1	6	@	6

SALT.

Cal. Bay, per ton	10	@	11	Cal. Bay, per ton	10	@	11
do common	5	@	6	Cal. Bay, per ton	10	@	11
Carman Island	11	@	12	Cal. Bay, per ton	10	@	11
Liverpool	10	@	11	Cal. Bay, per ton	10	@	11

SOAP.

Castile Soap	10	@	11	Castile Soap	10	@	11
Local brands	5	@	6	Castile Soap	10	@	11
Alspice	15	@	16	Castile Soap	10	@	11
Cassia	26	@	27	Castile Soap	10	@	11
Cinnamon	30	@	31	Castile Soap	10	@	11
Nutmeg	18	@	19	Castile Soap	10	@	11
Pepper	18	@	19	Castile Soap	10	@	11
Pimento	18	@	19	Castile Soap	10	@	11
Grind Alspice	18	@	19	Castile Soap	10	@	11
do Cassia	18	@	19	Castile Soap	10	@	11
do Cloves	18	@	19	Castile Soap	10	@	11
do Mustard	18	@	19	Castile Soap	10	@	11
do Cayenne	18	@	19	Castile Soap	10	@	11
do Pepper	18	@	19	Castile Soap	10	@	11
do Mace	18	@	19	Castile Soap	10	@	11

SUGAR, ETC.

Cal. Cane per lb.	10	@	11	Cal. Cane per lb.	10	@	11
Partz Pro. Cube	10	@	11	Cal. Cane per lb.	10	@	11
do in 50 lb. bxs.	10	@	11	Cal. Cane per lb.	10	@	11
do in 25 lb. bxs.	10	@	11	Cal. Cane per lb.	10	@	11
Circle A crushed	10	@	11	Cal. Cane per lb.	10	@	11
Powdered	10	@	11	Cal. Cane per lb.	10	@	11
Granulated	10	@	11	Cal. Cane per lb.	10	@	11
Refined	10	@	11	Cal. Cane per lb.	10	@	11
Hawaiian	10	@	11	Cal. Cane per lb.	10	@	11
California Beet	10	@	11	Cal. Cane per lb.	10	@	11
Golden O	10	@	11	Cal. Cane per lb.	10	@	11
do Key's trade	10	@	11	Cal. Cane per lb.	10	@	11
Cal. Syrup	10	@	11	Cal. Cane per lb.	10	@	11
do in 50 lb. bxs.	10	@	11	Cal. Cane per lb.	10	@	11
do in 25 lb. bxs.	10	@	11	Cal. Cane per lb.	10	@	11
do in kegs	10	@	11	Cal. Cane per lb.	10	@	11
Hawaiian Molasses	10	@	11	Cal. Cane per lb.	10	@	11

TEA.

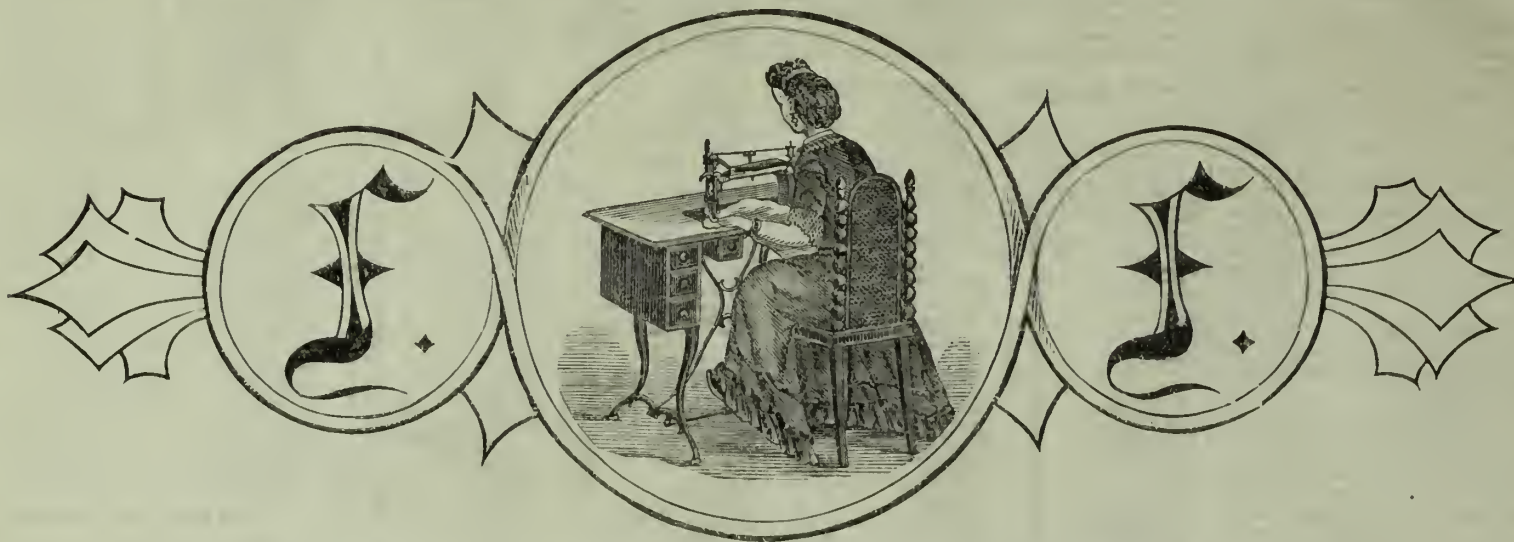
West Hartley....	12 00	@14—	Whole Pepper..	18	@	19
Scotch.....	9 50	@10 00	Pimento.....	—	@	15
Scranton.....	15 00	@17 50	Gr'nd Allsp pr dz	—	@	10
Vancouver Isd..	11 00	@11 50	do Cardo do	—	@	50

ATTENTION GRANGERS, ATTENTION!

PATRONIZE THOSE WHO SUSTAIN YOU.

WEED. THE BEST WEED.

IMPROVED SEWING MACHINE.



SPECIAL ARRANGEMENTS WITH THE ORDER THROUGH MR. I. G. GARDNER, AGENT OF THE STATE GRANGE.

THE MANUFACTURING INTERESTS ARE IDENTICAL WITH THOSE OF THE PEOPLE.

— THE —

WEED SPEAKS FOR ITSELF.

All purchaser have the privilege of returning their machines at any time within thirty days and having their money refunded if the machine should not prove in every way as recommended, *provided only* that they will first notify us of any fault they may find and give us an opportunity to set them right by explaining the cause of the difficulty.

A. MEAD & CO., General Agents,

No. 152 New Montgomery Street,

SAN FRANCISCO.

22v7-1am-4m

CEO. H. TAY & CO.,

614, 616 and 618 Battery St., S. F.,

OFFER FOR SALE

IRON PIPE,

BLACK and GALVANIZED.

PUMPS—LIFT AND FORCE.

RUBBER HOSE, ETC.

STOVES and RANGES,

THE RICHMOND RANGE,

THE HENRY CLAY,

THE EMPIRE CITY,

THE ALVARADO.

THE MONITOR, wrought iron body, cast iron top and hearth, will cook for 50 to 500 men; an excellent stove for large ranches during harvesting season.

AND A GREAT VARIETY OF

COOKING STOVES AND RANGES, FARMERS' BOILERS AND CALDRON KETTLES.

Ralph's Patent Oneida Cheese Vats.

DAIRYMEN'S GOODS,

MILK PAILS, PANS, CHEESE HOOPS, ETC.

BABBIT METAL.

Wire for Fencing and Baling.

ALSO, METALS, HOUSE FURNISHING HARDWARE, JAPANESE GOODS, ETC., ETC.

22v7-3m

WHALE OIL SOAP,

—FOR—

Destruction of Bugs on Plants, Etc.

PHENIX OIL WORKS.

517 Front Street.....SAN FRANCISCO.

20v7-1m

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

Grand Medal of Progress!

Grand Medal of Merit!

AND TO OAP THE CLIMAX.

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.



A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-1f

H. K. CUMMINGS.

1858.

H. B. RALSTON.

1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1r

NOTICE TO FARMERS.
Something Entirely New.
HOME SEWING MACHINE.

This machine is manufactured after an experience of twenty years. It contains within itself every known improvement. It is the best because the simplest, easiest to understand and by far the lightest to run, and the equitable adjustment of all its parts makes it the most durable Machine in the market. Take the INTERESTED STATEMENTS OF NONE, but

EXAMINE for YOURSELF.

SEND FOR A CIRCULAR.

It uses a Shuttle, Straight Needle, Two Threads, and makes a stitch alike on both sides.

E. W. HAINES, Agent,

17 New Montgomery St., Grand Hotel Build'g, S. F.

We also continue to sell another machine, the

HOME SHUTTLE SEWING MACHINE.

Price, \$45.

Mme. Demorest's Reliable Paper Cut Patterns. Send for a Catalogue. 15v7-eow-4m

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Calfs Limp and Bleedings of all kinds are speedily removed by it. WILLIAMS & MOORE, Prop'rs. 3v7-3m Stockton, Cal.

FARMERS WANTING TO HIRE AN Engine and Engineer for the season, for threshing, can hear of one by calling at, or addressing, J. W. RILEY, No. 54 Third street, San Francisco 23v7-1f

The Sewing Machine

—FOR THE—

GRANGERS.

NO COMBINATION! NO MONOPOLY!

The New Improved FLORENCE,

Side Feed and Back Feed. Agency established on the Pacific Coast in 1863. The lightest running, most simple, and most easily operated Sewing Machine in the Market. Always in order and ready for work. If there is a Florence Sewing Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner. Samuel Hill, Agent, 19 New Montgomery Street, Grand Hotel Building, San Francisco.

Mr. I. G. Gardner, State Agent for the California Granges, is authorized to make liberal terms to all Grangers who purchase the FLORENCE. No combination against favoring the Grangers has ever been joined by Florence Agents.

SAMUEL HILL, General Agent.

18v7-3m

The New Wilson SEWING MACHINE

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market

G. A. NORTON, Gen. Ag't for the Pacific Coast. 337 Kearny St., S. F. ap25-1f



PRICE, \$50.

NOTICE.

TO THE SUBSCRIBERS TO THE CAPITAL STOCK

—OF THE—

GRANGERS' BANK OF CALIFORNIA.

Notice is hereby given, that at a meeting of the Directors of the Grangers' Bank of California, held this 23d day of May, A. D. 1874, the first installment of ten per cent. on the capital stock was levied, payable in U. S. Gold Coin on or before the first day of July, 1874. Payable at the office of the President, 320 California street, San Francisco. By order of the Board. m30-5t ALFRED F. WALCOTT, President.

Davis & Sutton, Commission Merchants, For California Fruits; also for the sale of Butter, Eggs, Cheese, Hops, Green and Dried Fruits, etc., 75 Warren street, New York. Refer to Anthony Halsey, Cashier, Traders' National Bank, N. Y.; Ellwanger & Barry, Rochester, N. Y.; G. W. Reed, Sacramento, Cal.; A. Lusk & Co., Pacific Fruit Market, San Francisco, Cal.

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centreville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood.



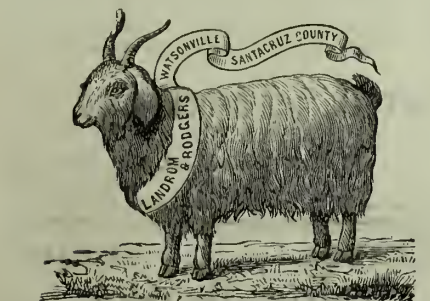
SULTAN SECOND.

See description in Pacific Rural Press January 4, 1873.
Address N. GILMORE,
El Dorado, El Dorado County, Cal.

A. G. STONESIFER,
BREEDER OF

Pure Blooded French Merino Sheep,

Has for sale a choice lot of Rams and Ewes, on the Ostrimba Ranch, six miles west of Hill's Ferry, Stanislaus County, Cal.



We respectfully invite the attention of wool growers to our fine stock of Cotswold Sheep and Angora Goats. We have 200 head of Pure Breed Angoras to select from; we have some of the finest Goats in America; we guarantee everything we sell to be as represented; our prices are as low as any in America for the same grade of stock. Call and see, or address,

LANDRUM & RODGERS,
Watsonville, Cal.

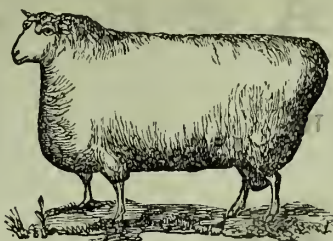
U. S. LIVE STOCK EXCHANGE,
Cor. 5th and Bryant Sts., S. F.

For Sale, a number of very choice thoroughbred DURHAM COWS, HEIFERS AND BULLS, raised in California. Also the largest number of the best and most valuable thoroughbred Durham Bulls ever brought to this State, just received from Kentucky. Are all of English breeds and of the celebrated Bates' blood, which, for its combined milk and beef qualities, has attracted the attention and won the admiration of respectable Stock Raisers throughout the civilized world. We have in our possession printed catalogues of the pedigree of each animal, and a certificate from Gov. Leslie of Kentucky, confirming the correctness of said pedigree.

Also a large number of Berkshire Pigs from Kentucky. For farmers and stockraisers this is a rare opportunity. Address,

DAWSON & BANCROFT,
449 5th street, S. F.

B. W. OWENS, San Francisco. | E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

WEDNESDAY.

WEDNESDAY.....June 17, 1874.

AT 11 O'CLOCK A. M.,

—AT—

M. L. Brittan's Ranch, Redwood City.



WE WILL SELL,



By order of M. L. Brittan,

HORSES.

73 head of Hambletonian, Clydesdale and Graded Horses, and Thoroughbred Brood Mares.

CHOICE DAIRY STOCK.

75 head of Dairy Cows, High Grade Durham Bulls, Heifers and Steers.

The train will be run from San Jose Depot, Market street, and return immediately after the sale. All persons wishing to attend the sale will apply for tickets and catalogues at our salesroom, or at the depot on the morning of the sale. Train leaves at 8:40 A. M.

CREGO & BOWLEY,
Auctioneers.

Kentucky Sales of Short-Horn Cattle for 1874.

	No. Head.
Hughes & Richardson, Lexington, July 22.....	50
Wm. Warfield & Co., Lexington, July 28.....	140
B. F. & A. Vanmeter, Winchester, July 24.....	80
J. V. Grigsby, Winchester, July 25.....	50
I. O. Robinson & Co., Winchester, July 27.....	40
Warnock & Megibben, Cynthiana, July 28.....	80
F. J. Barbee, Paris, July 29.....	60
C. M. Clay Jr., Paris, July 30.....	90
J. Scott & Co., Paris, July 31.....	70
J. Sudduth, Newtown, Aug. 1.....	40

The above sales comprise all of the most popular families of Short-Horn Cattle in America, and many imported animals.

Apply to the above addresses for their Catalogues.

m30-6w

Cotswold Bucks For Sale.

About three hundred Bucks, half and three-quarter bred Cotswold, and a few Thoroughbreds, for sale at Low Prices.

REFERENCES:

MOODY & FARISH, San Francisco.
SHIPPEE, McKEE & CO., Stockton.

Orders left with the latter firm will receive prompt attention.

A. VROMAN,

Jenny Lind, Calaveras Co., Cal.

SOUTH DOWN RAMS FOR SALE.

The subscriber offers for sale in this city Six FULL BLOODED SOUTH DOWN RAMS, lambed in February and March last. Weight of oldest not less than 150 lbs. Will be sold at a bargain, and may be seen at the corner of Howard and Twentieth streets, directly opposite my residence.

RUFUS ROWE.

San Francisco, June 2d, 1874.

ju6

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak Home. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

Oak Home Ranch, Waterloo Road, three miles from Stockton.

3v7-3m

U. S. LIVE STOCK EXCHANGE,

CORNER OF FIFTH AND BRYANT STREETS, S. F.

Cattle, Sheep, Milch Cows, Hogs and Horses sold on commission or bought on farm for stock.

Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State. Thoroughbred Durham Cows wanted. Address,

TAWSON & BANCROFT, 449 5th St., S. F.

Special rates to members of the Grange. m9

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,

17v7-3m

San Rafael, Marin Co., Cal.

FOR SALE.

25 full blooded Spanish Merino Bucks, one and two years old, from stock imported from Addison county, Vermont, in 1872. Call and see, or address,

m9-2m

B. F. WATKINS,
Santa Clara, Cal.

JERSEY CATTLE.

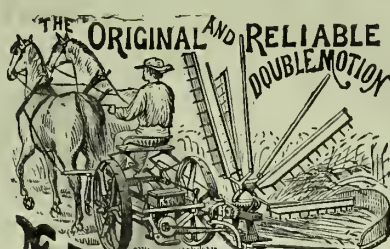
A few head of very choice Jersey Cows—Heifers and Bull Calves—for sale. Apply to

15v7-3m

R. G. SNEATH, Menlo Park.

AGRICULTURAL ARTICLES.

FOR THE HARVEST OF 1874.



Hoadley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our illustrated Price List, to TREADWELL & Co., San Francisco.

MATTESON & WILLIAMSON'S

AMERICAN CHIEF

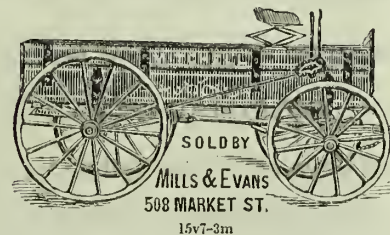


GANG PLOW.

Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m

MATTESON & WILLIAMSON,
Stockton, Cal.THE
CELEBRATED MITCHELL WAGON

WATERHOUSE & LESTER,

IMPORTERS OF

WAGON AND CARRIAGE MATERIAL,

BODIES, CARRIAGE PARTS,

Wheels, Axles, Springs & Carriage Hardware.

SOLE AGENTS FOR THE PACIFIC COAST FOR

Clarke's Adjustable Phaeton Sunshades.

Send for price list.

ALSO AGENTS FOR

Woolsey's Patent Wheels,

The best and handsomest Wheel made, having great strength and a fine finish. There is no other wheel that has the metallic-shodded band; and it can be repaired as easily as the common wood wheel.

Send for illustrated circular. Address

WATERHOUSE & LESTER,

122 and 124 Market street, and } SAN FRANCISCO.
19 and 21 California street, }
17, 19 and 21 Seventh street, } SACRAMENTO.
21v7-3m

BYRON JACKSON,

MANUFACTURER OF

Patent Self-Feeder & Elevator Attachment

For Separators, at the Yolo Planing Mill and Machine Shop, Woodland, Yolo County, Cal.

This improvement was patented in 1867 and in 1870. For the past two years I have been introducing it to the public with great success. It is pronounced by all that have tried it to be the greatest labor saving invention of the age. No Thresher will be without it after witnessing its operation. It saves all the hard work of feeding and injury to health, and one-half the labor required to supply the grain from the stacks. It will pay for itself in less than thirty days, besides doing better work. For particulars send for circular; it gives all necessary information, besides the best plan for using the Horse Forks ever adopted. Entire satisfaction guaranteed if properly used.

21v7-3m

O. OREGO.

S. C. BOWLEY

CREGO & BOWLEY,

Importers and Manufacturers

—OF—

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange,

CALIFORNIA STREET.....SAN FRANCISCO

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkeys, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of Light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey,
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harnesses, of the most celebrated makers:

C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcings, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,
24v5-3m San Francisco.

H. C. SHAW,

STOCKTON, CAL.

Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros."

General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Geared Headers.

The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW,
14v7-3m Box 95, Stockton, Cal.

WM. ZARTMAN & CO.,

CARRIAGE AND WAGON MAKERS,

COR. ENGLISH & HOWARD STS., PETALUMA.

Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate.

SPECIAL RATES TO GRANGERS.

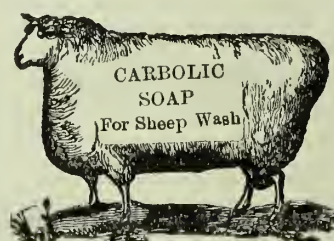
12v7-3m

STANDARD SOAP CO.'S

CARBOLIC SOAP

FOR

SHEEP WASH!



COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID & ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

The STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kane's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Blueing, Harness Soap, Thomas' Cool Water Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Bay Rum, Florida Water, Hair Oils, Extracts, Perfumes, Colognes, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street,
16v7-3m SAN FRANCISCO, CAL.

THE CELEBRATED NEW DRAW-FEED

WHEELER & WILSON

SEWING MACHINES

Are without exception the most desirable for family use. They are the LIGHTEST RUNNING Machine in the market, and sew with the finest to the thickest material with equal facility.

These machines have, since their invention, stood at the head of the list in public favor, and the recent improvements to them have increased their superiority still more. Buy no Sewing Machine until you have tried these.

WHEELER & WILSON MAN'G CO.

E. W. HARRAL, Agent,

20v7-4m-15p

427 Montgomery street, S. F.

San Francisco Employment Office,

NO. 606 CLAY STREET,

Crossett & Co., Proprietors.

(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.

Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP, on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction.

ap18-1f

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

14v7-3m

FIENOE & CO., 627 Sacramento St.,
bet. Montgomery and Kearny Sts., S. F.

KOHLER, CHASE & CO.,

AGENTS FOR THE

633 CLAY STREET,

SAN FRANCISCO.



THE ONLY FIRST-CLASS PIANO SOLD AT A LOW PRICE.

Beware of the CHEAP pianos sold from \$300 to \$400, made to look well and sound well (when new), but without durability or real merit.

21v7-lam 3m

SHOULD BE KNOWN BY MORE THAN ONE HUNDRED THOUSAND

GRANGERS,
FARMERS,
MINERS,
MILLMEN,
MECHANICS,
MANUFACTURERS,
FAMILIES,

Persons have been furnished by me with employment as

Blacksmiths,	General use,	Teamsters,
Book-keepers,	Grooms,	Woodchoppers,
Carpenters,	Laborers,	Feeders,
Cheesemakers,	Wareh'se men,	Miners,
Engineers,	Sacksewers,	Painters,
Wagonmakers,	Buttermakers,	Sheepshearers,
Cooks,	Lumbermen,	Shepherds,
Farm laborers,	Machinists,	Tracklayers,
Gardeners,	Milkers,	Wheelwrights,

And in all other capacities—male or female. Consequently, when you want

GOOD RELIABLE HELP,

CALL ON OR ADDRESS LETTERS TO

A. ZEEHANDELAAR,

715 Montgomery St., San Francisco,

(Post-office Box 775).

A. ZEEHANDELAAR,

Formerly of the CALIFORNIA LABOR EXCHANGE,

EMPLOYMENT OFFICE,

Real Estate and General Business Agent,

715 MONTGOMERY STREET,

(Corner Washington and Montgomery Avenue, S. F.)

MALE AND FEMALE HELP

Of every description sent at the shortest notice to City and Country, Free of charge to employers.

Business Places, Houses, Lots and Farms Sold. Partnerships negotiated. Farms rented on shares. General Commission and Collecting Business transacted. Address your letters to P. O. Box 775. m9-16p

Having taken new offices and enlarged my business in the most central location of San Francisco, (715 Montgomery street, corner Washington and Montgomery Avenue), I hope to receive the same liberal patronage as during the last six years of my Secretaryship of the Free State Labor Exchange, and later as its proprietor, (from April, 1868, to April, 1874). It is a known fact, and I feel convinced that on inquiry you will find among your neighbors many persons who have employed, through me, some skilled or unskilled labor, and who will endorse my services for GOOD JUDGMENT in the SELECTION OF HELP and EXPEDIENCY IN FILLING ORDERS.

SEEDS. PLANTS.

OF EVERY VARIETY.

Fresh and reliable, such as experience and care only can select.

GRASS AND CLOVER SEEDS, KENTUCKY BLUE GRASS, HUNGARIAN, ORCHARD, ITALIAN RYE, RED TOP, TIMOTHY, MESQUIT, SWEET VERNAL, CHOICE CALIFORNIA ALFALFA, WHITE CLOVER, RED CLOVER, Etc.

Also, RAMIE, JUTE AND TOBACCO SEEDS; together with a fine and complete collection of TREE SEEDS, AUSTRALIAN BLUE GUM, SEQUOIA GIGANTIFERA, PINIS INSIGNIS, Etc.

For Sale, wholesale or retail, by

B. F. WELLINGTON,

(Successor to E. E. Moore).

425 Washington St., San Francisco.

22v7-1y

W. M. BRANDON.

JACOB W. ROGERS

BRANDON & ROGERS,
California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.

20v6-1y-16p

FARMERS write for your paper.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.

M. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure White-faced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California
Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.

7v6-1y-16p2

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILIPS,
11v7-1m 608 Clay street, S. F.

PURCHASERS please say advertised in Rural Press.

CALIFORNIA DEEP-WELL PUMP.

(DOUBLE-ACTING.)

This Pump, as its name indicates, is a CALIFORNIA INVENTION, patented July 15th, 1873.

It is well known to farmers and others who use BORED WELLS, that a single-action submerged pump, the only one heretofore adapted to bored wells, when run by horse, steam or wind power, owing to the burden of the work being thrown upon one stroke, gives an uneven strain on the machinery, and causes a thumping or jerking action injurious to it. Various devices have been used to remedy this evil, but none with entire success.

WITH THE

CALIFORNIA DEEP-WELL PUMP

This difficulty does not exist; being DOUBLE-ACTING AND SUBMERGED, it fills on every stroke at any practical speed, thus keeping the strain on the machinery equal and constant; and the weight of the water raised increasing with the speed, operates as a brake and prevents the wind-mill from "running away." This pump

CAN BE USED IN ANY POSITION

In which a pump is needed, and its construction is such that its inside diameter or bore need be but one inch less than the diameter of the well casing. This pump is admirably adapted to situations exposed to freezing; for by having a small hole in the conducting pipe below the freezing point, the water will recede to this point when the pump is at rest. The pump is constructed of brass and iron, so that no corrosion can occur from contact of iron with iron.

Fig. 1, represents the pump suspended in a bored well; and Fig. 2, represents a transverse-vertical section of it.

No. 2. Inside diameter 3 inches. Conducting pipe 1 1/2 inches. Will raise 950 gallons per hour. Price, \$25.

No. 3. Inside diameter 4 inches. Conducting pipe 2 inches. Will raise 2,100 gallons per hour. Price, \$35.

BRITTAN, HOLBROOK & CO.,

111 & 113 California St., San Francisco.

15v7-1am-3m-16p

GENERAL AGENTS.

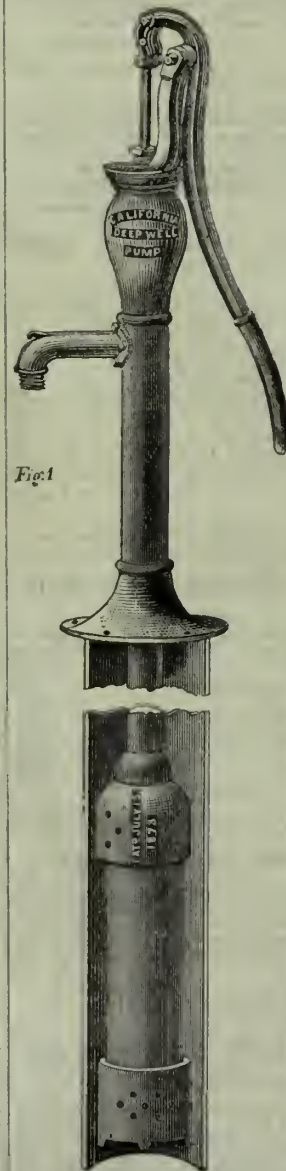
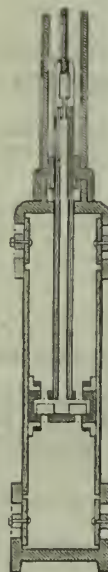


Fig.1

Fig.2



IMPROVE YOUR POULTRY.



COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

A few tricos of imported Dark Brahmas, of the celebrated Black Prince strain, for sale at \$30 per trio. Also, one trio imported Golden Polish, at \$30.

For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the world, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco.

SEEDS! SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,
Agricultural,
and Flower Seeds,
Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,
ENGLISH RYE GRASS,
RED TOP,
ORCHARD GRASS,
TIMOTHY,

MESQUIT,
RED CLOVER,
WHITE CLOVER
FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-1y16p

SAN FRANCISCO.



Volume VII.]

SAN FRANCISCO, SATURDAY, JUNE 27, 1874.

[Number 26.]

Ground or Unground.

A question has arisen, and is even now assuming considerable importance, as to whether our exportal wheat shall not be shipped in the form of flour. The proposition seems to have had its origin on this side of the water; and as there is supposed to be two sides to this, as to most other bargains, perhaps it would be well to learn how our foreign customers prefer to receive our wheat; whether ground or unground.

Those who are most strenuous in urging the shipment of flour instead of wheat, do not propose to so far anticipate the desires of our customers as to send them a different article from that ordered; they consider, first, which would be the best for us to send, then, if they are satisfied with it, why of course we will ship it to them. But we fear that they will not be as well satisfied with the flour as with the wheat. Flour is far more susceptible to injury than wheat. Every mishap that could befall wheat would be at least equally injurious to flour; while much that would be harmless to the former would be ruinous to the latter. The shell of the unground wheat protects it from odors; while these are readily absorbed by flour. The most delicate taints are extremely damaging to flour; and the exposure to dampness and various offensive odors during its transportation is, in the estimation of many, a greater risk than we can afford to run. Flour, it is true, has been shipped to Liverpool from California in moderate quantities within the past two years, the results being moderately satisfactory; but however favorable the reports from a few cargoes may be, it must, we think, be admitted that the risks involved in shipping flour are greater than in shipping wheat.

From our present knowledge of the wants of our English customers, we are justified in supposing that they would prefer to grind the wheat for themselves. We might, it is true, vary the manufacture of our flour so as to satisfy their peculiar demands, so far as our wheat alone will admit; but we are assured that California wheat is not of itself sufficient to satisfy the demands of the bread-eaters of Great Britain. They can buy no wheat that produces a finer looking flour; but in gluten it is declared to be inferior to that imported from some other countries. The system of mixing wheat is largely practiced in England; and in compounding a flour that comes up to their standard they use the California wheat to secure a good, attractive color to their bread; but for strength they rely principally upon that of other countries—the Australian in particular. English bread is undoubtedly of a more uniform character than our own. "Family flour," which forms the great standard in this country, is comparatively unknown in England, even by name; for families there do not make their own bread. It is the baker to whom they look for bread, as they do to the dairyman for the cheese to eat with it; and we must bear in mind that it is the baker who is to decide as to what is wanted there—he, of course, speaking for his customers, whose wants he is better acquainted with than we can possibly be.

One of the advantages expected from this proposed change from wheat to flour exportation, is the bran, which would undoubtedly be of great value, if we could retain it and get as much for our wheat without the bran as with it, as some evidently suppose. But this is an unreasonable expectation; for the bran is quite as valuable to those who are expected to buy our wheat as to us; probably more so, as they do far more stall-feeding than ourselves.

If our flour would be as acceptable to England as our wheat, and the risks in transportation were equal, it would be to our advantage, most certainly, to ship our wheat ground—especially if we could retain the bran.

Even the erection and fitting up of mills capable of reducing this enormous amount of wheat, would of itself give a great impetus to our manufacturing interests, while milling, as a permanent business, would furnish employment for a vast amount of capital and labor. In the matter of sacks also the advantage would be decidedly in our favor. Flour would be shipped in cotton sacks. This material we can grow ourselves, and we can manufacture it into

cloth; and from the cloth we can make it into sacks.

A contemporary of a neighboring city, in urging a radical change from wheat to flour shipment, manifests its impatience by already casting about for sites for the mills that are to be erected. The paper alluded to having located in a neighboring city, it was to be expected that San Francisco would be cut off from all the anticipated advantages growing out of this change. It accordingly declares that San Francisco is in no way capable of becoming the center of this great milling enterprise. Those, however, who are better informed as to what

ability to supply their wants; while others questioned our integrity. Probably the latter charge was most applicable to the case. Let us not be led into the same error in shipping flour.

THE WEST CAN STAND ALONE.—The West, today, presents more attraction to the careful, far-seeing emigrant than ever before. The natural advantages are still the same; shallow praises or bitter abuse cannot alter them. The improvements are permanent. Some owners



A SAW-MILL RAILROAD.

our city is doing, and capable of forming a more correct estimate of its further capacity, declare that San Francisco is peculiarly fitted, both by natural and acquired advantages, for reducing California wheat to California flour. As large as is the amount of flour which we have produced within the past year, even her present milling power has not been employed to more than two-thirds of its capacity.

The shipping of flour instead of wheat is certainly a consummation devoutly to be wished, and it may possibly be brought about in time; but we do not anticipate more than a gradual change. California flour has the difficult task before it of achieving a reputation in Europe. This task may be made less difficult by furnishing them with a good article to begin with. By neglecting this, the exporters of American cheese suffered material loss in the early days of cheese exportation; and some of our particular, but not fastidious customers, doubted our

of farms may be forced to sell, and a large class of fickle adventurers are so impatient for a change that desirable farms could be bought for much less than their value. This change in the ownership of the farms will produce a corresponding one in the business character of the people; and the want of money and loss of credit will be a benefit to the people of the West, for it will arouse a spirit of independence that will retrieve their credit and cause their trade to be courted. Being obliged to go without a little that they do actually need, they will learn to dispense with much that they do not need, and the difficulty of obtaining "help" will compel them to help themselves. The West is learning to stand alone; not only in agriculture, but in manufacturing also; and when the time comes, as it surely will come, when the East is willing to sell to her on any terms, it will be found that she is not in want of anything "in that line."

"Hyperion to a Satyr."

Whether the liquor saloons are closed or not, there is no use for us to close our eyes to the fact that a marvelous change has come over the tone and spirit of "election day." Of course this change must be for the better; it could not possibly be for the worse. The women have gone to the polls, making a regular housecleaning affair of their unexpected visit. As is customary in such cases, they declare that "those last tenants were very dirty people;" and, what is an unusual thing in such cases, those last tenants are willing to admit that the polls were in a horribly dirty condition when the fair new comers took possession.

That women have yet possession of the polls, there is no use denying. And does anybody think that they are going to give them up again at the close of one or of 100 elections? Not a bit of it. They are too fond of power. We do not anticipate that all the women are going to be on one side in succeeding elections, for the "secesh" spirit is stronger in the weaker sex than in their former lords and masters; but it is evident that among the improved implements that have recently been introduced into the various departments of labor, woman's claims as a decided improvement on the method of gathering votes, must be generally conceded. Even those who have suffered defeat in the late conflicts admit this. We are all willing to be decorated with flowers, and be led by them like lambs to the political slaughter. The prospect of exchanging a flower in the button-hole for a brick in the hat on election day, does not alarm any voters, apparently.

We are half inclined to put in a prophecy here; predicting as a consequence of this change in the character of the polls—there will be no more tight votes cast. Everybody will go to the polls; then, as a matter of course, everybody else will want to go, "dressed in their Sunday's best," and will appear to the best advantage in every respect. The ladies are still at work, and have a good deal to do, even before the present season of house cleaning is over. Elections will be held in Visalia, Kaweah and Tule river townships, Tulare county, June 29th. Sutter Grange, located at Meridian, Sutter county, passed resolutions at their last meeting endorsing the local option law, and urging its members to sustain the law at the coming election to be held in their township on June 30th. Maine Prairie township, Solano county, has four places where liquor is sold, but only gave five votes for license in fifty-three votes at the local option election, May 29th.

The Saw-Mill Railroad.

Among the many industrial contrivances to which California has given rise, that represented by the engraving is not the least noteworthy. It is a railway constructed down the side of a steep mountain, for the purpose of lowering logs to a mill, to be sawed into boards. The mountain, which is on the Cosumnes river, is so steep that to roll a log down its sides would break it into fragments. The railway was constructed at an exact angle of 45 degrees, and was 2,000 feet in length. It was built in 1852. This is but one of many works of like magnitude and difficulty erected in California.

ANOTHER AGRICULTURAL SOCIETY HEARD FROM.—Mr. H. T. Compton, Secretary of the San Joaquin Valley Agricultural Society, writes us that their fair is to open on September 29th and continue four days, closing on Friday, Oct. 2d. The premium list is not yet printed, but we have the promise of it as soon as it comes from the press, and will publish as soon as received. Messrs. Secretaries of other societies, please let us hear from you also.

L. LANDECKER, of Placerville, has a contract to supply 20,000 pounds of soap-root this season, and has put a large force of Chinamen at work digging it.

W. B. Ogden, of Sutter, brought into Marysville, on Tuesday, the first load of new barley of the season.

CORRESPONDENCE.

[The *RURAL PRESS*, in opening the columns of this department to its correspondents, does not desire to lay before its readers anything which is not in keeping with its character and position as an agricultural and family paper. Facts are always thankfully received; and suggestions and matters of opinion on subjects connected with agriculture are also acceptable; though correspondents are to be understood as speaking for themselves and not for the *PRESS*.]

From Santa Cruz.

DEAR *RURAL*:—As your cheerful presence doubtless gladdens many a household in the interior of the State, where, at this season, the dry, parched earth offers few attractions, perhaps a voice from the seaside would be gratefully received, and convey thoughts of refreshing breezes, surf baths and beach picnics to thirsting souls.

If, notwithstanding the advent of your young sister, the *Illustrated Press*, you are as cordially welcomed everywhere as you are here, it will be a pleasure to know if the natural advantages of our "city by the sea" are under discussion among those seeking homes. The prospect of a

Narrow Gauge Railroad

To connect us with Watsonville, within a year from this, brightens our prospects, and the removal of the local sugar factory of Claus Spreckles from Alvarado to Soquel, adds another to our already numerous manufactories to attract working bees to our hives. Then the dancing waves and invigorating breezes invite any number of the invalid and pleasure-seeking class, who find here a wide field for enjoyment, and usually leave us well satisfied with their chase after summer butterfies.

The Pacific Ocean House,

Which during the summer was closed, has been reopened, and offers excellent accommodations to guests, while the numerous homes that throw open their doors to receive summer boarders give visitors a choice seldom found in a pleasanter locality. The numbers who arrived in town last week surprised the most sanguine of our well-wishers, for, without doubt,

Santa Cruz as a Watering Place

Will bear away the palm from even Calistoga or the Hot Springs. Sea-bathing is one great attraction here; and the daily train of omnibusses and private vehicles to and from the beach, carrying the usual variety of enjoyment hunters—laughing children, jostling, demure matrons and coy maidenhood—forgetting city manners in the rustic surroundings. Then comes the rush for the bathing houses and the search for the most presentable costumes for dancing in the surf. The complete disguise thus afforded increases the delight and amusement of the crowd; while the antics in and out of the water are so grotesque, with the exhilarating effects of the salt air and dashing waves, that one becomes imbued with the spirit of the occasion, and even the ailing ones forget themselves and become as lively and gay as the youngest there. The spectators who throng the beach during bathing hours carry away the recollection of many amusing incidents which are repeated and enjoyed with the dinner or evening chat.

The glorious drives around Santa Cruz make it a charming place of resort. In every direction we have objects of interest to entice. The natural bridge, and its wild picturesque beach scenery, the drive to Felton, and its bird's eye view of the Powder Works, the big tree grove, and numberless smaller groves, gulches and creeks for hunting and fishing afford enjoyment for every variety of taste.

The Abundance of Trout

In our streams this season fills our young people with delight. Young lads think nothing of bringing in a string of the speckled beauties as the result of an afternoon's ramble, and the camping parties now locating on our various streams revel in trout catching and dove hunting, which the game law does not prohibit. Never before has Santa Cruz been so enticing to order-loving people; for, since the late Temperance triumph, the men who have kept the saloons running by their patronage now find enjoyment elsewhere, and the liquor dealers of the better sort are sadly discouraged and feel that they have been wrongly dealt with. If to their acknowledged defeat is added the cold shoulder of society for the choice of their profession, they are sadly in need of sympathy, and should desire nothing more than to enter the working ranks and swell the number of producers, instead of pandering to the craving thirst of consumers of liquor.

The weekly steamer "Santa Cruz" brings us passengers each Wednesday morning from San Francisco, who embarked the afternoon previous, and an ocean line stops on the way to Santa Barbara and other ports; which increases our facilities for traveling, without the fatigue of a stage ride. Among the improvements in the town during the past year we have the Oddfellows' hall completed, where the Post-office is now located, besides several fine stores and dwellings, conspicuous among which is the

Mansion of Mr. T. A. Hilm,

Surrounded by its spacious grounds and live fence of privet, which is an ornament to the town. We have cause to regret the removal from among us, of one of San Francisco's finest architects, who has been one of our industrious citizens for the past three years.

Mr. Chas. W. Davis, whose monuments of skill, in the erection of the Sutter St. Synagogue, Shot Tower, Tucker's building and others in your city, leaves many warm personal friends behind him, beside an improved taste in the style of building which is always a step towards refinement in civilized communities.

The charming sketches from the pen of our sister at the ruins, whose "Farm House Chat" is most eagerly sought after by the young folks here when the *RURAL* comes in, leave little more to be said by a dweller in this locality on the subject of diet, brown bread, and the like; but, between you and I, dear editor, there is not a more palatable dish to be found anywhere than a bowl of rich milk and crisp baked cold water gems, with a saucer of wild blackberries such as I've lunched from to-day. Buttermilk and soda do very well to cater to an abnormal appetite for hot raised biscuit, but by fermentation the coarse meal loses much of its sweetness; and many of my friends amuse me by asking how I make gems, and seem surprised that no sugar is added to give them their sweetness. My letter is already too long. My pen is seldom idle, and the next time you pass this way, call in and see if my tongue doesn't follow suit. Yours, etc., NELL VAN.

Express Charges.

EDITORS *PRESS*:—You would oblige me, and no doubt many of your readers, if you would publish the freight rates of Wells, Fargo's Express Company. The papers do not seem to think it worth while to inform the public of the fabulous prices for freight, which are charged by this company. Lately I purchased of Mr. Foiss, of San José, 1,054 seedlings, for which I paid \$25. I had them forwarded by this company to this place, Havilah, Kern county, when I found the freight was nearly double the original price; being \$41.50. I was extremely fortunate with them, losing only 14; but still it costs less to raise that number of seedlings than to have them forwarded a few miles by railroad. As I am an ignorant person, living among the foot-hills, at a considerable distance from anywhere, you will excuse my asking you a few questions: First, Is this company one of the general blessings of Providence? Second, Do they place any of their shares on the market for sale? Third, Do they declare any dividends? Fourth, Ought they not to be compelled to issue a free almanac? Fifth, How much, and what kind of this wild coffee they are talking about, must I collect in order to find a market for it? Respectfully,

WILL KRINGLE.

Havilah, Kern county, June 14.

[Our correspondent does seem to have paid rather a high price for the transportation of his trees, but the company referred to no doubt have sufficient reasons for putting up the rates over certain portions of their routes, owing to difficulties of transportation, etc., and this may be an instance. As to the questions asked about the company, we would state that their stock is not on the market; they declare no dividends; and if by "free almanacs" our correspondent (who is evidently a German, and with a limited knowledge of English,) means a circular containing rates of charges, etc., we believe they do publish such a pamphlet, which he can no doubt obtain, by applying to the local agent at his place. There is no market whatever for the "wild coffee," so called.—*Eds. *PRESS**.]

THE VINEYARD.

A Vintage in the Sierras.

EDITORS *PRESS*:—The first week of April, 1873, will long be remembered by the vineyardists of California. The unprecedented frosts of the 4th and 5th of that month damaged the grape crop throughout the whole State. It appears that few localities were exempt, especially in large valleys and on extended plains where the natural moisture of the soil would have been favorable to the production of either grain or grass. The only vineyards that escaped serious damage were those situated in mountainous districts, at a certain elevation above tide-water, where the land and sea breeze prevail, or where the beneficial effects of the mountain and valley winds obtain with regularity and certainty during the season of fruitage.

Having these facts in mind, during the first week in October of last year, (1873,) a leisure day gave me an opportunity of visiting the vineyard and fruit orchard of Mr. B. Bernhardt, of Auburn, Placer county. This plantation of fruit consists of 30 acres of land, situated on an elevated ridge, about 1,370 feet above tide-water. Its general slope is from the south to the north. It is immediately below the railroad track, and between the Bloomer Cut and the depot. The soil is a dark, reddish, sandy loam and gravel, which rests on a slate bedrock that stands on edge, and which has a depth of two or three feet above the rock.

There are 19,000 grape vines, which are of different ages, ranging from two to twelve years. There are a dozen or more varieties, both native and foreign. The native Mission or California grape largely predominates over

all others. There are, also, 800 bearing apple-trees of choice fall and winter varieties. In addition, there are pear, peach, apricot, nectarine and almond trees. There are several thousand mulberry trees. There is an acre of blackberries and raspberries, and an acre in a fine vegetable garden. There is a large old fashioned farm house on the place, which is surrounded by arbors and shade-trees. The out houses are spacious; and in one corner of the place, by a never failing spring of the purest and coldest water, is the distillery for the manufacture of apple-jack and grape brandy. There is, also, a large wine-cellar; and a larger one yet in the course of construction.

Mr. Bernhardt and family received my visit with true German hospitality, and extended to me the freedom of the plantation, with the enjoyment of the luscious fruits and sparkling wine. It was the season of vintage, and joy, labor and happiness abounded. The proprietor and his boys gathered the grapes in the vineyard and carted them to the wine-press, where they were dumped on a low platform. A stalwart German was industriously engaged in scooping the fruit into a patent press, which was propelled by horse-power. The grape was simply mashed without crushing the seeds. The lever of the press worked down the screws as long as the whitish, cream-colored juice exuded in a clear stream. Then the residuum or pomace was thrown into casks to be carted to the distillery, to be made into brandy. Thousands of yellow jackets were regaling themselves on the saccharine matter of the juice and cheese. (This fact probably accounts for the phenomenon, that old toppers often have bees or wasps in their stomachs, and not infrequently even in their boots.)

Fastened to the nozzle of the wine-press, a gutta percha hose carried the newly made juice or must down into the wine cellar, filling large puncheons in regular and consecutive order. When a cask is filled it is chalked, and allowed to stand and work with the bung open for three months. Underneath the casks are large dripping pans, which serve to catch the surplus and refuse matter that is thrown out. During the process of fermentation, the puncheons are kept full of new juice. At the end of three months the new wine is racked off into clean casks. When it is one, two or three years old, it is put upon the market. The older the wine the better is the quality. Somewhere an old Roman by the name of Horace discoursed of Falernian wine that has stood on the lees for fifteen years, rendering it "fit for Augustus and the gods."

Mr. Bernhardt prefers the common Mission grape for wine, and even for the table. It is hardy, and yields more fruit to the standard than any other variety. As a table grape he sends forward by rail, as slow freight, thousands of fifty-pound boxes at \$1.50 per box, to Nevada, Utah, Idaho and Montana. He sells his wine at seventy-five cents per gallon, and the demand exceeds the production. He trains his grape standards, so that the fruit is held above the ground, thus avoiding the danger and effect of frost, and giving a chance for the night wind from the higher mountains to circulate above and below the young fruit freely; because, when and where the wind blows, there can not be frost. He prunes in February and March and sometimes a little later; thus, also, increasing his chances against the April frosts. If a vine becomes touched, he cuts off the frozen part down to the last bud, and a new shoot puts out and bears fruit. He does not believe in irrigating grape-vines, because it renders the fruit watery, and destroys its rich and saccharine quality. If I may be allowed to judge, his wine is somewhat similar to that of Sanscivaine's Cocomongo vineyard, in the foothills of the San Bernardino mountains, with the addition of more body and bouquet; or, as Dr. Sylvester has it better expressed, "with more fermentine." Those people who drink wine vinegar, which is made on the tule or alluvial soil of the great valleys, and still persist in calling it wine, can form no more idea of the great excellence in quality of our foot-hill wine than the peasant on the plains of Hungary can of the famous Tokay, which he never sees to enjoy. T. S. MYRICK.

Auburn, Placer county, June 15, 1874.

The Grape Worm.

EDITORS *PRESS*:—Since writing my hurried communication of the 4th, concerning the ravages of worms in the vineyards near Vacaville, I have been informed that the green worms are the "Tobacco Worm," and those which are dark on the back, with yellow lines, are the "Columbia Worm," each having a horn about one-fourth or one-half inch long on the posterior part of the back. In tobacco plantations they were destroyed by taking them by the horn and dashing them on the ground, their size making it easy to find every one. Their eggs are laid on the under side of the leaf. As to the origin of these now at work no one knows, only that they have traveled from one vineyard to another; the road at the time was covered for hours as they crossed in the journey.

I am not an expert in grape culture, or the pests that infest vines; but this evil, from all I can learn, is something entirely new, and those interested should be on the alert to give information that will throw light on the subject, that means may be taken to prevent further spread of the pests. In this spirit I have written what little I could learn concerning the subject. CHAS. W. OTTIS.

Rio Vista, June 18, 1874.

"Worms After the Grapes."

EDITORS *PRESS*:—I find an article on the above subject in your No. of June 13th, from C. W. Otis, of Vacaville. From the description he gives, I am satisfied the same worm made its appearance in my vineyard about two weeks ago. Since that time they have completely destroyed my vineyard, containing about two acres; and at present there are but few worms left to be seen. Where they came from, or where they went to, I cannot tell, but I found they could not climb trees. I have thought, too, that if the attack these worms make on the grapes, intended for distillation into alcoholic drinks is all they do, it may just now prove a blessing rather than a curse. And as our friend Otis wishes a remedy, I suggest first that we all remodel our vineyards, and rid them of all grapes intended for manufacture into intoxicating drinks; replacing them, strictly, with the table and raisin grape. Second: That we all work and pray for a law prohibiting the manufacture, importation and sale of all intoxicating drinks as a beverage. So then I feel sure the grape culture will soon regulate itself into healthful prosperity under the blessings of God; and so many of our men, some of our women, and scores of our boys will see, and act, on the Divine truth, that "wine is a mocker, strong drink is raging, and whosoever is deceived thereby is not wise."

Yours truly,

J. S. FILLMORE.

Petaluma, June 18th, 1874.

THE SWINE YARD.

Points of a Berkshire.

H. E. E. writes the *Rural New Yorker*: "Will you please give the points of a full-blooded Berkshire hog?" In our issue of Jan. 18, 1873, we published the report of a committee on Berkshire to the National Swine Breeders' Convention. The report fills two columns, and we have not space to republish it. Let our correspondent may not have access to that report, we publish the "characteristics and markings" as reported to and adopted by the Convention, as follows: Color, black, with white on feet, face, tip of tail and an occasional splash of white on the arm. While a small spot of white on some other part of the body does not argue an impurity of blood, yet it is to be discouraged to the end that uniformity of color may be attained by breeders; white upon one ear, or a bronze or copper spot on some part of the body, argues no impurity, but rather a reappearance of the original colors. Markings of white other than those named above are suspicious, and a pig so marked should be rejected.

Face, short, fine and well dished; broad between the eyes. Ears, generally almost erect, but sometimes inclining forward with advancing age, small, thin, soft, and showing veins. Jaw, full. Neck, short and thick. Shoulder, short from neck to middling deep from back down. Back, broad and straight, or a very little arched. Long ribs well sprung, giving roundness to the body; short ribs of good length giving breadth and levelness to the loins. Hips, good length from point of hip to rump. Hams, thick, round and deep, holding their thickness well back and down to the hocks. Tail, fine and small, set on high up. Legs, short and fine, but straight and very strong, with hoofs erect, legs set wide apart. Size, medium. Length, medium; extremes are to be avoided. Bone, fine and compact. Offal, very light. Hair, fine and soft, no bristles; skin, pliable.

CARBON FOR HOOS.—*Turf, Field and Farm* says: No observant farmer has failed to notice the avidity with which hogs, whether in confinement or at large, will devour quantities of rotten wood. This decayed wood is but a form of carbon; and carbon being an antiseptic, the instincts of the animals lead them to eat it, as the instincts of dogs urge them at times to eat grass because of its sanitary effect. On one occasion the writer had a pig, weighing about 40 pounds, put into a pen and carefully tended in every way. The allowance of food was, with the chance offal from a small kitchen, sixteen ears of large southern corn per diem, given twice a day. Having a kiln of charcoal in the woods close by, I determined to try how much of this charcoal could be converted by aid of the digestive organs of the pig, into fat, which is but another form of carbon. By degrees the supply of corn was diminished and carbon substituted for it, until finally the corn was reduced to eight ears. At the end of nine months the pig was butchered and weighed, net, 205 pounds, and the lard and meat were of exceptionally fine quality.

RAISING HOOS.—Keep no more hogs than you are willing to furnish with a good supply of bedding. A hog will keep himself nearly as clean as a man if he has a chance, but if he is poorly fed and poorly bedded, he will be sure to make himself filthy. I think that dry ground for a yard is to be preferred, and a couple of pails of water on each hog in a hot day will do him good even if there is no danger of his melting. If we raise pork to sell, we must raise our own pigs, and not pay \$3.50 in the fall, and much higher in the spring. It will be well to keep in mind that if we compel our hogs to lie constantly in their own filth, even in summer, we may not expect them to fatten well, and that they will not be fit to eat.—*Ed.*

CATTLE BREEDERS.

Col. Younger on Short-horns.

The Short-horn is the noblest beast of the bovine tribe; his varied colors, red and white, blending into roan; his massive and yet symmetrical form, "and when the curved lines abound over the body, and play into one another, giving brilliancy to the surface, while the sweeping lines of the contour, with the tapering fineness of the extremities, the pleasing countenance and the joyous spirit, a symmetry, state of health and disposition to improve are conjoined, that afford the highest satisfaction to a breeder."

To be successful in breeding this noble beast, we must acquire a full knowledge of the exact form, the relative proportions one part should have to the other, so perfect in memory and theory, that you can, when looking at any Short-horn, know whether he comes up to the standard in form of what a thoroughbred Short-horn should be at any age. This knowledge enables you to select first, your herd to begin with, and then to make your crosses to keep up your perfect form.

Description of a Well-bred Short-horn.

The invariable color is red and white, or these colors blended as roan; the head should be small, broad above the eyes—a well-developed brain—tapering from the eyes to the muzzle; the nostrils distended, jaws distinct and clean; the eye is prominently set in the head, and with a placid expression; all the extremities—the limbs, head and tail—are fine, small, tapering from the body; the body should be nearly a square, and should be rather barrel-shaped, the ribs rising well from the spine, rounding and meeting below, giving ample room for the free action of lungs and heart; the line of the back should be straight and level, extending out to setting on of the tail—a back high above the level is narrow, and is accompanied with flat ribs and long, narrow face; which are both indications of want of disposition to fatten—the thigh should be nearly straight up to the tail, filling in and outside of the thigh nearly down to the hock; legs short, and should stand well under the beast, the hind legs coming up to the middle of the thigh; this gives ease and gracefulness to his motion; broad in the chops; horns small, and of a waxy color—no black tips.

By the touch the breeder knows the quality of the beef, and the aptitude to fatten; it is an index to the constitution, but is the most difficult to acquire. Nothing but long practice and close attention will give that knowledge. The skin should be loose, thick, soft and mellow, and long, soft, mossy-feeling hair, bearing a decided color; a firmness of texture over the whole body is essential to a disposition to be fatted.

The Two Classes of Short-horns.

There are now two prominent forms of the Short-horns; both have their advocates. They are called by some wedge-shaped—that is, one tapers from the shoulders back; the other from the hips forward; the first is very deep in the brisket, and thick in the shoulders; chops broad, often hollow back of the shoulder; loin and hips narrow in comparison to the width of the shoulder; not deep in the flank; cut up high between the hind legs—or, what we call bow-legged behind; in this class the legs set outside of the body. This shape never produced a good milker, neither are they best for beef; and the reasons they are not milkers, they lack the breadth in the loin and hips, and depth in the flank, and they don't fill and come down on the inside of the thigh; the abdomen is not deep enough, consequently they have small udders, of no capacity to hold milk, and it lays high up. This class requires two cows to keep one calf in thriving condition. Neither do they have the capacity of beef from the shoulders back that they ought to have, where it is the best and worth the most. But their advocates say that this form gives style. This may take with the novice, but the butcher knows the form that gives the greatest quantity of savory and valuable beef, and the dairyman knows by experience the form and color that produce the greatest flow of rich milk.

The other class are wide and level on the loin and hip, full thighed, coming down well to the hock, deep in the flank, filling down well between the hind legs, rather barrel-shaped, the ribs rising well from the spine, then rolling gracefully down so as to give great depth to the body and large, capacious abdomen, wide enough brisket to give a good flooring to the heart and lungs; legs standing well under the body; the chops on a level with the hips and loins. The massive hips, wide loin, broad and long thigh, and deep flank and finely developed udder, extending well forward, teats tapering an equal distance apart, are finished up with a beautiful neck, long and tapering up to the throat, small head, broad above the eyes, tapering below to the muzzle; this is the natural form for grazing.

Now, take the beast with his legs stuck on the outside of his body, the large and deep mal-formed brisket, high chops, short neck, head large, which invariably follows; what kind of a grazer would he make? The largest quantity of milk and beef must be produced from grazing. Then it is important to have the form that can graze with most ease. We must unite the beef and milk qualities in the same animal.

The large round bone, heavy head, coarse horn, require food to grow them. The butcher never pays for them, but the consumer does.

Then don't buy nor breed from that class. The fine, flat bone, small head and horn, these breed from, they mature early, are good feeders and good milkers, and adapt themselves to any locality.

The most beautiful and encouraging sight to me is to see a herd of these noble beasts grazing quietly on our beautiful lawns, making beef and storing their capacious udders with the life-sustaining food, coming up in the evening and lowing for the milk-maid, to be relieved of their burden. These are animals that every farmer should cultivate; they feed the poor and afford luxuries for the rich.

Blind Calves.

EDITORS PRESS:—I have two blind calves—one that became blind early last winter, at about eight months old, while the other was born blind, about two months ago. The eyes of both look exactly alike; being of a dark green color, and have been so ever since first noticed. Will you, or some of the readers of the RURAL, tell the cause and also a cure, if there is any? The calves appear healthy every other way. S. A. O.

Bonita, June 12.

[The simple statement that a person has two blind calves affords very little clue as to either cause or cure. The dark green color spoken of, however, seems to point towards the green cataract as the probable cause of blindness. If so, there is no relief if the cataract is complete, and very little if incomplete. If your calves can see in the least degree, a wash made by rubbing down a half drachm of belladonna in a couple of ounces of pure water, and applied occasionally, may afford slight relief; but if they have no perception of light, nothing can be done. As to the cause, see that your yards and stables are kept in as clean and healthy a condition as possible, and let the butcher have the mothers whose calves are thus afflicted; and examine closely the father, and, if there is the slightest suspicion of weak eyes or unhealthy blood, change him immediately, and you will probably not be troubled with any further annoyance and loss in this respect.—Eds. PRESS.]

LARGE YIELD.—Tulare Times, June 13: The fine specimens of grain brought to our office this week are evidences of the fine crops in this vicinity. Mr. G. H. Webb brought in a few stocks of wheat and oats, raised on his farm adjoining town, that were very fine, the oats being about seven feet high and the wheat heads unusually large and plump. We also received specimens from Messrs. J. P. Jones and F. Bacon, raised on their farms in the Cottonwood district, about twelve or fourteen miles from here. There were several varieties, among which were the Club and Sonoma wheats. Each head contained about 100 grains, and we were informed that it averages thirty stalks to the stool, thereby making an immense yield. We hear flattering reports from all parts of the county concerning the crops. Tulare county will have a great surplus of grain this year; almost double that of any season previous. The hay crops are now nearly all harvested. The yield was abundant. We have heard of some producing as much as three to five tons to the acre. The farmers are now at work in earnest, gathering and thrashing the grain crop. We congratulate the farmers on their abundant returns, and may they ever thus be blest with a bountiful harvest.

TALL GRAIN.—Visalia Delta, June 13: Mr. Geo. H. Webb showed us, a few days since, some stalks of wheat that measure six feet from the roots, and some of oats, of the common variety, which measure seven feet. These are an average of the whole crop on the place. One man had to follow the machine while it was being cut, to clear away the first swath, so heavy was the crop. This grain was raised on his place at the end of Court street, about half a mile from town. The heads are of very fair weight, and the straw bright and clear. He also informs us that about a week after mowing a lot of clover hay, the new growth had made a stand of a foot in height, having, in many places, grown into the cocks so as to hold them against the pitching fork. It makes a growth of about two inches per day, and the stalks are very tender. Doubters are requested to call at the farm and verify these statements, if they choose.

FROM VACAVILLE.—Cor. Vallejo Chronicle, June 13: Hay cutting in this vicinity is finished, and very heavy crops have been the general rule with the farmers. The wheat crop looks splendid, and some of it is ripe enough to harvest. Mr. Wm. Butcher has several headers to work cutting barley; Mr. J. W. Adcock will commence heading his wheat next Friday. J. M. Bassford, the proprietor of the celebrated Sunny Dale rancho, got through shipping cherries last Tuesday; he had a very large crop this season, but the prices ranged quite low.

EARLY VEGETABLES.—Mr. O. Bingham, of Pleasant valley, shipped some corn to San Francisco last Friday; it was the first in market, and sold readily for 50 cents per dozen. H. Seaman, of Putah creek, shipped the first tomatoes in the San Francisco market; they sold at 50 cents per pound; he shipped them on the 3d inst. Quite a lot of apricots are being shipped daily from this place; the crop, however, is very light.

WHITE crystal barrels have been introduced for various purposes in Europe.

MISCELLANEOUS.

How Thermometers are Made.

The Polytechnic Bulletin thus describes the manufacture of thermometers at the Tower Manufacturing company's establishment, Chester, Pa.: The glass tubes, as received, are about a yard long. A boy nicks them with a hard steel knife, and breaks them into the lengths required. The bores, which are flat, are compared, by means of a lens, with those of ten standard sizes, and the tubes assorted accordingly. They are then passed to the blow-pipe table. Each glass blower has a foot bellows, and uses an oil lamp. Melting the glass at one end of a tube, he blows it into a bulb by pressing the sides of a hollow India rubber ball attached at the other, proportioning the size of his bulb to the bore of the tube, and ascertaining the size by using a pair of callipers. While the bulb is yet hot, the tube is inverted in mercury, which as the bulb cools, rises and partially fills it. The tube is then withdrawn and a short India rubber tube attached at its open end. Into this mercury is poured; that in the bulb is boiled to expel the air, which rises up through the mercury in the India rubber tube, and an atmosphere of the vapor of mercury now fills the glass tube and bulb. As this condenses, the mercury in the India rubber tube takes its place, when this tube, with any mercury remaining in it, is removed. The bulb is now warmed, and the open end of the glass tube hermetically sealed.

The bulb and a portion of the tube are immersed in melting ice, and the height of the mercury marked; they are then transferred to a bath at 62° Fahr., and the height marked; next to a bath at 92° Fahr., and the height again marked. The lengths of the three spaces of 30 degrees each are now carefully measured. If they are exactly equal, the bore of the tube is assumed to be uniform, and the degrees laid off on the brass scale of the thermometer are all made of the same length. If the spaces of 30 degrees each are not found to be exactly equal, then, by means of a highly ingenious dividing engine, the degrees on the scale are made to increase in length as the calibre of the tube diminishes. When the plate has been divided, and the figures and letters punched, it is passed, laterally, between rollers, to remove the burr left by the tools. Were it rolled lengthwise, the accuracy of the dividing would be impaired. The plate is then silvered and lacquered, the glass tube attached, and the whole slid into the well-known japanned tin case. The establishment turns out two hundred dozen thermometers a week.

WINE AND FERMENTED FRUIT JUICES.—The detection of malic acid is not sufficient to prove a sample of wine to be adulterated. The most certain procedure is to filter and add ammonia in excess. The fruit wines, when this has been done, deposit crystals, which adhere to the sides of the test glass. Genuine grape wine, on the other hand, deposits a powder, much less in quantity, not adhering to the sides of the glass; and, to the naked eye, devoid of crystalline structure. Dissolved in dilute acetic acid, the deposit from cider and perry contains lime and phosphoric acid. In grape wine lime is also present, but in smaller quantity. In this case, if the precipitate given by oxalate of ammonia is filtered off a fresh addition of ammonia gives a further precipitate. This is not the case with cider and perry. If perry and wine are mixed in equal proportions, a deposit of crystal is found on the sides of the test glass on adding ammonia. In cider and perry the phosphoric acid is present in combination with lime, while in wine it is combined with magnesia. The most characteristic reaction is that with ammonia.—Mechanics' Magazine.

GRAINING.—In describing the methods of imitating the grain of wood, we will mention only the simplest, that the uninitiated in the art may readily execute a fair specimen, without the array of tools employed by the professional grainer. The colors used in graining may be mixed in oil or distemper, the latter being preferable, for if not satisfied with the first attempt, it is easily washed off with water, and the work done over again. Surfaces to be grained should be painted with at least two coats of paint, tinted as follows: For light-colored oak, tint the white paint with yellow ochre, to a nice cream color. For medium shade oak, add a little amber to the cream color. For dark shade oak, add amber and a little Venetian red to the cream color. The last coat, or ground color, should be made to dry with an "egg-shell gloss," not flat, that the graining mixture will not be absorbed, and thereby make the graining appear dirty.—Am. Homestead.

WINDOWS FOR DARK ROOMS.—To light a dark room looking out on a narrow yard or street, let the glass be roughly ground on the outside, and set flush with the outer wall. The light from the whole of the visible sky, and from the remotest parts of the opposite wall, will be introduced into the apartment, reflected from the innumerable faces or facets, which the rough grinding has produced. The whole window will appear as if the sky were behind it, and from every point of this luminous surface light will radiate the room. The common window let into the wall takes only the reflection from opposite buildings.

Danger of Using Shot for Cleaning Bottles.

Fordos has recently directed attention to the dangers of lead poisoning where shot are used for cleaning bottles that are to be used for wine and other beverages. When shot are placed in a glass with water, carbonate of lead is at once formed, a portion of it being noticed as a precipitate in the water, while another portion of it attaches itself as a thin film to the sides of the vessel. This film adheres so firmly to the glass that it cannot be removed by rinsing with water alone, an acid being required to move it. When shot are used for cleaning bottles which are afterwards well rinsed out, the carbonate of lead suspended in the water will be removed, but that portion which is attached to the sides of the bottle remains, and is afterward dissolved by the liquid placed in the bottle, if it possesses a sufficient solvent power. If the shot are only shaken up with water for a short time, it is scarcely possible for the carbonate of lead to become attached to the sides of the bottle, but oftentimes the shot are left in the bottle with the water for some time. Besides, the rinsing is not always done so carefully as it should be, and the carbonate of lead suspended in the water is not all removed. Fordos took four half-pint medicine glasses that had been cleaned with shot, and in one he placed white wine, in another red wine, in the third quinine wine, and in the fourth vinegar. After standing two days each was found to contain a considerable quantity of lead.

Another danger might also arise from shot getting lodged in the narrow creases at the bottom of certain bottles, when the action of an acid upon it would dissolve not only the lead but the arsenic which is always present in shot in sufficient quantity to render the liquids poisonous.—Journal of Applied Chemistry.

COAL.—An average Atlantic steamer consumes fifty tons of coal in twenty-four hours. Therefore, if five tons of coal are sufficient to feed an ordinary grate in our dwellings during the entire year, the coal consumed on board a steamer in one day will last a small family burning a good fire, ten years. If a load of coal be left out doors, exposed to the weather, until it is burned up in one grate, say a month, it loses one-third of its heating quality. If a ton of coal is placed on the ground, and left there, and another is placed under a shed, the latter loses about twenty per cent. of its heating power and the former about forty-seven per cent. The softer the coal the more it loses, because the most volatile and valuable constituents undergo a slow combustion.—Iron.

A CAR-LOAD.—Below we give a statement of what is in nearly all localities regarded as a car-load of transportation. As a general rule, 20,000 pounds or 70 barrels of salt, 70 of lime, 70 of flour, 60 of whisky, 200 sacks of flour, six cords of hard wood, seven of soft wood, 18 to 20 head of cattle, 50 to 60 head of hogs, 80 to 100 head of sheep, 9,000 feet of solid boards, 17,000 feet of siding, 13,000 feet of flooring, 40,000 shingles, one-half less of hard lumber, one-fourth less of green lumber, one-tenth less of joists, scantling, and all other large timber, 340 bushels of wheat, 360 of corn, 680 of oats, 400 of barley, 360 of flax seed, 360 of apples, 430 of Irish potatoes, 356 of sweet potatoes, 1,000 bushels of bran.

THE WASTE OF COTTON SEED.—Mr. Aikin, of South Carolina, says that the loss by neglecting to save cotton seed is immense; piles of seed are allowed to decompose and waste at nearly every gin house, and yet the seed is a valuable manure. For cultivating crops, 30 bushels of cotton seed in the drill, or 50 bushels broadcast, to the acre, will increase the crop considerably. Seed can be rotted by composting it in alternate layers of leaves, straw, and stable manure; 100 bushels of green cotton seed, mixed in bulk with a ton of soluble phosphate and allowed to remain a fortnight, will make a capital compost for 10 acres of any cultivated crop.

LITHOFRATEUR appears to have been occasionally used by the German military engineers during the war in 1870, and its employment during the siege of Paris was specially referred to by the military correspondent of the Times. The composition of these several substances is now so universally known that it is perhaps unnecessary to give it. Litho-fracteur is, practically, dynamite under another name. It generally consists of nitro-glycerine, sandy earth, powdered coal, sulphur, sawdust, and nitrate of soda or nitrate of baryta.

PAINT FOR WOOD.—Wash the wood first with a solution of 1 lb. blue vitrol in 4 quarts water, then with ½ lb. of yellow prussiate of potash in 4 quarts water. The resulting brown ferrocyanide of copper withstands the weather, and is not attacked by insects. It may be covered, if desired, with a coat of linseed oil varnish.

The following is commended as the best process of bronzing articles made of iron wire: Clean the wire perfectly and then immerse it in a solution of sulphate of copper until covered with a coating of metallic copper. Immerse the articles in the following solution: Verdigris, 2 oz.; sal-ammoniac, 1 oz.; vinegar, 1 pint, diluted with water until it tastes only slightly metallic, then boiled for a few minutes and filtered. The articles are steeped in this liquor at the boiling point, until the desired effect is produced. Wash carefully in hot water and dry.

PATRONS OF HUSBANDRY.

The California State Grange Headquarters are at room 9, No. 320 California street, S. F.—General State Agent: I. G. GARDNER, (Member of the Executive Committee). State Secretary: W. H. BAXTER.

Patrons who are subscribers to the RURAL PRESS should pay their subscriptions promptly in order to secure club rates.

An Attempt at Monopolizing Wheat Ships.

Nothing worse for our farmers could possibly happen than that there should be anything like a monopoly of wheat-carrying ships. It has been currently reported on "Change" that the new house of Morgan's Sons have chartered about 70 vessels of a carrying capacity of about 100,000 tons, at freights varying from £4 to £4 10. As it has also been generally circulated that these parties are to be the agents for the sale of wheat belonging to the farmers, it seems inconsistent that they as agents of the producers should monopolize the bulk of the ships coming to this port, thus establishing a high freight market, to the detriment of the farming interest. We have still hopes of seeing a large amount of "seeking" tonnage arriving at this port, which will frustrate schemes, if they have formed any, of Morgan's Sons to monopolize the freight market to the injury of our producers. Since writing the above we gladly learn that the "Alcatraz," an iron ship of 843 tons, registered A. I., and a first rate wheat-carrying vessel, has been chartered outside of the monopoly at £3 17s 6d to Liverpool. This gives a more reasonable margin for farmers to get living rates for their wheat than the extravagant figures given by Morgan's Sons will afford.

The above extract, clipped from the columns of the *Evening Post* of June 22d, shows so plainly throughout the animus that prompted it that we need hardly caution the Grangers of our State not to be misled by its statements. The opponents to our plan of looking out for ourselves, in their haste to cry monopoly, forget to look back on their own record. We need only call attention of the Grangers to a year or two past, and ask what benefit they reaped from the ships that were chartered ahead, at low prices, and loaded here at the highest rates ever paid in this market for freight. The writer of the article in question cites the charter of the "Alcatraz," just concluded, and jumps to the conclusion that in consequence of the rate that has been paid, it is to be the established rate for the whole season—forgetting again, in his haste, other charters, made previously, of vessels still in port, loading at much lower rates, which would be equally as applicable to his position. Profiting by the experience of former years, our agents have provided against a repetition by the "Ring" of other former efforts to control our products, and it is yet too early to cry out about the high rates the farmers have paid for their vessels. We have a larger crop than ever before to move, little or none of which has as yet come to market, but later on in the high tide of our shipments, we fear not but that the good judgment shown in the taking of these vessels will be apparent, and the result such as will prove to every member of our Order that the time for monopolies on our products has passed.

How to Form a Grange.

Farmers in different parts of the country, at a distance from any present Grange organization, are often anxious to have a Grange established in their immediate vicinity, but are ignorant of the steps necessary to be taken for such a purpose. To such we would say, that the first thing to be done is to prepare a paper substantially as follows:

ALTA, Kern County, Cal., June 1, 1874.
MR. J. W. A. WRIGHT, STATE LECTURER, ETC.—Dear Sir:—Since we think it necessary in order to promote and advance the interests of agriculture and domestic economy in our midst, to form ourselves into a society for this purpose, and believing as we do that the purposes and aims of the Order known as the Patrons of Husbandry, are proper and right, and essential to the prosperity and general welfare of all interested in agricultural pursuits; we therefore respectfully request you, whom we suppose to be a proper officer for this purpose, in this State, to meet us at [name the place and time] at as early a date as possible, for the purpose of organizing a subordinate Grange of the Patrons of Husbandry.

This document should be signed by some one or more persons in behalf of the whole, or what is better, by the full number requisite to organize, which is nine males and four females, and forwarded to either the Master, Lecturer or Secretary of the State Grange, or to the organizing Deputy residing nearest to the point where it is desired to organize. All the signatures should be those of persons actually engaged in some strictly agricultural pursuit, or their wives or daughters. Such a communication will always be promptly attended to by any of the parties described above. The list of organizing Deputies, for this State, will be found published in the RURAL PRESS, two or three times each month, at the head of the department devoted to the Patrons of Husbandry.

Letter from Brother Hamilton.—No. 3.

I organized Carson Valley Grange, No. 3, with twenty charter members, at this place to-day. I have been instructing very fully in the secret work, in order that uniformity may exist among the different subordinate Granges in our jurisdiction. The instructions are in exact accordance with the formula adopted in California. When I leave the State I will leave a deputy here who is fully instructed, and who will serve as a standard for all the other masters in the State to conform to, and who will attend to completing such other organizations as may be necessary.

The agricultural population of the State of Nevada is a good deal scattered, and it must be a work of time to get them all enrolled in the good cause. So far I find a good deal of enthusiasm, and all who had taken hold work with a good will.

Before leaving Carson City, in company with Brother A. D. Treadway, I visited the State Prison, and was shown through the various departments by the warden in charge. The building is of stone, quarried out of what is now the prison yards. The cells and rooms are of the most suitable character; the discipline is very strict; all the work required for the comfort and convenience of the inmates is done by the convicts. Shoe-making is carried on quite extensively in one of the shops, in which about 30 convicts are employed. The work looks well and will compare favorably with that of skilled workmen in other places. The demand for this kind of work exceeds the supply; and as the shoes and boots are sold at fair rates the receipts for work turned out go a great way toward defraying the expenses of the institution. We visited the kitchen where dinner was being prepared. The supply of food was ample, and the bread looked to be of as fair quality as is usually found upon any private table. Several Chinese and one negro have charge of this department. In the tailor-shop, the striped uniform of the prisoners is made and repaired. In the laundry, Chinamen preside, and washing and ironing are done in the most approved style. A well of hot water in the yard furnishes an ample supply of fluid for all cleansing purposes. Additions are being made to the prison in the way of new cells and rooms, all of which work is done by the prisoners. They quarry out and dress the stone in the jail-yard, and lay it up under the direction of a competent officer; the men work eight hours. No conversation is allowed in the shops or yards. Armed guards are stationed at all of the most prominent points, with positive orders to shoot down, without challenge, any convict who goes beyond the dead line, which is plainly marked with black crosses. This order is so well understood that so far there has been no necessity for carrying it out. Yours fraternally, J. M. HAMILTON.

Genoa, June 10th, 1874.

Since the above was in type we have received the following note from Bro. Hamilton, announcing his return from Nevada:

EDITORS PRESS:—I reached here to-day at noon; left Reno yesterday at 2 A. M.; found many letters awaiting my arrival, which I will answer as fast as I can. On Saturday, June 13th, I organized "Washoe Valley Grange, No. 4," at Franktown, with twenty-six charter members. I have appointed brother A. J. Hatch, of Reno, a general deputy for the State of Nevada. He is well posted in the work of the Order; is active, energetic, feels a deep interest in the success and prosperity of our cause, and will no doubt give satisfaction in that capacity. He will attend to such organizations as may be necessary in the State, so that there will not be any necessity for me to go there again, at least for some months. Yours fraternally, J. M. HAMILTON.

Geneva, June 16th, 1874.

THE GRANGERS' BANK, which has incorporated with a capital of \$5,000,000, will be opened informally on or about the 15th of July, in Hayward's building, California street. The amount of stock subscribed for, so far as reported at the office of the Secretary, already exceeds \$1,500,000. Probably the amount actually taken, at this time is very little, if any, short of \$2,000,000. None but Patrons of Husbandry are allowed to take stock. That which has been taken is mostly in small amounts, and the subscribers reach fully 1,000 in number. It is to be, as its name indicates, a Grangers' bank. Alfred F. Walcott, of E. E. Walcott's sons, is President; Calvin J. Cressy, Vice-President; and William H. Baxter, Secretary.

SANTA CRUZ GRANGE is reported to be in a healthy and prosperous condition. Their meeting on the last Saturday of May was the fullest ever held. There is a class of some ten or twelve now on the way for the present month, and the indications are that the farmers, generally, in that region will soon become members of the Order. We trust such will be the case. There is room for at least three flourishing Granges in and about Santa Cruz.

GONE EAST.—Worthy Secretary Baxter, of the State Grange, has gone East on a short visit to the "old folks at home." He will probably be absent some three or four weeks.

THE California Granger comes to us this week materially enlarged, and embellished with a new and appropriate heading.

In Memoriam.

EDITORS PACIFIC RURAL PRESS:—Since I last wrote you, giving a brief account of our harvest feast, our Grange has been cast into deep and lasting gloom by the sudden death of our worthy and respected brother, Adrian P. Ryerson. Mr. Ryerson was one of our charter members, and was the first lecturer of the Grange. He leaves a widow, nine children and an aged mother, besides numerous friends to mourn his loss. He was an old resident of this county, having settled in Benicia soon after the discovery of gold. Enclosed I send you, as instructed, a copy of the resolutions of condolence as adopted at our last meeting:

WHEREAS, The relentless hand of death has entered our Grange and stricken from its roll the name of Bro. Adrian P. Ryerson, by removing him from our midst; and recognizing the fact that "The ways of Divine Providence are past finding out." Therefore, be it

Resolved, That while we bow in submission to the decree, we can but feel that in the affliction we lose a respected brother, whose voice will be forever hushed in our deliberations, and whose demise has created a void sincerely to be regretted, and that we will ever preserve his memory fresh in our minds.

Resolved, That this Grange will wear the usual badge of mourning for a period of 30 days, and that its heartfelt sympathy is hereby extended in condolence with his bereaved family, in the hope that in time they may be brought to regard their loss as his gain, trusting in the mercy of Divine Grace again to gather us all in reunion within the gates of that Eternal Grange above, with God for its Master, prepared for all living.

Resolved, That these resolutions be spread upon the minutes, and that the Secretary be instructed to transmit a copy thereof to the widow and family, and that copies be sent to the RURAL PRESS, the California Granger and the local papers for publication.

Chas. B. Deming, Sec'y.

Vallejo, June 20th, 1874.

California Farmers' Mutual Fire Insurance Company.

EDITORS PRESS:—At a meeting of the Santa Clara Grange, held this day, the following resolutions were passed:

Resolved, That the Santa Clara Grange approves of the California Farmers' Mutual Fire Insurance Association, as presented by the President of that Association, and would earnestly recommend the Grangers, and all farmers of the county, to give it their united support.

Resolved, That a copy of this resolution be sent to the RURAL PRESS and California Granger for publication.

I. A. WILCOX, Sec'y.

The following action was also had regarding a change in public school books:

WHEREAS, It is represented that a meeting of the State Board of Education is soon to be held, with the view of changing the text books of our common schools, Therefore, be it

Resolved, By this Grange, that such action by said Board, would not be, in our opinion, in accordance with the wishes of the people of this State; and as it would needlessly entail a heavy expense on the patrons of these schools, we are emphatically opposed to any change being made, at the present time, in the text books, as aforesaid, and hope the Board will defer such action till demanded by public opinion.

Resolved, That a copy of these proceedings be sent to said Board of Education, by the Secretary of this Grange.

Santa Clara, June 20th, 1874.

New Granges.

SONORA GRANGE, SONORA, TUOLUMNE CO., was organized June 15th, by Deputy J. D. Spencer, of Modesto, with 29 charter members and the following list of officers: S. S. Turner, M.; Robert F. Williams, Sec'y; George Soulsby, T.; Riley Gilkey, S.; E. F. Hammers, O.; J. F. Ralph, S.; S. Segard, A. S.; S. Allen, G. K.; Joseph Marks, C.; Mrs. E. A. Ralph, Ceres; Mrs. E. J. Gilkey, Flora; Mrs. S. A. E. Marks, Pomona; Mrs. E. Brooks, L. A. S. Brother Williams, the Secretary, in communicating the above, says: "This is the first Grange in Tuolumne; and now, having once got the Order started here, we shall have quite a large Grange in a few months. But just now the farmers are very busy with their hay, and do not like to lose even a day. Our crops, as a general thing, are pretty good—more so on the hill-sides than on the level. The fruit crops of all varieties will be abundant."

WASHOE VALLEY GRANGE, FRANKTOWN, STATE OF NEVADA, was organized June 13th, by Worthy Master Hamilton, with 26 charter members and the following list of officers: Elias Owens, W. M.; Ross Lewers, O.; W. Thompson, L.; C. Perkins, C.; J. H. Hope, S.; G. D. Winters, Sec'y; B. Small, T.; L. Cook, A. S.; H. Perkins, G. K.; Miss E. Simons, Pomona; Miss Ida Simons, Flora; Miss M. A. Smith, Ceres; Mrs. V. O. Towl, L. A. S. This makes the fourth Grange which has been organized in the State of Nevada.

LENN'S VALLEY GRANGE, GLENTVILLE, KERN CO., was organized June 13th, by General Deputy J. W. A. Wright, with a full list of charter members and the following list of officers: A. B. Du Brontz, M.; J. F. Lewis, O.; S. W. Wordy, L.; J. Pascoe, S.; G. Van Daren, A. S.; J. Morrison, C.; D. Lavers, T.; S. E. Reed, Sec'y; T. E. Wilks, G. K.; Mrs. P. A. Morrison, Ceres; Mrs. M. C. Wright, Pomona; Mrs. E. J. Towery, Flora; Mrs. N. A. Pascoe, L. A. S.

A NATIONAL GRANGE FIRE INSURANCE CO.—An act to incorporate the National Grange Fire Insurance Co. has been introduced into Congress, which provides for the incorporation of a company with a capital of \$1,000,000. One of the provisions of the bill is that the company shall make full annual reports of its affairs to the officers of the National Grange of the Patrons of Husbandry.

Grange Rulings.

The following rulings, made by J. M. Hamilton, Master of California State Grange, P. of H., since his return from Nevada, have been handed us for publication, for the benefit of subordinate Granges, generally, throughout the State. All rulings made by Worthy Master Hamilton will be regularly published in these columns:

Until dispensation has been received, a Grange has no right to initiate or expel members, nor collect or pay over dues, or transact any business as a Grange.

At the time of organization of a Grange, a committee may be appointed to prepare by-laws and secure a room for meeting. Their reports should not be handed in or acted upon until dispensation has been received.

After a candidate has been balloted for, accepted, and initiated in the first degree, he is entitled to all the pecuniary benefits to be derived from a connection with the Order; therefore is subject to the payment of same dues as other members, without reference to the time when he was enrolled as a member.

According to the decision of the National Grange at St. Louis, "a person to be eligible to membership in the Order, must be engaged in agricultural pursuits, and have no other permanent interests which may come into conflict with our objects and purposes. The wives and children of such (if of proper age) are also eligible, if not engaged in any business adverse to our interests."

A lady teacher, when father or husband is eligible to membership in our Order, is also eligible from her connection with them, as the occupation of teaching is not of itself a bar to eligibility.

No Grange, either State or subordinate, is a proper judge of the propriety of setting aside a plain provision of the constitution. Principle should never be sacrificed to expediency, and the requirements of our organic law, together with the construction placed upon it by the National Grange, must be strictly complied with.

After a report has been submitted it becomes the property of the Grange, and can only be withdrawn by consent of the Grange, expressed by a majority vote.

After a candidate has been balloted for and elected, the admission fee paid by him becomes the property of the Grange, if he never presents himself for initiation, or forfeits by misconduct his right to be raised to all the degrees. A return of any part of the money to him is simply a donation from the funds of a Grange to an individual.

We Must Have Manufactories.

The tendency of the Grange movement is to accomplish good; and that it is already working deep revolution in the feelings and sentiments of the people, awakening the masses to the importance of co-operation for mutual protection and the advancement of the agricultural interest, no careful observer can doubt. Farmers of the south and west are compelled to change their tactics, pull out of the old ruts, and strike out on a new line of progress.

High tariff, Eastern monopolies and combinations of money power are rapidly doing their work of enslaving the people. There is no earthly escape from the influence except through organization and co-operation for the development of the great resources of the country; stopping the drain of money which necessarily flows to the East for articles that should be made at home. The people are now sorely feeling the effects of the evil. They are manifest in the scarcity of money in the South, and the abundance of it in the East. All our profits gone for manufactured articles, and consumed in high tariffs, and nothing to bring it back. Was there ever an appeal so strong, to a class, for organization and co-operation? The Grangers recognize the facts, and have begun the reformation, which will work wonderful changes in a few years. The question of establishing manufactures has been thoroughly discussed and is uppermost in the feelings of all Patrons of Husbandry. The country is ripe for any movement in that direction that presents itself in a practical shape and promises success.—*Tobacco Leaf*.

CONTINUED WARNING.—We cannot be too urgent in calling upon the members of Granges to be doubly cautious and careful about the receiving of members into their bodies. Here lie, unquestionably, our great danger—the rock upon which we may be dashed to pieces. There are crafty men, any number of them, lingering about our gates in order to shove their way in. They consist of lawyers, politicians, merchants, grain speculators, etc. Before we are aware of it they will seek some advantage, and unless we are on the lookout, they will acquire it.

All at once there is a perfect avalanche of would-be admirers of the farmer, and loud praises go forth of their glorious profession! They have a most profound interest in agriculture, and would bring heaven and earth together to advance its claims! Dear souls! when and how did they so soon become such enthusiastic friends of the "horny-handed" brigade?

We repeat what we have often said, that it is not safe for us to receive as members either lawyers, merchants, or speculators, no matter whether they are carrying on farms or not.—*Grange Outlook*.

How the Grange Educates.

While a little learning may be a dangerous thing, a little intelligence is good, and the more one has of it the better. A man may go on from year to year picking up information of a general character, and yet not possess himself of much that is really valuable to him. Until lately, the farmer read a great deal that gave him but little intelligence regarding things in which he is most interested. He read his party paper, which of course showed that his party was pure and all other parties corrupt. He saw but one side of the question, and as that was in accordance with his own prejudices, he concluded, as most people do, that it was all right. It was a clear case that, when his party was in power, taxes were not high, and it was equally clear that when some other party held the management the country was going to the bad as fast as possible. To educate the people in this way is the business—the sole mission—of party papers.

The Grange has wrought a decided change in the character of information that reaches the farmer community. The statistical facts of the Grange are not biased by party prejudice or preference. They are facts—well authenticated facts—collected without regard to what political party they condemn or sustain. The farmers have long known that they were loaded with taxes to raise money which went they knew not where nor for what. The Grange is looking into the things from a non-political standpoint, and the picture presented is not gratifying. The salary question is examined, and the tax-payer finds out that thousands of office-holders are receiving salaries a long way in excess of the services rendered. The Grange has found out that the party in power is always a plunderer of the masses; that monopoly schemes are always intended to victimize the people; that the watchword of party is snare and delusion; that party platforms are made to be broken; and that party paupers only tell the truth when it will advance their own interests or damage those of their opponents. Whatever else may be said of it, the Grange is certainly a disseminator of a class of reliable information which it is important the farmer should possess.—*Los Angeles Herald.*

THE GRANGE.—A Grange of the Patrons of Husbandry is a place of social courtesy, innocent amusement and mutual improvement. However we may differ in religion and politics, we meet and work together in unity and harmony as one family. The Grange is a school for mutual culture, a center of business for trade and exchange, for co-operation and mutual help. It is a compact of practical protection, and a court of honor and fidelity. Such are the materials of our noble structure; of such is the substance of the grand arch of our co-operative fraternity, which already spans the whole domain of the great Republic. The key-stone of this noble arch, which binds and holds all its parts together in symmetry and beauty, is the constitutional prohibition of religious political discussion within the precincts of the Order. Strike out this key-stone and the whole structure must topple and fall into a confused mass of ruins, to remain a grievous monument to the folly and perversity of the Grangers who struck the fatal blow.

Here we have a fair presentation of the true principles of the Patrons, which must form the great basis of our returning prosperity. We hope every farmer, whether in or out of the Order, will study to improve in the great principles and practices herein set forth, and thereby help to improve all our interests socially, mentally, morally and financially.—*Etc.*

PATRONS' UNITY.—The Point of Timber Grangers have associated themselves together and formed a corporation, to be known by the name of "Patrons' Unity." The capital stock is placed at \$50,000, divided into 500 shares of \$100 each. Principal place of business, Point of Timber, Contra Costa county. The object and purposes of the corporation are for the establishment and conducting of warehouses, wharves, purchase and sale of real estate, freighting, buying and selling of grain, goods, machinery, agricultural implements and farm products; also to engage in manufacturing, merchandising and conducting a general commercial business. Term of existence, 50 years. Following are the names of directors for the ensuing year: R. G. Dean, Thomas Murphy, Thomas McCabe, A. Richardson, J. E. W. Carey, Sylvester Wills, and A. C. Wristen.

TUOLUMNE COUNTY.—By reference to our usual head of "New Granges," it will be seen that a Grange has just been organized by Deputy J. D. Spencer, at Sonora, in Tuolumne. This is the first organization in that county. Brother Spencer, in making his report of this organization, says: "Among the membership are some of the very best citizens, and most extensive farmers, stock-raisers and horticulturists and vine-cultivators in our southern mining counties. Old Tuolumne was well known in the flush times for rich mines and for the able public servants she furnished the State. Her riches are now in her pastures, fine orchards, vineyards, lumber, grain and hay fields."

GRANGERS' FRUIT DRYING COMPANY.—The Sacramento Council of P. of H. has formed a Joint Stock Fruit Drying Company, with a capital of \$50,000, and will erect suitable buildings at once.

The Grangers of Colorado will celebrate the coming Fourth of July with appropriate ceremonies.

The Merchants—Sensible Advice.

We cannot see why merchants pursuing a legitimate business should be opposed to the Order of Patrons of Husbandry. The business of the country cannot be carried on without merchants. The Grangers appreciate this, and they are not inimical to them as a class, but the farmers think they have been oppressed by capital—have been charged too much for articles they need. They think there are more merchants than are necessary to do the business of the country—that the cost of selling their produce and of procuring their supplies, consequently, is too great. They have, therefore, as sensible men, to the best of their judgment, only taken measures to reduce their expense and save money for themselves; in doing this they are only attending to what they think are their own interests but in no spirit of hostility to the interests of another class. On the contrary, every one knows that if the agricultural interests of the country prosper, every other interest prospers; if the farmers acquire wealth the merchants receive a proportionate advantage—the richer the country the more successful is the mercantile interest. Then, why do the merchants decry the Grangers? Would it not be more sensible for the merchant to join hands with the farmers to assist them in their efforts to reduce unnecessary expenses and cost, and work harmoniously for the interests of both?—*Grange Outlook.*

THE LOS ANGELES GRANGE CO-OPERATIVE COMPANY have secured the services of Bro. J. H. Seymour as manager. He has had 12 years' business experience in Folsom, and three years in Oakland. At the latter place we knew him personally as a popular and successful merchant, and an estimable man. Bro. S. has lately visited San Francisco, and is confident that he will secure for the Co-operative company great benefits in the way of business transactions, almost immediately.

THE STANISLAUS COUNTY COUNCIL will hold a session on the first Monday in July (6th) at Grange Hall, in Modesto. A full attendance is solicited. All Fourth Degree members of the Order, though not members of the Council, will be admitted as visitors.

COUNTY DEPUTIES.—Two new deputies have been appointed by Worthy Master Hamilton, namely: for Placer county, Bro. A. D. Neher, of Roseville; and for Tulare county, Bro. M. S. Babcock, whose post-office address is Kingston, Fresno county.

LARGE HEN'S EGG.—Brother Merryfield, of the Dixon Grange, sends us an egg laid by one of his hens, which measures eight inches in circumference one way and six inches the other. The hens are a mixed breed of common, Spanish and Polands.

WALNUT CREEK GRANGE, of Contra Costa county, will celebrate the coming Fourth of July with an open harvest feast. Prof. Carr, of the State University, will deliver an address suitable to the occasion. A pleasant and profitable time may be expected.

WON'T PATRONIZE LIQUOR SELLERS.—Marshall Grange, of Michigan, numbering 200 members, has resolved not to trade with or patronize in any way persons engaged in liquor selling.

AGRICULTURAL SOCIETY.—From the *Vallejo Chronicle* we learn that on Monday the Board of Trustees of this society met at Vallejo. The 3:20 purse was stricken out and the money equally divided between the matches free for all trotters and pacers, and the 2:45 district purses. A sale of stock of all kinds is to be held on Friday, last day of the fair, from 10 A. M. to 3 P. M. T. Robinson was elected to fill the vacancy occasioned by the resignation of John Brownlee. The rent of Mr. Williston's present lease of fair grounds and improvements will be reduced, after August 6th, to \$65 per month. J. B. Hoyt was elected president of the Society; Mr. Williston, secretary; J. B. Frisbie, treasurer. A vote of thanks was tendered Wm. Gouverneur Morris for the able and efficient manner in which he has conducted the affairs of the society for the past year. The board then adjourned to meet at call of the president.

SANTA CLARA VALLEY.—I. A. Wilcox, of Santa Clara, writes under date of June 22d, as follows: The farmers are very busy cutting and putting up their hay—nearly all the wheat on the low slope towards Alviso is already cut for hay, while the shorter growth on the uplands will be principally for wheat. The crops are generally extra in this valley; all the anxiety now being for good prices. We had showers of rain, with some hail, accompanied by thunder, on Saturday night. The weather was quite cool on Sunday, with a light shower in the evening. The wind has been strong from the south for two or three days. More rain last night than on the night previous, and still cloudy and threatening as I close this morning.

OUR ROOT CROPS.—We hear no more of the potato blight, but this, with other root crops, is reported to be suffering severely in some quarters from the ravages of the grasshoppers. In Santa Maria valley this pest has been particularly active; potatoes, turnips, and even some fields of corn and beans that were very promising, have been seriously damaged.

POULTRY YARD.

Mr. Mechi On Poultry.

This eminent English agriculturist has the following to say about poultry: "No one item on a farm pays so well as a good stock of poultry properly managed. With them everything is turned to account. Not a kernel, wild seed, or insect, escapes their scrutinizing eyes. Their industrious claws are ever at work, uncovering, ready for appropriation, every hidden but consumable substance. Fowls must have free access to chalk or lime to form the shells of their eggs, and grit or gravel to grind the food in their gizzards. They luxuriate on grass or clover, which are a necessity for them. In winter they like mangolds or swedes. They must have access to plenty of pure water. The quality of the eggs depends upon the quality of the food. They, like ourselves, like shade in summer, and warm, sheltered corners in winter. They must have access to shelter in wet weather. Fowls will not be long healthy on the same ground or yards—the earth gets tainted. Therefore, to prevent disease, lime and salt your yards and their usual pasture once a year, say in autumn, when the rains will wash it well in and sweeten the surface.

Broods of chickens never do better with us than on the grassy brows of patches abutting upon the growing crops, either of corn or pulse, into which they run either for insects or for shelter. The roofs of the coops should be water-tight, and the coop should often be removed, having only the natural ground for the floor. The ground soon gets tainted unless you remove the coop.

You can hardly make some people good managers of poultry if they lack observation and judgment. These are especially necessary in the breeding of poultry. Your male birds should be often changed, say at least once in two years, and they should be young and vigorous. Breeding in and in will not do, any more than it will with animals.

I consider winged game, poultry and birds the farmers' friends. My poultry have access at all times to my fields. Fowls are very useful in cleaning off flies. I have often been amused at seeing the neat and quick manner of their taking flies from reposing bullocks and sheep, much to their comfort.

Employment For Fowls.

To keep fowls from eating eggs and each other's feathers, and to keep them in good health, give them something to do. There will generally be no trouble about feather-eating when fowls have their liberty all the while and are well fed, and the same is true of egg-eating. But when it is necessary to confine them, the owner should make it his duty to keep them at work. One good method is to cover their yards, when not in grass, with some sort of litter—straw, leaves, cornstalks, salt hay, vegetable tops, etc., and cover most of it.

This will necessitate "scratching" for it, and they will undertake it without further urging. Where litter is abundant the work of the fowls in scratching may be utilized in getting the litter reduced to a "very fine tithe," as farmers say of ground well prepared for seed. They will scratch a moderate layer of straw or salt hay out of sight after a while, if allowed to do so, and even cornstalks also, after sufficient exposure to the hot weather has made the stalks brittle. Another good plan is to plow or spade their enclosure frequently; sow it with corn or other grain, and harrow or plow this under.

It will soon sprout, and while the green tops will be eagerly eaten, the half decomposed grain is also dainty food for fowls, and the work of scratching it out will furnish agreeable employment and exercise till it is all gone. And still another excellent plan is to lightly bury beef heads or tough pieces of refuse meat in the chicken yard. In due time, in warm weather, this becomes inhabited, which the fowls are not slow in discovering. Of course scratching is resorted to, and their reward is not only the crop of offensive insects themselves, but the putrid flesh also, in amounts proportioned to their industry.

Fortunately, a chicken's gizzard is a chemical laboratory of such power that everything going into it is deodorized and purified before being changed into flesh and eggs, so there need be no scruples about feeding such articles. Let the owner exercise ingenuity to keep his fowl at scratching, and it will close the door to many vicious habits.

THE CAUSE OF CHICKEN CHOLERA.—We do not think the introduction of foreign fowls is the cause of chicken cholera. The foreign breeds are no more subject to disease than any others. Besides, what breeds have we that are not originally of foreign origin? The cause of cholera is undoubtedly lack of attention to cleanliness, warmth, and to a proper diversity of food, and want of pure water.—*American Agriculturist.*

The legislature of Massachusetts has lately passed a law making it necessary that a dozen eggs weigh one and one-half pounds. This is a move in the right direction, and we hope all the other States may speedily follow the good example set by Massachusetts.

ROBERT WATT has had a patent issued for 10,000 acres of land in the Big Meadows, Plumas county.

SHEEP AND WOOL.

Experiment with Sheep in Germany.

Mr. L. A. Morrill, at a meeting of the American Institute Farmers' Club, of New York, stated that from thousands of experiments made in Germany, it had been demonstrated that hay alone will not produce as much wool, nor as perfect, as when straw and other substances are mixed. It must be repeated that variety of food will furnish those perfect proportions of organic and inorganic matters of which wool is composed. If we give the sheep too much food of a carbonized or fattening character, the fibers of wool, being tubular in formation, distend or become coarser, and the weight is certainly increased; but, on the contrary, if fed a number of kinds, and abounding in albumen, the fiber will be much increased in length, not so much in diameter, simply because the varieties of food supply to a greater extent the substances requisite to form the filament.

This may be termed natural wool, the quantity or weight of which will be as great as that produced by feeding proper food, which has the effect to increase the diameter of the fiber at the expense of the length, making it harsh and wiry. The Germans abhor feeding large quantities of fattening food in growing Saxon wool, as the effect is to destroy its delicate texture, and its value is diminished for the manufacture of the softest and finest fabrics.

The American wool grower need not over feed simply with a view to make heavy fleeces, as the wool of the sheep, when fat, is comparatively coarse, and the expense of the food used in placing them in this condition, together with the reduction in the value of it, will more than counterbalance the gain from the increased weight. The wool of the Saxon and Merino variety is never so beautiful and perfect in all respects as when it is natural, and this follows only from keeping the sheep in healthy store order, and nothing beyond that.

The feeding of grain by the Germans is simply as equivalents, hay always being the standard by which the quantity of any kind of food daily, is determined. Their aim is not to increase the flesh and fat at the expense of the wool or its valuable properties; and if we ever expect to rival them in the extensive production of the most beautiful and perfect wool in the world, and at the least sacrifice, we must imitate their economy in feeding and unsurpassed mode of management in all things.—*Live Stock Journal.*

The Gad-fly.

The most annoying insect (at least temporarily so) by which sheep are attacked is the *astrus ovis*, or gad-fly, which in the summer months abounds in woody places. The sheep are exceedingly annoyed by them, and resort to all manner of defence. The moment the fly touches the margin of the nostrils the sheep shake their heads, and strike the ground violently with their fore-feet, at the same time running away and holding their noses close to the ground; and as they cannot, like horses and cattle, take refuge in the water, they have recourse to a rut, dry, dusty road or gravel pit. After the eggs are deposited, they are soon hatched, and the maggots crawl up the nostrils, and enter the maxillary and frontal sinuses, and also the cavities of the bone which supports the horns of the sheep. These cavities are all of considerable extent and magnitude, and the thin flexible bones which constitute them are covered with a dense white membrane, upon the mucous secretions of which the larvae is supposed to feed. From the presence of the larvae this membrane is found more or less inflamed, and especially that part which covers the maxillary sinuses.

Very little can be accomplished by way of treatment, and as the larvae are so securely lodged, any remedy strong enough to dislodge them, if it could but reach them, would only endanger the life of the sheep. By way of preventives more may be accomplished, though not without some little trouble. As the gad-fly especially abounds in woody places, the sheep should be kept away from brush and trees between the hours of nine and five o'clock, especially during the months of July and August. On rainy days this is not necessary. Besides this, the face and whole of the head, from the eyes down, including the nostrils, should be smeared every two or three days, or as often as the part becomes dry, with a mixture of equal parts of tar and whale oil.

SHEEP OF THE BIBLE.—The broad-tailed sheep of Asia-Minor is said by the best authority to be precisely the same as those which formed the flock watched by the shepherds of the Bible, and to which belonged the Paschal lamb. Such is the indolent conservatism of the nation of the East, that no demand is made upon the zootechnic skill of the flock-master by the ceaseless efforts of manufacturers to keep pace with the desire for new and original styles of fabrics, as in this country.

A regular wool dealer, who thoroughly understands the subject, says the proper way to tie a fleece of wool, is to lay the fleece on the table, turn in the head and tail, and turn in the flanks, and roll it up, commencing at the tail end, tying it with two strings to keep the roll in place, and then with one string across the ends. This is sufficient. A fleece thus tied is light, easily handled and examined, and can be felt all through.



Time Levelleth All.

[For the Press by JEROME A. ANDERSON, M. D.]

Two cottages upon the green,
Agone, we built us, side by side.
And what should brother's homes divide?
So nothing there we placed between.

A little spark, I know not how,
Was fanned into a burning flame—
I thought he wronged me; and there came
Harsh, bitter words between us now.

He could not brook, that face to face
We stood in passing out and in;
And so, our little homes between
At last, a cold, high wall did place.

I saw the stones piled up in pride—
And I, within my heart, a wall
Higher and prouder built, to pall
The chambers once he occupied.

And then I wandered far away—
For half a life we had not met;
I thought to find the barrier yet
When I returned; one summer day.

Bnt, lo! long since it crumbled down, fell;
And nothing now our homes did part—
And suddenly within my heart
I felt its pall was gone as well.

Like long-forgotten childhood rhyme,
My brother's voice then softly said:
"Time levelleth all." With bowed head,
"Yea," whispered I, "and blest be Time!"

Yet, though the needless wound he heals,
Still there remains the cruel scar
On hearts and wasted years, to mar
The tear-blurred page the past reveals.

Mr. and Mrs. Snowler.

[Written for the Press by F. H. W.]

Of all the canine animals in this wide, wide world, Jack and Jane Snowler were the worst. Yes, I repeat it, "the worst." Jack was a small, thick-set, square-headed, thoroughbred bull dog, of a very amiable disposition—exceedingly so, if a stranger was to show so much as the toe of his boot within a mile of Elworth Grange, our house, Jack would proceed to masticate said toe of aforesaid stranger in the most insinuating and presiding manner. Madam Jane Snowler was his better-half—better in some ways. Better at growling, better at eating; but at hitting, they were nip and tuck; I felt 'em both, and I ought to know.

Well, the first time I saw Mr. and Mrs. Snowler, I had just come home from boarding school. Hadn't been home for six months. Hadn't seen anybody for six whole months. O how I thought of home, as the cars rushed along! How I remembered my mother's peppermint drops, always on hand, when any one was sick! How I determined to be sick a couple of days myself! O how impatient I was for the cars to stop! How I wouldn't wait for the carriage at the depot! O how I rushed along the road! How every stone bigger than an egg tripped me up; then laid me in the dust! How I panted to reach home! And how, instead of going two miles around by the road, I determined to jump the creek and make a near cut across the fields.

Accordingly, taking a good run and a big spring, I lauded safely—in the middle. And had to wade out through three feet of mud. Here was a damper! My best Sunday breeches spoiled. My boots full of mud. Myself shivering with cold; and two newly-plowed fields to trudge through. Never mind, home was at the end. And I pictured a warm fire, clean clothes, and a good lay out to lay in, when I got there. Across the fields I started. Through the sticky, clinging, miry soil, I held my way. I was in no amiable frame of mind. You might say I was angered. Yes, you might bet I was mad, mad as a warring bull! On I trudged. The last field was done. I was home. Joyfully I placed my hand on the gate, when a series of howls, as if all Hades had broke loose, arrested my further progress. There, right in front of me, just behind the gate, stood two dogs, two small bull dogs, bristling with fierceness. But how dare they stop me? stop me? What could they be thinking of? They should be well punished for their audacity. Stop me? me, Junious Napoleon John Jones? Why the very name was enough to terrify them. But they should suffer severely for attempting such a thing. I would march boldly in. I would show them I was not afraid. I would go bravely to the front. Slapping my hand on my breast, I cried, "Be brave, Junious Napoleon!" and in I went. Heavens what howls! Great guns, what barks! Jerusalem, what teeth! I glanced hastily down; one cur had hold of one leg; the other dog hold of the other. I jumped about like a French dancing master; I yelled, I kicked, and I almost swore. Still they held on. They shook those pants as if they contained a thousand rats, instead of my poor legs. Rip, rip, tear; I looked down. My best pants were gone. Torn half off me. Jumping hastily back, I regained the gate, leaving all but the waistband in the villains' mouths. Where was my mother? That noise ought to have brought her out. I looked wistfully at the house; not a soul appeared. They

must be gone out. Yes, they were out, and I was here alone with those contemptible sneaks. With what satisfaction they growled over those breeches, as they tore them piece by piece. Oh, for a means of revenge!

Here was a predicament; no pants; and in full sight of the road. Somebody would soon be along. What was I to do? I would have revenge. I would exterminate those purps from off the face of this earth. I would piece-meal them. They should not brave me in such an open manner. They should not dare my vengeance. Difficultly I dragged off my muddy, miry boot. Painfully I hopped to the gate. Carefully I took aim. Swiftly it flew. But Jerusalem! I had aimed too high, and crack, bang, went two of our best French-lawn windows. "Goodness!" I exclaimed, "won't mother be mad when she gets home!"

Heavens! what a yell of triumph those little despicable curs set up. They mocked me; did they? They ridiculed my skill at marksmanship; eh? Would I stand it? No. Off came the other boot. Now, you mean, contemptible sneaks; you curs, I'll pay you off. I raised my arm; I took good aim; I threw, and it missed. Up ran one of those mean, deceitful little dogs, grabbed it, and made off. But the other one didn't go. Why didn't he? I wished he would. But O! no. No move in him. There he stood. There, right in front of the gate. What was I to do? Here I was without breeches, in full sight of that road. Shivering, too, like fury. Some carriage or wagon was apt to come at any moment. It's a wonder they hadn't been on before. Anna Comas might come. Oh! what should I do? Anna was my sweetheart. Hark! what's that? A rumbling, rolling noise struck my ear. Was that a carriage? Heavens! it was. Nothing was left but to run for it. I must brave those awful dogs. I must run the gauntlet of their teeth. Summoning all my energies, I plunged frantically in. Bow, wow, wow. Teeth again! And one of those mean curs ran between my legs, and over I went, scrambling in the dust. But I was up again. On I dashed. On the dogs came after me. I had a dim notion that the carriage had turned the corner, and that the people in it were shouting at me. But forward I rushed, followed by those spiteful dogs. No use trying the doors; I knew they were locked. Something must be done. The dogs pressed me hard. Recklessly, I made for the little kitchen-window, at the back of the house. I reached it. It was three feet high; it seemed like six. I was never noted for jumping, but some desperate act had to be done. Those despicable curs were at my heels. I must be quick. I reached the window. Making one convulsive, spasmodic jump, I sprang through the window, aash and all; and landed on my head in a large pan of dough, set there to rise. Pleasant, wasn't it? Yes, but too much so. The dough atack to my hands and face; it filled my mouth and nose, and blinded me completely. With difficulty I crawled across the floor to the farthest corner, leaving a trail of dirt and dough, and dirt behind me. I felt like dying. I wanted to leave this wicked world with its dogs, kitchen-window, pans and dough.

Suddenly a large horse-pistol was thrust through the broken window, followed by my father's face. "Come out, come out," he roared, "we saw you, you thief. Come out; no prevarication." The next instant, and before I had time to answer, he caught sight of the large dough-pan, standing on end, covered by my jacket, which I had taken off in order to get rid of that terrible dough. Mistaking what he saw for the rear of some inhuman burglar, he fired. Bang—the pan was riddled. Kick—where was my father? That pistol hadn't been fired since fourth of July, six years ago; and when it went off it kicked, sent my father head over heels, back into our large watering-trough. My! how that pan was scattered, tin, dough and jacket; jacket, dough and tin lay around in reckless profusion. I would have trembled in my boots, if I had had 'em; but as I didn't, I did the next best in my stocking feet. As I sat there trembling and shivering, the thought gradually forced itself into my mind that that must have been father's carriage on the road. What a fool I had been.

When that pistol kicked father into the watering-trough, he got pretty well doused with water. He was generally a pious man; but this was too much for him. He scrambled clumsily out. He threw the pistol over the fence. He stamped. He roared. He actually said three bad words. He kicked Mr. Jack Snowler. He followed it up on Mrs. Jane Snowler. He ended by kicking 'em both. First one, then t'other. He didn't know what to do. In a short time mother came up, half frightened to death. She embraced my wet father, thinking he was dead, wounded or killed. Slowly and sadly I crawled out of the window; just as my father was telling her how he blew that burglar to anitherens. As he caught sight of me, he recognized his son, and, fatherly like, abook his fist at me. My mother nearly fainted at sight of me. Mr. Snowler bit at me. Mrs. Snowler growled at me. And every one had a go at me. I penitently embraced my mother, covering her with a mixture of dough and dirt, much to her discomfort.

Half an hour after I was in bed, with three mustard plasters, and enough of the customary, infallible peppermint drops to fill a small barrel. I afterwards learned that mother and father had gone to the station with the carriage for me; but in my impatience, by cutting across the fields, I had missed them. Jack and Jane Snowler had been given to father by an old sea-captain, while I was at school, hence had not

yet made my acquaintance. Time passed on, yet at the end of a month's friendship with those despicable dogs, I was obliged to utter the sentence heading this sketch.

A Word Fitly Spoken.

[BY ELEANOR KIRK]

"My mother never had sour bread."

This was a most unfortunate remark, and Mr. Penney was conscious of it as soon as the words were out; but this did not hinder him from going on much in the same strain.

"Of course I don't know how she managed it, but I remember she used to talk about setting her sponge over night, and then in the morning she was always up as soon as the girl was, and the dough was kneaded and kneaded, and when it came out of the oven it was as white as the driven snow, and as sweet as honey."

Mrs. Penney's face was scarlet. "I did my best, John," was just trembling on her tongue, but this last elaborate description of the bread-making *modus operandi* of his maternal parent turned the disappointment she had felt in not pleasing her husband into gall and bitterness, and she answered instead, in a mocking tone:

"As white as the driven snow, and as sweet as honey! I have seen it stated somewhere that men are not given to exaggeration. Such slight coloring, though, I suppose, is excusable when a man is speaking of his mother's superiority over his wife. Hereafter, Mr. Penney, if baker's bread does not suit your appetite, the kitchen is at your disposal to set your sponge, and knead and knead! and I have no doubt that when you take your mess from the oven it will be as white and as sweet as ever your mother's was."

Just here Mrs. Penney arose, moved the baby's high chair away from the table, and, with the chubby year-old in her arms, sought the privacy of her own chamber. Mr. Penney followed.

"There's no need of getting in a huff, Mary," he said, as he closed the door. In this matter of continuation the gentleman was swayed by two entirely opposite and antagonistic motives. He did not like to go to business with a cloud between him and his wife, and he did not want the last word. No doubt Mr. Penney thought by having the last word he could dissipate the shadows he had so heedlessly evoked—but of course he was unsuccessful.

"It is my opinion," he proceeded, "that if you were to rise a little earlier, before the dough had time to sour, you would have just as good luck as mother had."

"I haven't slept three consecutive hours for the last two months, with this baby, John Penney, and that you know as I as well do, and yet you are thoughtless enough to ask me to get up in the morning when the cook does, in order that your *whim* may be satisfied."

"A whim, is it, to be careful of one's stomach? to prefer good bread to poor? Why, what bread you put before me this morning wasn't fit for a—for a—" John Penney hesitated a moment, but finally it came out—he really did say it, reader—"for a hog to eat."

Mrs. Penney was on the point of saying something especially rasping, if not actually insulting, but she was checked by a timid rap on the door, and the entrance of a sad-faced, delicate woman, who colored slightly, as she noted the embarrassment of her hostess.

"I found that I could spare you to-day, Mrs. Penney," she explained; "you know I thought I should not be able to sew for you until next week; but Mrs. Smith was very ill this morning, and could not go on as she intended, so, if you like, I will commence your work."

Mr. Penney withdrew with a single good morning to the intruder. In one sense he had come off conqueror; he had had the last word after all, and that was victory enough. Mary wouldn't try to feed him with sour bread again, he was very sure. "Inbards should assert themselves sometimes," he informed himself, on the way to business. What would become of them if they didn't? He had been married two years, and house-keeping six months; while they were boarding everything was smooth as oil; but they hadn't more than become domiciled in their own house before trouble commenced. The baby was sick, and the mother complaining. Then Mary had never been instructed in domestic matters. She could sew and crochet and embroider, was very fond of reading, understood music, was considerable of an artist, a good deal of a woman, and, with the proper forbearance, and the exercise of a decent amount of tact, would have been the best wife in the world, (so she thought.) During the days of courtship, and the first few months of married life, she was the subject of unlimited petting. Her will was her husband's law; but after the birth of the baby, and the added responsibility of housekeeping, everything changed. Mr. Penney did not, could not, take into consideration that these cares had also made a difference in her; that she had changed also; she could not feel—wives never can—that there was anything amiss with her—that the cloud on her brow and the nervousness of her manner radiated a magnetism unmistakably repellent. Had Mrs. Penney remained healthily amny, baker's bread would undoubtedly have satisfied Mr. Penney. Deprived of the joy he needed, and had been accustomed to, he turned, man fashion, to finding fault with what, under other circumstances, he never would have considered for a moment.

"You are not well, this morning, Mrs. Penney," said the kind voice of the seamstress, as

the lady nervously brought out the material she wished made up.

"No. I am not very well," she replied, apparently more to herself than to her companion; "but I don't mind so much about that, I mean I could bear ill health very well, if didn't have other things to trouble me."

The pale face of the dress-maker lighted up wonderfully, as she met the tired eyes of her companion.

"My dear Mrs. Penney," said she, with sudden inspiration, "will you allow me to express my thoughts? Perhaps it may be of service to you. I have had a very hard life, and only by personal experience have I ever learned anything; experience of the richest, and most agonizing description."

"I wish you would tell me something," replied Mrs. Penney, with a quiver of the sensitive lip. "I am doing the best I can, and yet, Mrs. Harris, I am failing utterly in accomplishing that which is dearest to my heart—the happiness of my husband, and the comfort of my home."

"You think you are doing the best you can," continued the seamstress: "here you are mistaken."

"Bnt, Mrs. Harris," interrupted the lady, with an offended air.

"Wait a moment, and I will explain—prove the truth of my statement by your own words. You acknowledged, a moment ago, that you were not well, but that this fret was of small importance compared with other things. Now I maintain that health is the groundwork of all happiness, the beginning and end of all progress. Without health you can no more be a companion for your husband, and wise mother to your child, than your husband could be a good business man without it. This, then, is the first thing to be considered. Your nerves are rasped, your child is more of a burden than a joy, your pretty house an unpleasant responsibility, your husband seems inconsiderate and unappreciative; and the demon that has brought about this complete metamorphosis lies entirely in yourself—your present lack of a healthy foundation."

"But John doesn't seem to sympathize with me in these cares," broke in Mrs. Penney. "I tell him in the morning how trouhlesome the baby has been; all he ever says is, 'Is that so, sis? I have heard mother say that children are very apt to be cross at that age. You'd better lie down when the baby does to-day, and see if you can't get a snooze.'"

"Exactly," said the seamstress. "Do you ever act upon this advice?"

"No how can I? all the time I have to sew and attend to things, is when the baby is asleep."

"Better let things go without attention until the little one is less trouble."

"And then John would find fault with the disorder."

"I do not think so. Your nervous condition makes a nervous atmosphere that your husband feels as soon as he enters it. The real difficulty he does not realize any more than yourself. The elements are discordant. He is immediately thrown out of equilibrium, and in trying to restore himself he takes hold of the wrong string, and the result is domestic chaos. Woman must make the home. There is no way of getting round that fact. Your husband makes his place of business—makes the money for you to adorn the nest with, which he has a right to expect comfortable when he flies to it at night."

"But is a husband to have no responsibility in home matters?"

"You would not think of finding fault with your husband because nature had not endowed him with the means of providing his baby with the first food it needs."

Mrs. Penney laughed.

"That seems very ridiculous, does it not? and yet it is no more so than the hundred and one things women demand of their husbands which they are equally unable to give. Woman is the natural nurse of the man as well as of the man-child! By nurse, in the first instance, I mean the comforter and inspirer. Without health you can be neither. What, then is the result? You know as well as I do. Sometimes divorce, sometimes desertion, sometimes a dragging out of existence more terrible than either."

"I wish you had heard Mr. Penney find fault with the bread this morning," said the little lady dreamily.

"The bread was something tangible, something he could get hold of. The real difficulty was not. Something needed straightening out; he tried to make himself believe it was the bread he was irritated about, but, my dear Mrs. Penney, it was something far back of that. I have no doubt I could trace it by actual gradation; but, at the bottom was the disordered state of your nerves, caused by neglected health. Get well, and your bread will be all right."

"Do you really think so, Mrs. Harris; but how shall I get well?"

"By taking advantage of every possible moment to make up the sleep you have lost; by arranging with your servant, even by paying her more wages, to take care of the baby while you go out to ride, or walk, or make a visit; to change conditions as often so you can make it convenient, and especially to arrange to accompany your husband when he desires you to be with him."

"Oh, John hates to go out alone of an evening. Last night he hurt me dreadfully by saying that if the baby kept on interfering with his pleasure he should dub it a nuisance! Poor little baby! He wants me to have a

nurse; but how can I trust a stranger with my treasure?"

"There it is—as plain as the sunlight. In this last remark you have shown me yourself and husband exactly. Your husband wants you, and is lonely and discontented without you. He cannot feel the same tenderness for the child that you do, so be sensible and not demand it. You are divided between your love for your husband and your love for your baby. You have fretted yourself into a state of illness and actual discomfort, because you cannot serve both as you feel they should be served. If your husband wants another servant you should obey him, for in this he is wiser than you."

"Oh, Mrs. Harris, if you could only live with us!"

"I will, dear, if you want me, for I have no home, and perhaps I may do you good."

After this the way was made plain. There were a few jars at first, but common sense, good health, and the good nature that comes of both, arranged all at last; and both husband and wife bless the angel that was sent them in the guise of a seamstress.

Tea-table Gossip—No. 1.

[For the Press by Mrs. I. H. NICHOLS.]

"I do wish we could have a community with no inferior class. It would be so much pleasanter if we could escape contact with the low creatures!"

"I agree with you," Miss Patty Pan," responds the apothecary's clerk. "I don't believe in mixing up with our inferiors. I, for one, will not come down to the level of those beneath me."

"Wouldn't you associate with your superiors in mental and moral culture, Mr. Pestle?"—meekly inquired Miss Charity Child.

"Of course. We can learn from such. But I object to mingling with inferiors, as tending to vulgarize the manners and degrade the moral status of the upper classes. Evil communications corrupt good manners," is a wise old saying."

"Ah, indeed!" retorted Madam Brusque, "You do not object to associating with your superiors! Have you a special permit to bring them down to your lower moral and intellectual level? Evil communications are by no means confined to any one class. Indeed it seems that they are putting on the livery of the superior classes, as you call them. At least the evidences cropping out in these circles, establish their presence as tolerated guests. The inferior classes, as you call them, might very properly object to association with their superiors on the ground of danger to their moral status." And the outspoken old lady sipped her tea, bolt upright in her high-backed chair—during the remainder of the meal, as much as to say it was only for Mr. Pestle's improvement in morals and manners, that she condescended to sit at the same table.

THE OLD HOMESTEAD.—It does one good to go back to the old homestead, periodically. If this experience were needed to make any one have faith in the doctrine that every family should have its home, I wish every one could have a similar experience to mine. It was where I was born. Blessed be the man or woman who was born on a farm! No! that is not correct. Blessed is the man or woman who was born on a farm, and can go back to it, and to his and her parents, after thirty or forty years of experience, knocking about the world, and jostling against all classes of humanity! That is better! Think of it! To go home—what a word—and straight into the arms of the good mother who bore you, and feel both your hands taken in the warm ones of the grand old father—the austere, upright (always), and exacting old father of your boyhood—who, by look, quiver of lip, tremulous of excitement and joy, gives you more touching "welcome home" than could be revealed in all the caresses conceived of—I say all this is worth living for!—*Rural New Yorker*.

LAZINESS prevents a man from getting off his horse to put on the first rail that gets knocked off the fence, and through this lazy neglect a whole field of corn is seriously damaged. Laziness keeps a man from driving one nail when one would do, and finally costs a carpenter's bill for extensive repairs. Laziness allows a gate off the hinges to be propped by rails—or a stable or a barn to leak and damage hundreds of dollars' worth of provender. Laziness, in short, is the right and proper name for nine-tenths of the excuses given for bad farming. But the most prolific of the many wastes that are due to laziness is the waste of ignorance.

THE FROZEN NORWEGIANS when they first beheld roses were deterred from touching them when on the bush, because they believed them to be fire budding on trees. The aborigines of Virginia, when they came into possession of a little gunpowder which the English colonists gave them, sowed it in their fields. They had seen the English ignite it, and they hoped to reap so large a crop from that which they sowed that they might be able to blow away the whole colony. Truly a primitive idea of war.

AN Irish emigrant hearing the sunset gun at Portsmouth, asked a sailor, "What's that?" "Why, that's sunset," was the reply. "Sunset!" exclaimed Pat; "and does the sun go down in this country with such a bang as that?"

TAILOR, measuring fat customer.—"Would you hold the end, sir, while I go round?"

Young Folks' Column.

Table Manners—For Little Folks.

In silence I must take my seat,
And give God thanks before I eat;
Must for my food in patience wait,
Till I am asked to hand my plate.
I must not scold, nor whine, nor pout,
Nor move my chair nor plate about.
With knife, or fork, or napkin ring,
I must not play, nor must I sing.
I must not speak a useless word,
For children must be seen, not heard.
I must not talk about my food,
Nor fret if I don't think it good.
My mouth with food I must not crowd,
Nor while I'm eating speak aloud,
Must turn my head to cough or sneeze,
And when I ask say, "if you please."
The table cloth I must not spoil,
Nor with my food my fingers soil.
Must keep my seat when I am done,
Nor round the table sport or run.
When told to rise, then I must put
My chair away with noiseless foot;
And lift my heart to God above,
In praise for all His wondrous love.

"DOGOLOGY."—A little dog belonging to a gentleman, residing near Stony Brook, Long Island, was in the habit of following his master's wood-wagon to the landing, some three miles distance. One day he was set upon and roughly handled by a large dog belonging to a resident in the next village. The next day, though lame, sore and bruised, the little dog persisted in accompanying the wood-wagon again. When the wagon started, the large farm dog was also found to be moving along quietly under it. He was never known to accompany the wagon-team before. The teamster attempted to drive him back, but he refused to return. The little dog led the way, limping and brooding over his wrongs. He was also contemplating the sweetness of revenge, and gloating over its near accomplishment. When he reached the place where he had received his ill treatment the day before, he limped up to where his enemy lay basking in the sun in the front yard, and snapped and snarled through the pickets in a most tantalizing manner. Thinking to repeat the chastisements of the day before, the village dog leaped over the fence, but only to encounter the large farm dog who had been watching the proceedings from under the slow-moving wagon, and who now came rushing to the rescue. The village dog was nearly killed before they could be separated. The large farm dog left the party after the fight and returned home. He had come only for the purpose of aiding his little friend to obtain revenge. The little wretch was almost human in his airs of triumph, and in his expressions of gratified malice. By what process, think you, did the little dog communicate his wrongs, or plan with his big canine friend this well concerted scheme of retaliation.

JOHN'S SHARE.—"Dad," said a hopeful sprig, "how many fowls are there on the table?"

"Why," said the old gentleman, as he looked complacently on a pair of finely roasted chickens that were smoking on the dinner table, "Why, my son, there are two."

"Two!" replied the smartness, "there are three, sir, and I'll prove it."

"Three!" replied the old gentleman, who was a plain, matter-of-fact man, and understood things as he saw them; "I'd like to see you prove that."

"Easily done, sir, easily done! Ain't that one?" laying his knife on the first.

"Yes, that's certain," said dad.

"And ain't that two?" pointing to the second, "and don't one and two make three?"

"Really," said the father, turning to the old lady, who was in amazement at the immense learning of her son, "really, wife, this boy is a genius and deserves to be encouraged for it. Here, old lady, do you take one fowl, and I'll take the second, and John may have the third for his learning."

GIRLS—Girls do not always know their power. It is far greater than they think; and were they true and brave enough to exert it, they might almost, in a generation, revolutionize society about them. Exert your power for good upon the young men who are privileged to enjoy your society. Gentle and good, be also brave and true. Try to exhibit the ideal of a woman—a pure and good woman—whose life is mighty as well as beautiful in its maidenly dignity and attractive loveliness. Do not let it even seem that dress and frivolity constitute your only thoughts; but let the elevation of your character and usefulness of your life lift up the man walks by your side. Some of you are in intimate associations, which under exchanged promises, look forward to a nearer and more enduring relation. In these hours do nothing to lower, but everything to refine and ennoble each other's character.

IN LOVE WITH HIS MOTHER.—Of all the love affairs in the world none can surpass the true love of a big boy for his mother. It is a love pure and noble, honorable in the highest degree to both. I do not mean merely dutiful affection; I mean a love which makes a boy gallant and courteous to his mother, saying to everybody plainly, that he is in love with her. Next to the love of her husband, nothing so crowns a woman's life with honor as this second love, this devotion of the son to her. I never yet knew a boy to turn out bad who began by falling in love with his mother.

A LITTLE boy fell asleep in one of the Troy churches, on Sunday evening, and created quite a sensation by rolling off the seat and calling out, "Knuckle down tight."

Good Health.

Liebig's Extract.

In a letter to Joseph Bennert, Dr. Pettenkofer enters into an elaborate exposition, or rather vindication, of Liebig's extract. Like all alimentary novelties, that renowned preparation has had to fight its way into popular acceptance through at least two initial prejudices: first, a suspicion as to its wholesomeness, to use no stronger phrase; next, a scepticism as to its possessing any specific virtue whatever. Both these barriers the extractum carnis has at length surmounted, though three-and-twenty years have elapsed since its discoverer first produced it in the Royal Laboratory at Munich. How little its assailants understood the object of their attack may be inferred from the charges they brought against it. "The extract," said they, "containing as it does neither albuminoids, nor fat, nor hydrates of carbon, is not an alimentary substance." Of course it is not. It was precisely on the principle of eliminating from the extract every particle of albumen, of fat, even of gelatine, that Liebig proceeded. And with what result? To produce, not an alimentary substance strictly so called, but a condiment which has a distinct and unique place in dietetics. The role of condiments in the complex action of nutrition is but partially appreciated, and the most natural condiments are usually neglected for others much coarser, more stimulating, but really less efficacious. Voit, the most recent experimenter in dietetics, confirmed the popular impression that the flow of gastric juice to the walls of the stomach may be accelerated even by the sight of meat, as when he witnessed in a fasting dog, in which he had established a stomacheal fistula, the immediate rise of the juice when he offered, without giving, the animal a bit of meat. Bonillon, he further maintained—warm and well-boiled bouillon—is the simplest and best digestive, and it is from this premise that Pettenkofer vindicates for the extract its paramount claims as a condiment. These it owes to the mixture of salts, different, indeed, but combined in definite proportions in a ratio which the organism imperatively demands, and the slightest deviation from which would constitute a veritable impurity. No amount of the best meat can take the role of the extract, any more than milk can play the part of cheese or butter. The product of Liebig is neither a nutrient nor an alimentary substance capable of economizing the albumen, the fat, or the carbo-hydrates; it is simply a condiment, but one of such efficacy that Pettenkofer does not hesitate to anticipate for it the chief place among such aids to digestion, not only in the sick-room, but in common every-day life. It has served him as a text for a very instructive essay on nutrition in general, and though much that he says is recapitulation, it is recapitulation of a kind that has a novelty of its own, from the clear and discriminating eye he passes along the series of discoveries bearing on the physiology and application of food.—*London Lancet*.

Food.

No more important questions can occupy the attention of the student of social science than those relating to human food. The advancement and development of the race depend primarily upon its aliment. And as man is the ultimate of all created earthly beings, so his food should be combined of the most progressed elements in earthly production. Vegetables contain all the elements composing the bodies of animals, but in a lower state of organization.

The muscles, nerves and brain power of man must be supported by nitrogenous food, and the more progressed and highly organized this food is, the more perfect will be the muscular power, the more delicate the nervous sensations, the keener and more profound the mental penetration.

Our ideas of digestion and nutrition become much simplified as we progress in chemical knowledge. It was once thought that the animal stomach possessed the power of metamorphosing its food into such elements as the system required, and therefore it was not material of what elements the food was composed, so that it be eaten with relish. But later science has demonstrated that the animal has no power of changing one element into another, and can merely use what it finds ready formed in its food. The vegetable elaborates—the animal appropriates. It then becomes of the highest moment that one should understand the elements of the food we use, and learn so to combine these as to produce the highest development of health, strength and personal beauty; thus attaining mental and moral culture.—*Ex.*

GYMNASTICS, while increasing the power and activity of the muscles, are of little advantage in warding off phthisis. Many stalwart gymnasts have been victims to consumption. The swinging of heavy clubs about the head cannot be recommended. Less exercise than that with the arms causes hemorrhage in those consumptively inclined. Boxing puts almost too much strain on the heart and lungs, and it is questionable whether severe blows on the chest are ever of use. Bowling should be avoided by consumptives. Rowing tends to expand the chest, and if no racing be undertaken, may prove of great value. Swimming should be used with great caution, as too long a stop in the water is apt by itself to bring on consumption.

Ozone.

Doctors differ widely as to the physiological effects of ozone upon the human body. That it acts upon the blood in some way is probable, but what special disease it causes, or what special disease it heals, is not yet ascertained. Some say that in an air which lacks ozone rheumatism may be expected; and it is asserted, and with great confidence, that the cholera is likely to come where ozone is wanting. There is reason for that assertion, which we shall presently mention, but it has not been fully proved by observation. Others say, on the contrary, that the irritation of this pungent gas will show itself in skin disorders, will send out blotches, eruptions and fire on the cheek and forehead; that ozone poisons the blood while it stimulates, and is to be classed with gin and whisky. Not enough is yet known of its medicinal effects to bring it fairly into the pharmacopœia; and happily it cannot be kept on hand by the druggist, cannot be rolled into pills, or bottled for future use. Sunshine may be stored away in coal beds, but ozone is slippery, and disappears mysteriously, like the ice of carbonic acid. Only general assertion can be made concerning ozone in pathology, that on the whole, other things being equal, a lack of this influence in the air weakens the constitution, takes force out of nerve and muscle, and so predisposes the system to take on disease, and makes contagion more dangerous.

More certain is the effect of ozone as a purifier in the air. No fluid acts more positively in decomposing and dispersing offensive substances. If its own smell is positive, it speedily drowns other more disgusting odors, and substitutes what is comparatively sweet and clean. It puts ammonia and sulphureted hydrogen, the odor of the stable and pit, out of the way more effectually than the chlorides. No disinfecting substance works so swiftly and so thoroughly as this attenuated shade of a substance. Dr. Fox quotes Schoenbein as saying that "air containing one three million two hundred and forty thousandth of ozone is capable of disinfecting its own volume of air filled with the effluvia evolved in one minute from four ounces of highly putrid flesh!" Surely no marvel of homeopathic theory or practice can match this statement. It goes beyond the fiftieth or the one-hundredth dilution.—*Herald of Health*.

Poisonous Wall-Papers.

The poisonous effects upon the air of rooms of arsenical pigments on wall-paper have been generally ascribed to the inhalation of the dust, which was found to contain arsenic and copper; but cases of arsenical poisoning of this kind have occurred in which, on account of the moisture still present in the wall and the effectual fixing of the colors, this explanation will not answer. Upon these a recent series of experiments by Fleck throws some light. Air in glass receivers was subjected to the action of Schweinfurth green and arsenious acid by simply placing these substances beneath some bodies in a moist condition, and by applying them as a coating to others, with and without paper, potato and wheat starch being employed as pastes. After from eight days to three weeks, in different cases, the presence of arseniated hydrogen in the air was unmistakably revealed by tests; and left no doubt that cases of chronic arsenical poisoning must be attributed not only to the mechanical mixture of arsenical compounds with the air of rooms in the form of dust, but also to the presence of this gas, resulting from the decomposition of free arsenious acid in Schweinfurth green. It was also found that the development of the gas is favored by moisture in the air and the presence of organic matter, especially that in the paste. Mold appeared on the paper in some cases, showing that arsenic is not a preventative of its formation, as often stated.—*Technologist*.

THE symptoms of asphyxia by illuminating gas are discomfort, inclination to vomit, convulsive movements of the muscles, especially those of the breast, the skin is cold, the breathing and pulse irregular. The remedies recommended are exposure to free air, even if cold, irritation of the skin by vinegar, and the palms of the hands, soles of the feet, and the spine with a stiff hair brush, blowing air into the lungs. When consciousness returns, place the patient in a heated bed in a room with the windows open, and administer a few spoonfuls of Malaga, Madeira or sherry wine. A mixture of tartar emetic and Hoffman's liquor, flavored with honey-water and orange-flower syrup, is spoken of as an efficacious after the return of consciousness.

VENTILATION AND WARMING.—In a lecture on ventilation, lately delivered before the Franklin Institute, Mr. L. W. Leeds gives the following practical directions concerning provisions for ventilation and warming in the construction of buildings: First, never have long underground fresh-air ducts. Second, never allow a sewer, soil-pipe, foul-air flue or smoke flue to come near the fresh-air supply-flue, for fear of some connection being made between them by carelessness or accident. Third, never heat a building exclusively by currents of warm air. Fourth, always put the heating-flues on the outside walls instead of on the inside walls. Fifth, endeavor strenuously to avoid the fresh-air chambers becoming a common receptacle for all the rubbish of a filthy cellar.



PUBLISHED BY

DEWEY & CO.

A. T. DEWEY, W. B. EWER, G. E. STRONG, J. L. BOONE.

PRINCIPAL EDITOR.....W. B. EWER, A. M.

OFFICE, No. 333 Montgomery street, S. E. corner of California street, where friends and patrons are invited to our SCIENTIFIC PRESS, Patent Agency, Engraving and Printing establishment.

SUBSCRIPTION AND ADVERTISING RATES.

SUBSCRIPTIONS payable in advance.—For one year, \$4; six months, \$2.25; three months, \$1.25. Clubs of ten names or more \$3 each per annum. \$5, in advance, will pay for one and one-third year. Remittances by registered letters or P. O. orders at our risk.

ADVERTISING RATES.—1 week, 1 month, 3 months, 1 year.
Per line.....25 .30 \$2.00 \$5.00
One-half inch.....\$1.00 \$3.00 7.50 24.00
One inch.....2.00 5.00 14.00 40.00

Large advertisements at favorable rates. Special or reading notices, legal advertisements, notices appearing to extraordinary type or in particular parts of the paper, inserted at special rates.

SAN FRANCISCO:

Saturday, June 27, 1874.

TABLE OF CONTENTS.

GENERAL EDITORIALS.—Ground or Underground; "Hyperion to a Satyr;" The Saw-Mill Railroad, 401. The Tyrolean Grape-cure: A Representative Fruit Grower; Insect Pests Increasing in California, 408. Coveting Our Neighbor's Servant; The Human Frame: The Wolf; The Coyote, 409. Patents and Inventions, 412.—A Saw-Mill Railroad, 401. A Coyote: A California Wolf, 409.
CORRESPONDENCE.—From Santa Cruz; Express Charges, 402.
THE VINEYARD.—A Vintage in the Sierras; The Grape Worm; "Worms After the Grapes," 402.
THE SWINE YARD.—Points of a Berkshire; Carbon for Hogs; Raising Hogs, 402.
CATTLE BREEDERS.—Col. Younger on Short-horns; Blind Calves, 403.
PATRONS OF HUSBANDRY.—Progress of the Patrons in California; New Granges; Meetings; Etc., 404.
SHEEP AND WOOL.—Experiment with Sheep in Germany; The Gad-fly; Sheep of the Bible, 405.
POULTRY YARD.—Employment for Fowls; Mr. Mechl on Poultry; The Sex of Eggs; Poultry Raising; The Cause of Chicken Cholera, 405.
HOME CIRCLE.—Time Levelled All (Poetry); Mr. and Mrs. Snowler; A Word Fittingly Spoken, 406.
Tea-table Gossip.—No. 1; The Old Homestead, 407.
YOUNG FOLKS' COLUMN.—Table Manners; For Little Folks; "Dogology;" John's Share; Girls: In Love with His Mother, 407.
GOOD HEALTH.—Liebig's Extract; Food; Ozone; Poisonous Wall-Papers; Ventilation and Warming, 407.
AGRICULTURAL NOTES from various counties in California, 412.
MISCELLANEOUS.—Large Yield; Tall Grain; From Vacaville: How Thermometers are Made; Wine and Fermented Fruit Juices; Graining; Windows for Dark Rooms; Danger of Using Shot for Cleaning Bottles; Coal; A Car-load; The Waste of Cotton Seed; Paint for Wood, 403. The Tuolumne Reunion, 410.

Our Great National Anniversary.

Judging from present indications, our nation will celebrate the approaching anniversary of its independence with unusual heartiness and zeal. From all quarters reports are received of active preparations, and unity and harmony seem to prevail generally. In San Francisco arrangements are nearly perfected by means of which a celebration will be secured worthy of the occasion; while in other cities and villages, so far as heard from, similar preparations are being made.

An increased interest in holidays generally, and a disposition to keep and to enjoy them is one of the perceptible changes in the habits and inclinations of the American people. And especially since the war of the rebellion has the nation manifested an increased enthusiasm in celebrating those of a national character. This apparent change in regard to the keeping of holidays is commendable, even in connection with those of a social and festive character; but as manifested in an increased enthusiasm in keeping our national holidays it becomes a hopeful sign of growing patriotism.

STILL MODEST.—The RURAL PRESS is continually receiving so many compliments from its readers that all its proverbial modesty is needed to deter it from joining in the general chorus, and "blowing its own horn" occasionally. Still, it may be better as it is; for in all probability this very modesty may be one of the qualities which bring forth the compliments alluded to. We shall, therefore, satisfy ourselves, as usual, with the conviction that the Press supplies the wants and gratifies the tastes of its readers; thanking them, meanwhile, for their hearty encouragement and support.

TOMATOES.—An item is going the rounds of the press to the effect that Mr. Burton, of Island Ranch, near Tahoe City, has succeeded in raising tomatoes 6,425 feet above the level of the sea. A pretty tall vine, that!
N. B.—No patent on this. Never mind crediting RURAL PRESS.

The Tyrolean Grape-cure.

This readers of the Press will probably anticipate from the above heading a dissertation on some process of curing grapes. But we propose to notice a system by which some of the ills that flesh is heir to are declared to be cured by means of the grape, and not to speak of any mode of preparing this luscious fruit for market.

The city of Meran, the ancient capital of Tyrol, has long been noted as a place to which invalids resort to eat grapes; not simply because they are supposed to be harmless, but that they are acknowledged to be curative; especially in bronchial and other diseases of the throat and lungs. So extensive and permanent is this patronage, that Meran relies upon it principally for its support. The population of the city numbers four thousand five hundred, but this number is greatly increased during the months of August, September and October by strangers, who come here for the grape-cure, and to rest awhile in a climate which resembles closely that of California. The visitors are German, Russian and Italian, with a few English and Americans; and invalids, especially those suffering from throat and lung diseases, find it an excellent winter residence. Dark and heavy arcades extend through the principal streets, and under these the business of the city—the traffic in grapes forming an important feature—is transacted. This retired position and quiet character of the place, with its dry and pure atmosphere of the surrounding country, must necessarily act as important auxiliaries in curing chronic diseases of the above-named types; but no higher position than as aids is claimed for them: the chief reliance of the invalids being placed on the grape-cure.

A recent visitor to Meran gives in the columns of *Chamber's Journal* the following account of its grape cure:

The great object of interest here, the absorbing occupation of life, is—eating grapes. The first thing one does on arriving at Meran is to buy a basket; and the visitor is to be seen at seven next morning, gay and exultant, buying grapes to fill his purchase of the evening before, wondering much at their cheapness; yet discovering after a very few days' experience, that he paid rather highly in giving at once the price demanded. For grapes of the richest bloom and most delicious flavor are to be seen all around; they hang in purple bunches over all the hills, in every garden, round every cottage porch; carts and baskets full of them are brought into town every morning, and they lie heaped on stalls in glorious profusion at the corners of the streets. Everybody who comes "takes the grape-cure," to the extent of eating more grapes than he ever did before in his life, unless he prefers figs, which are almost as plentiful and excellent. But I propose now to speak of those invalids suffering from bronchial affections, or incipient consumption, or other complaints, for whom this most agreeable medicine has been prescribed.

No quantity of grapes under three pounds a day can be considered as a true and energetic grape-cure—less than this is mere pleasant dallying. The patient begins with one or two pounds a day, dividing the quantity into three portions—one taken an hour before breakfast, the next between that and dinner (which takes place at 12:30 or 1 at latest, at Meran), and the last portion in the afternoon or evening, an hour before the last meal of the day. The grapes must be eaten in the open air, an injunction obeyed to the letter at Meran, as everybody walks about eating grapes all day long, unless you prefer taking one of your three portions sitting in your verandah, gazing lazily out over the lovely country. After a couple of days, the quantity is to be increased by half a pound, until it reaches three or four pounds. This is often sufficient—dependent, of course, upon the nature of the disease, the progress it has made, etc. Many people eat six pounds daily, although as many as eight are said to be unusual.

Patients are not to be discouraged if they feel less well after three or four days of grape-eating; this is not seldom the case; but this crisis being past, they speedily feel the benefit of the treatment. One great advantage of the grape-cure is, that no special diet is enforced. Food in any way trying to the digestion is, of course, forbidden; and other fruit is in general not recommended; but after eating from four to six pounds of grapes daily, one does not feel any particular inclination for further indulgence in Pomona's haunts. Grapes, containing a large quantity of nourishment, have a very satisfying effect on the appetite generally, and less of other food is required; and in cases where the cure is taking good effect, the patient gains in weight, and, after a while, in strength also. As there are some diseases of the respiratory organs for which the grape-cure is rather injurious than otherwise, it is necessary to consult a physician before undertaking it. The cure occupies from four to six weeks, and during September and October the grapes are at their best. Early ones are to be obtained in August, and late ones in November, but they are neither so good nor so efficacious; the country, too, is in its greatest beauty during the height of the grape season.

The grape has always been counted among the most wholesome of fruits, and its nutritive properties have attracted considerable attention of late. It is believed by many that it will yet take its place among the standard articles of food. In cases where the grapes have been

produced in superabundance in California, they have been fed liberally to some kinds of farm stock, the result going far to establish their claims as an economical article of food. But we were hardly prepared for the intelligence contained in the above quotation; and it is not given here with a view to induce the establishing of a similar enterprise in California, though Tyrol cannot excel us in the perfection of either climate or grape. We wish merely to turn the attention of our readers to the subject of grape consumption, and to inspire confidence in fruit generally, but more particularly in the grape, as wholesome, nutritious and economical food. Still, it would be well to give their curative properties due consideration.

Look Out For Fires.

People who only see the harvest-field in print or on canvas, look upon it simply as something glorious and beautiful. They are aware that it demands an immense amount of labor, but even this labor is supposed to partake largely of the glory that surrounds the harvest field, and is, in a measure, its own reward. But behind this somewhat gaudy curtain, care, anxiety, and labor, stripped of all their romantic surroundings, are busy gathering in their abundant harvests. The farmer receives at harvest-time the hearty congratulations and applause of the whole community, but there is another hearty bestowal which he should receive through this long day of trial, when his heart and brain are taxed as severely as his muscles; he should have the prayers of the community. When we consider the stern realities which he must encounter, and the fearful uncertainties he may be called upon to meet, should he not be considered as fitting a subject of prayer as the sailor during his perilous voyage, or the soldier while performing his duties and facing the dangers of a military campaign?

Some of the farmers of California have, at the very commencement of their harvest campaign, been severely tried by fire. One of these, Mr. Sturgeon, living a few miles from Hill's Ferry, lost by fire on Wednesday the 10th inst. two stacks of grain containing 1,000 sacks; the fire extending, also, over 160 acres of stubble ground. A team of four horses was only saved by the greatest exertions. Another grain stack, the property of Mr. Wm. Horton, residing near Stockton, was burned about the same time as the above; the fire destroying about 700 bushels of barley. This last fire is supposed to be the work of an incendiary.

Farmers should be on their guard against accidental fires, and the whole community should be on the alert to frustrate the plans of the incendiary and to bring him to justice.

A Representative Fruit Grower.

A call from Mr. J. R. Nickerson, of Placer county, is among the pleasant, friendly visits received during the present week. We do not know how many blades of grass Mr. N. has caused to grow where none ever grew before, but we can vouch for his services in greatly increasing the production of California fruit, and also in improving its quality. Two hundred and twenty-five acres is something of a fruit patch; and this is the amount of territory which Mr. Nickerson has at present devoted to fruit growing. His list of fruits is a long and varied one, embracing almost everything that California can produce. His principal fruit, however, is the grape, of which he has a great many varieties. Our readers will very naturally conclude that the grower of such a vast quantity of fruit must necessarily be able to give but little attention to selection of varieties and improvement in the quality of fruit, but such is not the case. Mr. N. is a close observer, and enthusiastic worker in the improvement of our fruit. During the two seasons just passed he has been practicing an entirely new system of grape pruning, by means of which he expects to secure to the vine a great increase of product. His success during the two seasons in which he has practiced his improved system has been even beyond his most sanguine anticipations. We expect to be able to lay the details of this system before the readers of the Press soon, as Mr. Nickerson is among those who wish to see all good things disseminated as widely as possible.

WHAT THEY SAY AT THE EAST.—The Cincinnati Times thus speaks of the present grain crop of California: Last year we opened our eyes and mouths to marvel over the immensity of the California wheat crop, and this year we are still further astounded by the information that the crop of 1873 will be more than doubled. The area under cultivation is upwards of 2,000,000 acres, 300,000 acres more than last year, and the yield is extraordinarily fine. The total crop is estimated at a minimum figure of 35,000,000 bushels, leaving 25,000,000 bushels for export—nearly twice the greatest amount that California has ever furnished for exportation, more than all the rest of the United States exported last year, and twice as much as Russia exported from her great grain districts on the Danube. California's gold yield is a mere trifle compared with this golden shower of grain.

Insect Pests Increasing in California.

We notice, in looking over our country exchanges, that from several localities come complaints of various insect pests having made their appearance. In no case, we believe, have they assumed proportions of sufficient magnitude to give cause for any general alarm; still such visitations should not be lightly passed over, for the canse which this season produce comparatively small quantities of the pests may, in coming seasons, if unchecked, or under more favorable conditions, produce them in destructive numbers. While we believe the appearance of the grape worm in some localities, the potato disease in others, the canrenlio and grasshoppers in still others, to be due in a great measure to the almost unprecedentedly wet warm spring and summer we have had and are having, yet we fear a part may be attributable to that train of evils which almost invariably follows the extensive occupation and farming of any country, and which consists in killing and frightening away the natural enemies of these pests—the birds—and in the greater introduction of their normal food in the shape of the crops they prey upon.

The wonderful rapidity with which forms of life may be called into existence under conditions favorable to their development is well known; for instances of which, see the vast hordes of mosquitoes which follow the overflow of the bottom lands in many States; the stagnant pools and ponds left by the retreating flood, and heated under the rays of a burning sun, forming the best possible nidus for them, and forthwith they put in an appearance in countless myriads and apparently almost independent of parentage. Yet spontaneous evolution is far from being necessary to account for their presence, and in the wonderful powers of reproduction of many of the forms of insect life lies our greatest danger. Hence we can easily see in the destruction of a single moth in the spring the death of almost, if not quite, millions of army worms or caterpillars, or similar pests in the coming summer. For this reason we believe it to be the duty of every farmer to protect and encourage by all possible means those birds which feed upon these pests in all stages of their development, whether larvae, pupae or perfect insects. He can well afford the small per cent. these tiny underwriters ask for insuring his crops against loss from these sources; and which is more than repaid by the dividends he receives in the way of cheerful, caroling companionship in his toil.

As to the best means of fighting these pests in localities where they are at work, a city cotemporary offers a few timely hints which are as follows: "A coat of pitch between earth and air will do wonders with peach trees. A sprinkling of salt between cabbage rows will preserve them from caterpillars and slugs. A little lime slaked and showered over newly-turned earth will destroy grub-worms of all kinds, and scarcely an invader known to the insect world is not immediately conquered by easy means." To which we would add that in those districts where the grape worm is traveling from vineyard to vineyard, a deep furrow with the land-side towards the vineyard, ploughed all around, will prove a formidable barrier, and if the same can be filled with water from the irrigating ditches, the defence is almost complete.

THE WEATHER IN SAN FRANCISCO.—In our endeavors to gratify the public curiosity concerning the state of the weather in all portions of the country, we clip carefully and sedulously from our exchanges from all quarters, and our readers will be able to learn from our agricultural notes how the weather is conducting itself in various localities. They may possibly give a thought to San Francisco, and feel disposed to ask the always-in-order question—"How's the weather?" In reply to such inquiries we would say that San Francisco is now enjoying delightful weather. The nights are perhaps a little too cold for the growing corn or the corner loafers, even; but San Francisco does not need to grow any of the former, while of the latter she grows more than she needs under any and every dispensation of the weather. To the tourist now visiting this city, any splenetic complaints against the weather now prevailing appear decidedly unreasonable. They declare that people who are not satisfied with our present standard of weather must be hard to please.

GOOD FOR ALL INDUSTRIES.—An agreeable phase of the present harvest season is the large demand for the best available implements. The sale of reapers and headers is said to be unprecedented. Consequently our manufacturers and dealers in these articles are already receiving a substantial guarantee of the prosperous times approaching. This must necessarily inspire confidence in various quarters, and secure the investment of capital and labor in industries connected with agriculture.

Banner Mining district, in San Felipe county, San Diego county, is now a very thriving settlement. It contains two hotels, two stores, a butcher-shop, two mill offices, a blacksmith-shop, a large stable, three or four saloons, and 25 or 30 residences.

THE Mendocino Democrat notes the appearance of grub in the grain in that vicinity.

Coveting Our Neighbor's Servant.

The system of domestic service in this country is one of the few points where our people can be brought to acknowledge their inferiority to the countries of the old world; and here the confession—like many others for which human nature expects to be credited—is prompted by vanity, rather than humility. When we acknowledge that our atmosphere is fatal to domestic servitude, it is done in a spirit similar to that which we may suppose governed the poet Cowper, when he declares that: "Slaves cannot breathe in England." A free-born American, man or woman, is hardly expected to be fit for service, either by nature or habit; and when those who were born and reared in this condition in Europe became incapacitated for their legitimate occupation, and seem to lose even the desire to please, after a brief residence in this country, it is considered as complimentary to the character of our political institutions and social habits.

This is highly gratifying to our democratic spirit; but the indulgence is followed by a woe of depression, when we consider the value of what we have sacrificed on the altar of democracy; for in nearly all classes of our people the want of faithful and efficient servants is severely felt. It is one of the few blessings that Americans are willing to concede the possession of to other countries, and about the only one that excites our envy. Probably there is not one of the Divine commandments so often violated in this country, as that which says: "Thou shalt not covet thy neighbor's man servant, nor his maid servant."

It may seem extremely creditable to our humility to acknowledge the superiority of the servants of other countries, but we must lower our pride still further before we are able to obtain a correct view of the matter. It is not enough for us to own that Americans are ill adapted for the position of servants; we must confess that our men and women are not fit to become masters and mistresses. If the servants of the old countries have the principles that form the basis of domestic service instilled into their youthful minds, and impressed upon them at every step in their humble career, and even inherit the requisite characteristics; on the other hand, their masters and mistresses are bred and educated for the high positions which they are to occupy, and inherit much of the requisite dignity. On one side there is confident submissiveness and veneration; on the other, the duties and responsibilities, as well as the privileges of rank and station, are fully realized. The spirit of jealous rivalry, that follows equality like a shifting shadow, is rarely seen there.

How different it is with us! Many of our masters and mistresses have but lately emerged out of servitude themselves; lacking the experience indispensable in the proper management of servants, and quite destitute of dignity. Consequently their errors are detected and freely commented on by those who are serving them, and they fail to secure their respect. The best drilled army of servants would soon become demoralized under such leaders.

The mistress, who occasionally devotes a leisure hour to writing racy articles for the family paper, or magazine, showing the sins and follies of American servants in the worst possible light, belaboring that ignorant, but willful "Bridget," with her wit and spleen, was, perhaps, three years ago, a milliner's apprentice, or possibly a "Bridget," herself. After reading these ludicrous or shocking accounts of female servants, and seeing the caricatures of them in funny papers, we are hardly prepared to meet the original as she comes out of the side door in a lady-like manner. Fashion and taste have favored her equally with her mistress, her apparel being inferior in nothing but the cost of the material; and the difference here is scarcely discernible, except by dealers in the articles. She is just as attractive an object as the newly made lady, who sits in the parlor window and eyes her with a jealous glance. As she comes sailing gaily out of the servants' gate, she tosses her head saucily, after taking a look at her mistress, as much as to say, "You needn't pout on your airs; I know all about you and your family. I may, perhaps, sit in as grand a parlor of my own, and ride in my own coach, some day." Very likely these predictions will come true; and we may expect to see her sitting languidly in her own library, complaining through the columns of her favorite paper about these horrid American servants.

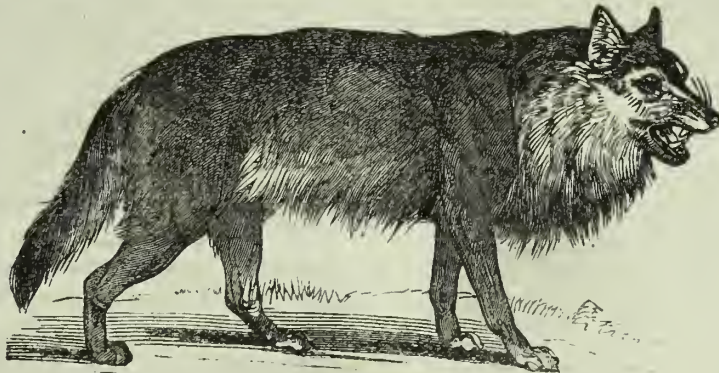
Among male servants and employees of all kinds, the same cause for complaint exists. In countries where the dividing lines between classes are clearly defined and permanent, there is little of this fretful kicking in the traces by servants, and the heads of their superiors are not turned by the sight of their position. The servant feels no disgrace in serving the son of his own father's master. But here a man may be called upon to serve his former playmates; whose family, perhaps, held a position below that of his own; and if he does not know, and keep his place, the other is as nearly lost, and appears to quite as great a disadvantage in his new position as master.

The rapid deterioration of foreign servants after their arrival in this country, is not altogether owing to the influence of the unusual liberty they enjoy here: it is caused more by their connection with unsuitable masters and mistresses. It is like placing a team of willing and reliable horses in the hands of a careless or unskillful teamster. It is often remarked

by the lookers-on at the accidents and annoyances that occur on the road, that the horses evidently know more than their drivers; but their judgment and previous training are of no avail in the hands of those who are often placed over them. They lose confidence in themselves, even, when they no longer know what is wanted of them.

The appearance and conduct of servants, and even of horses and cattle, are as sure an indication of the character of their employers or owners, as their own actions; and if there are no good servants found in this country, we may safely conclude that there are no good masters and mistresses here.

It is expected that any one who points out a social or political evil will prescribe a remedy, as a matter of course; and the reader asks at once: "Well, now, what does the writer propose to do in the case, supposing the truth of his statements to be admitted?" There has been no lack of proposed remedies for the defects of our domestic service system. If they have been powerless for good, the fault is probably not so much in the remedies themselves, as in an incorrect diagnosis of the disease. In fact, society does not require any further treatment in such cases beyond a thorough under-



A CALIFORNIA WOLF.

standing of its actual condition; and if masters and mistresses can be brought to see that they are as much to blame as the servants, it will, at least, be a good starting point in the desired reform.

We have found that the service systems of other countries do not accord with our national characteristics. They will not bear transplanting in our soil. This want will probably be supplied from the undeveloped resources of our favored country, though it may require a long time to perfect the system. It does not necessarily require the degradation of any class. If both parties can be fully heard from, or both silence their complaints, and masters and servants would come together, without the assist-



A COYOTE.

ance of any go-between demagogues, they could understand and realize their mutual obligations; or, they may possibly discover that there is really no obligation on either side, any more than between buyer and seller; and all that is required between the parties is a fair price for a good article, and common courtesy.

COOL-WEATHER HAY-MAKERS.—It is not improbable that some of those now harvesting their hay-crop receive occasional applications, such as a friend of ours once received in New York, where the hay-makers are almost burned at the stake or stack, for their agricultural faith. At this time of the year mechanical trades are dull there; and one day some men out of work had strayed a few miles into the country, and going to the proprietor of the hay-field, who occupied the position of leader among the sweating mowers, asked him if he could give them a job. He questioned them as to their experience in hay-making, and also as to their ability to stand such hard work. They confessed to having had no experience in this work; but as to the latter, they thought they could stand the work, if the weather was not too hot. He told them that when the weather was not too hot for comfort it was too cold for hay-making; and as he had plenty of cool-weather hay-makers at present, he should not want them.

The Currency Bill has been signed by the President. This bill fixes the greenback circulation at \$382,000,000—adding to the present circulation \$26,000,000.

The Human Frame.

The Liver.

The liver—the subject of this one of our series of articles—is, perhaps, less understood than any other organ of the body. Physiologists have been for years, and still are, disputing, as to the exact functions it performs in the human economy. But to speculate about its undetermined offices, falls, happily, not within the province of this article, so we will content ourselves with presenting a few facts which ought to be in the possession of every one.

First, as to its position: Its major portion lies on the right side just behind the lower ribs, and protruding about three-fourths of an inch below them. From right to left it is about 10 or 12 inches; from before, backwards, about six inches, and about three inches in its vertical diameter, so that its position is easily estimated from these figures, remembering that it tapers to a rounded point as it approaches the left side. Its weight is from three to four pounds, being considerably the largest gland in

the body. Occupying so much space as it does in an organization where every atom is employed in some manner, it is apparent that its functions must be very important. All we know of these is, that it receives through the portal circulation a large portion of the blood from the stomach, spleen and intestines, which is laden with products absorbed during digestion, and compels it to undergo, within its substance, a second capillary circulation, before passing to the heart; that it pours into the partially digested food in the duodenum, during 24 hours, an amount of its peculiar secretion—the bile—almost equal to its own weight. With offices so important, but so little understood, it is easy to see why it is made the universal scape-

goat of the ignorant; that bullet-headed, profound doctor or sage, knowing old lady who shakes his or her head and gravely declares that, "The liver is out of order, my dear," instantly gets credit for great profundity of learning and masterly intuitive perception. For our part, we only introduce this brief description of it here in order to entreat the readers of the Press to "give it a fair show." We suppose that here some fair head will be tossed with the exclamation, "Oh, dear, we poor women have to catch it now for tight-lacing." Well, you ought to catch it; but we have no severer strictures on your getting tight by lacing than we have on any of our male readers who may get tight in their peculiar way. Not even tight-lacing is so surely destructive to the functions of the liver as is alcohol in any form. The lacing of the women, by interfering with its functions, in digestion, is a fruitful cause of dyspepsia, if long persisted in; but the drinking of the men causes almost an absolute suspension of those functions, followed very often by surely fatal fatty or waxy degeneration, and the drinker dies of "liver complaint," without dreaming that the use of alcohol killed him. So, in concluding this article, we would respectfully beg of both our male and female readers never to "get tight" in any manner whatever—never crowd and displace the liver by tight-lacing, or stupify it with alcohol, if you value the blessings of perfect health.

A fish farmer in Illinois gets 75 cents per pound for his trout; thus a small string of fish will bring as much as a sheep, and they require neither grain, hay or stabling.

The Wolf.

The California wolf, unlike those found elsewhere, is of a gray color, slightly mixed with black. It is also larger and more dangerous. It boldly attacks cattle, and its power of muscle in the neck is so great that it can gather up a calf or sheep and easily run off with it. Its scent is quite remarkable. It is said that it scarcely ever fails to reach its object, when once on the track. In the winter season it ventures very near the towns and villages, and creates considerable excitement. It never attacks horses or cattle in the rear, from the fact, probably, that the latter use their heels to too much advantage. It, however, pounces upon them in front, and generally conquers them. When suffering from hunger, it will, it is said, eat the flesh from its own bones.

The Coyote.

This animal is, it is claimed by some, peculiar to California, and not found in any other country. Of this we have our doubts. It may exist elsewhere—possibly in Mexico—yet on this point we cannot speak knowingly. One thing, however, we do very well know: It is the most thieving thing that walks on four legs. Our artist has, we think, displayed his genius and taste in the manner in which he presents this strange animal to our view. It will be observed that the rascal is feasting on the bone of some poor victim which he has evidently pounced upon in an unguarded moment, during a dark night (coyotes seldom leave their holes during the day), while his sneaking attitude and villainous expression of eye plainly indicate his general disposition.

BRICK MAKING.—Stockton is supplying a large share of the brick used in building the Palace Hotel in San Francisco. The bricks are made on the banks of Calaveras river, and hauled by team to the water front in this city, where they are shipped on schooners to the bay. J. C. Smith has two gangs of workmen—nine men in each gang, constantly at work in the brickyard. Each gang turns out 7,500 bricks daily, or 15,000 per day by the two gangs. He expects to produce not less than 2,000,000 bricks during the season. James Edwards & Son are similarly engaged, and have an equal force of men employed. This gives a daily product of 30,000 bricks. We are told that it requires, on an average, a little over one cord of wood to burn 3,000 bricks, or 350 cords to 1,000,000; therefore in burning 4,000,000 bricks, the amount which two firms are expected to produce, not less than 1,400 cords of wood will be required.

THE EAGLE HAY PRESS.—Many of the readers of the RURAL PRESS are probably looking about them at the present time with a view to purchase a good and cheap hay press. We would call the attention of such to the advertisement of the Kimball Manufacturing Company, which will be found in our present issue. The "Eagle Hay Press," of which they are the manufacturers, is well spoken of by those who have used it; and by the cut and accompanying description an estimate may be formed of its merits.

WHEAT SHELLING.—The unusual fullness of the wheat heads of the present crop has caused considerable shelling. In some fields, where the growth is particularly tall and heavy, a large percentage is said to be lost in this way. In some cases where forty bushels to the acre was expected, not more than thirty will be realized, the difference being caused by shelling out. Farmers seem to differ materially in their opinion as to the liability of certain kinds of wheat to shell.

The following is the average yield per acre of the crops of Arizona Territory for 1873: Barley, 1,344½ pounds; wheat, 1,213 pounds; corn, 1,579½ pounds; potatoes, 7,853½ pounds; rye, 1,500 pounds; oats, 1,200 pounds; sugarcane, 24,000 pounds; tobacco, 800 pounds; vegetables, 5,875 pounds; and alfalfa, 20,000 pounds.

One of the largest vineyards in Sacramento county, and perhaps the largest, is that of John Miller, located on the celebrated Florin wine belt, which extends from the American river to within a short distance of the Cosumnes, and spreads out east and west full ten miles.

OVER 1,000 acres of grain is growing upon the Gerke farm, Butte county, promising a yield of at least 30 bushels to the acre. The vineyard never looked better, and Gerke says he will make at least 100,000 gallons of wine this season.

It is reported that a disease is prevalent in the vicinity of Antioch which is destroying cattle. The animal becomes dizzy, staggers about, and drops dead.

The hay crop in Nevada county is said to be first-rate. The yield is large and the quality good. The article is selling in Nevada City, however, for \$40 and \$45 per ton.

FROM December last until the present June there were received at San Francisco, from Los Angeles, 4,544,140 oranges, 490,280 lemons and 22,000 limes.

THE Los Angeles honey crop is expected to amount to 200,000 pounds.

The Tuolumne Reunion.

One of the largest reunions of the former residents of Tuolumne county, ever had in this State, assembled at Badger's Grand Central Park, East Oakland, on Wednesday of last week, June 17th, on the occasion of the seventh anniversary of that association. There were between 2,500 and 3,000 men, women and children present; and at least 1,500 of that number were former residents of "Old Tuolumne." The entire arrangements were complete in every particular, and for which great credit is due the entire management, but especially their retiring President, Mr. L. P. McCarty, who labored ardently for weeks previous to make it a success. It was a financial as well as a social success. Although their expenses were very large, they will net some \$200 from this last gathering.

The music, both instrumental and vocal, would have done credit to our first-class concerts—for none but first-class artists participated. Among them were the entire members comprising Walcott's band; and of vocalists, Miss Fannie Marston, soprano; Mrs. Julia A. Cameron, contralto; Prof. Carmini Morley, tenor; Mr. C. Makin, baritone. The programme of dances was elaborately arranged, and the dances themselves sustained with zest.

At 12 o'clock the floor was cleared and the large assemblage was called to order by the President, and the programme carried out in full, with some additions. First a quartette, "Nights Shade no Longer," was sung by Miss Fannie Marston, Mrs. Julia A. Cameron, Prof. Morley and Mr. Makin. The song, "The Sword of Bunker Hill," by Mr. Makin, followed, which, taking into consideration the disadvantages of the Pavilion he had to sing in, was the best rendered we have ever heard of; after which came the poem by Hon. Walter Murray, who was received with immense applause, and proceeded to deliver the following poem, which at frequent intervals was received with enthusiastic demonstrations of approbation:

Hail Tuolumne.

The weary exile, heartsick and distressed,
Who deems of every land his own the best,
Strains at the chords which bind him to that home
From whence in luckless hour he chanced to roam,
And while his body, weak and trembling, stands,
Alone and friendless, within foreign lands,
Casts back his soul on spirit-wings to greet
Affection's smile, a kindred's fond heart beat,
His Nation's flag, and all those ties of earth
Which sanctify to him the country of his birth.

Not these the feelings that we hold for thee,
Our early choice, thou fair Tuolumne.
No Mother thou to us; our baby knees
Ne'er knelt before thee, and our infant teaze
Ne'er brought the flush of anger to thy brow—
Thou wert not the Young Matron then, as now,
Thou wert our Glorious Mistress, in that time
When youth (not yet attained to manhood's prime)
Revels in Nature's beauties and adores
Far more the creature than the Great First Cause.
We wandered in thy palaces of pines,
We drank thy mountain air as richest wines,
We layed within thy limpid mountain streams,
And, though not poets, shared the poet's dreams.
We delved beneath thy bosom, and drew thence
Thy bounteous treasures, rich in pounds and pence.
But richer still in those ambitious hopes
That soar beyond the poet's rhymes and tropes.
Some toiled to gain the mastery of men,
Some to woo Fickle Fortune back again;
Some thought of father, mother, loved ones dear,
And plumed to brush aside affliction's tear.
Some thought of one behind them, dearer far,
Their life's fond object and its guiding star,
For whom they dared to leave the toil and care
Which dog the wanderer's footsteps everywhere,
And counted all their perils cheaply bought;
Could they but live in the lost dear one's thought;
Rich in the hope, oft groundless and fruitless,
To achieve at some long day a heart's home and a mate.

Ah! many a sacred hope was lost of old
In that wild, feverish, toilsome hunt for gold,
And far from me to stamp as sordid those
Who thus went forth to battle with the foes
Of youth, and strength, and high emprise, and health,
Nor hold them lustful votaries of wealth.
Perish the cynic who can only see
Mean impulse, where, perchance, divine may be.
Rather do I rejoice to know and see
So many friends of Old Tuolumne—
So many playmates of her younger hours,
So many comrades, dear to us and ours,
Whose life's long struggle whether lost or won,
Deserves the praise of each and every one.
Let us remember with an honest pride
All those who, battling against the fierce tide
Of Fate and Fortune, have impressed a name
On California's pregnant roll of fame.
And what if no o'er-mastering spirit stands,
A beacon light to this and other lands,
To speak of the high worth begot of thee,
Thou fairest county, proud Tuolumne!
Yet in the humbler record of brave hearts,
Of honest name, and sound, enduring parts,
Thou wilt may challenge all thy sisters fair
To meet with thee in emulous compare.
And you, my friends, who, whether you have part
In the record, or hold it to your heart,
Bear with me while from memory I recall
Some names that from our roll we can't let fall.

'Tis much to expect that those rude, reckless times
Could wed a churchman to my rider rhymes;
And yet the very ground on which we stand
Tells of a Hamilton, whose bold, firm hand,
And free, fair record, speaks of mountain air
Inhaled of old in our Columbia.
And Harmon, too, whose useful life bears fruit
In teaching young ideas how to shoot,
Once, in Sousa's bright and early day,
"Pointed to brighter worlds, and lead the way."
Yolo has borrowed in our David Deal
A great deal more than we can from her Steel.

After the Church, the Law comes close behind,
And here a richer record we shall find.
For our Divinelle, with just an equal way,
Dispenses justice to either side the bay;
Quint, the great champion of the Fair—her foe—
(Take either side you will,) is ours, you know;
Martin, McGarvey, Cavis, Elkins, Ford,
Each in his turn has wielded Justice's sword,
And Jemmy Letford, last of the old race,
Remains our Justice of the "Pacc."
McNeill's bright ermine, brighter still appears
When born upon our roll of Pioneers.

Congress sends back the names, still unforget,
Of Brave Ned Marshall and of Charley Scott;
Dorsey adorns Sonora, Wolcott halls
From Contra Costa's land of pleasant vales;
And Ferral, lo-day's Orator, whose time
The State employs in prosecuting crime,
With forceful words on heart-beat quickens when
He mounts the rostrum or wields the pen.

And let us not forget the honored dead—
Green springs the turf on Barbour's reeking head,
Whose polished speech once warmed the civic strife
And to forensic lore gave newer life.
And poor Ben Moore, the trusty friend of old,
Whose honest voice was never bought or sold,
May he enjoy a peace he never knew—
In the life-ferver he so well passed through.
And Coffroth, too, the eloquent, the sage,
The poet-orator, whose ripper age,
If spared, had brought to him a higher fame,
A greater labor done, a fuller name.

Pass we to living names: From San Joaquin
Hark to the drum-beat and the bugle-ring;
Evans, the statesman-warrior—the word
Recalls the flashing of the hero's sword;
List to the rifle-blast, the dismal cry
Of the fierce Indian's death agony;
Such be the messengers of peace we send
To woo the red man to a righteous end.

The clang of war, the thought of duty done,
Recalls the bright and honored name of Gunn,
Whose "mighty weapon," always in the right,
Ne'er faltered in the journalistic fight.
His son, a Douglass, is true son of thee,
And worthy of thy name—Tuolumne.
And bold McCarthy, hero of the "Flag,"
The first in combat, and the last to lag,
In San Diego's hopeful land of "rail,"
His war-cry shouts, "There's no such word as fail!"
Washburne, the "Pilgrim" and the Pioneer,
His "odium oum dignitate" passes here,
And half forgets, in his Athenian lair,
The time when Lopez had him by the hair.

And while I speak of comrades who have stood
In public service for the public good,
I call to mind our Mandeville, whose fate
Was to survey the Senate and the State;
Our Sedgwick, with his occupation gone—
For Loel's Option's cry is "Good-by, John!"
Our Chamberlain, whose proper place should be
Dispensing verse to-day, instead of me:
Who, long in office, yet ("his past belief"),
Although Receiver, never was a thief;
And Paul K. Hubbs, the Nestor of our band,
Him of the silvery tongue and ready hand,
Who shining in the Senate, next was found
Suppressing smugglers in far Puget Sound;
And Charles F. Dodge, and Luckless J. S. Hoff—
And here comes the hearty name of "Thof."

A host of mad parade before my eye:
Radcliff, the high priest of the mystic tie;
Todd and Bertine, the founders of "Express";
Street, who brought lightning through the wilderness;
Herr Alexander, with us as I hope to-day,
And Taylor, from the village 'cross the bay;
And Long Tom Murphy, and Alonzo Green,
(Less green than some whom you and I have seen);
And classic Homer, not the blind of old,
But one whose inspiration ne'er grows cold;
And last, not least, the Rutherford, whose art
Adorned our cities, acting well their part;
They helped to build the old-time mountain home,
May health attend them whereso'er they roam.

"Twas a good thought, from time to time, to bring
In social union and sweet communing,
So many comrades scattered far and near
To spend one pleasant day in all the year.
It rightly sprang from a fair lady's heart;
Therefore let Mrs. Soderer take part
In our remembrance; and let Dinsmore, too,
Her worthy coadjutor, have his due.
Their effort, small at first, commenced a tide
Which kindly thought and honest country pride,
Nish's hearty impulse, woman's smiling eye,
The general sympathy, have swelled so high
That the huge wave, defying Time and Fate,
Sweeps from Sierra to the Golden Gate.

McCarty, too, deserves his meed of praise—
Our Active President, whose nights and days
Were freely given, and who, hand in hand
With Cunningham, McCusker and a band
Of kindred spirits from our mountain heights,
Has helped to swell to-day the sum of our delights.

And let us hope that when again we meet
In this fair spot our loving friends to greet,
All those now present may be here to see,
And swell the cry—All hail, Tuolumne!

At this point of the exercises, by request,
Mrs. Julia A. Cameron sang (as a solo) "The
Days of Auld Lang Syne," which by many
was considered the gem of the day, not only
for its appropriateness, but as well the way
it was rendered.

Miss Fanny Marston next sang "Three Cheers
for the Red, White and Blue" with much
patriotic feeling, and was followed by Prof. C.
Morley, who received a shower of applause
(equal to an encore) for so feelingly singing
the simple ballad, "Thou Art so Near, and yet
so Far." Then followed

The Oration.

This, although an extempore effort, was exceedingly appropriate to such an occasion. The allusions to the distinguished dead pioneers of "Tuolumne" were exceedingly affecting. The eulogies of Coffroth, Solomon, Barber and others produced a profound sensation. The orator, Robert Ferral, of San Francisco, was vociferously applauded at the close of his admirable production, which stamps him as one of the rising orators of our State. In closing his remarks, he very happily referred to that day, June 17th, being the 99th anniversary of the "Battle of Bunker Hill," when he fairly aroused his audience to a pitch of frenzy, referring to the scenes enacted following that battle in our country's history.

"The Star Spangled Banner" was then sung by Miss Marston, Mrs. Cameron, Prof. Morley and Mr. C. Makin, and could not well have been rendered better. The solos performed by E. Schlott, on the French horn, and Signor Caspari on the clarinet, were the great features of the day. Prof. Gustave Scott accompanied the soloists on the piano.

The Collation.

The literary exercises concluded with the solo of E. Schlott on the French horn. Immediately thereafter some two hundred ladies and gentlemen, on invitation of the managers, repaired to the long bowling alley adjoining, which had been gracefully decorated with flowers and evergreens for the collation. Tables

extending the length of the apartment, besides a shorter table in a side room, were spread with a feast of good things. President McCarty presided, with W. G. Dinsmore, Treasurer, on the right, and Mrs. Soderer, one of the founders of the association, on the left. There was no formal speech-making at the banquet, but the President proposed "To Our Guests, the Poet, Orator, Music and the Press," which was responded to by the reporter of the *Alta*, in this wise: "To the President of the day," etc.

Election of Officers.

After the inner man had been satisfied, the dancers repaired to the Pavilion, and the members of the association to the grove, where an election of officers for the ensuing year was had. Here several speeches were made, and sentiments proposed by retiring and newly elected officers. Mr. Dinsmore especially paid a handsome compliment to the press, for the frequent, timely, and liberal notices made of this festival in their columns.

The following named were duly elected officers of the Tuolumne Re-union Association for the ensuing year: President, Jas. L. Homer; Vice-President, Hon. Stephen Wing; Secretary, Hon. P. B. Bacon; Treasurer, Wm. G. Dinsmore; Executive Committee—Z. H. Cunningham, L. Jacobi, H. M. Rosekranz, A. Sharp.

IMPROVED HOG TRAP.—This invention has for its object to furnish an improved device for catching hogs and holding them securely while being ringed, marked, etc. The hog, in seeking to escape through a gap in the trap, steps upon a tilted board, the tilting of which pitches him forward so that his neck may be between levers. The levers, by suitable mechanism, then close and clasp the hog around his neck, and around his body in the rear of his fore legs, where he may be held securely by hooking the straps upon pins.

DURHAM STOCK AS BUTTER MAKERS.

The following letter is published at the instance of Peter Wall, Esq.

GREEN VALLEY RANCH, Marin Co., May 8th, 1874.
MR. J. B. REDMOND—Dear Sir: We have just churned the cream obtained in seven days from our three-year-old heifer which we bought of you, and the result is fourteen and a half pounds (14½ pounds). Thinking that you might be interested in the matter I thought best to drop you a line. If any person thinks that your Durham stock does not milk well I would like to have them swallow this statement. Last year after bringing her from your place (and of course as a two-year-old), and after four months from calving, she made, on dry feed in August, in one week, nine and a half pounds. Respectfully yours,
25v7-4t O. ALLEN & SON.

READ'S ROAD SCRAPER.

STOCKTON, CAL., June 4th, 1874.

MR. R. F. READ, Agent for Welster & Co.—Dear Sir: After testing your Scraper on our road (the Stockton and Lone Narrow Gauge Railroad) for the past twenty days, we can assure you of its value as a labor-saving machine. In the last four days of its operation it has moved 2,800 yards into embankment in good shape, notwithstanding many inconveniences. The team used consisted of eight horses, and the material was all handled three times and a portion of it four. I consider it a great saving over the ordinary methods of handling earth, but cannot give you the exact proportion that it bears until after further work. Yours, etc.,
H. B. PLATT, JAS. D. SCHUTLER,
Contractor. Chief Engineer.

THE END-SHAKE THRESHER.—The following letter is from Wm. P. Harkey, Esq., Sheriff of Sutter county, referring to the value of the Lanfenberg End-Shake Shoe for threshing machines:

YUBA CITY, CAL., March 25, 1874.

MESSES. TREADWELL & CO., San Francisco.—Gentlemen: In regard to the Lanfenberg End-Shake Shoe, which I bought of you last season, I will say I have given it a thorough trial, and if I could not get another I would not take One Thousand Dollars for it. I need it throughout the season on a Russell Separator, which I had run previously with a side-shake, and it saved me a great deal of trouble and much loss. It saves all the grain. I consider it the best and most valuable improvement on the threshing machine yet brought out. It is absolutely indispensable to the economical working of a good thresher.
WM. P. HARKEY.

13v7-3m

Road Making and Ditching Machine.

CHICO, June 11, 1874.

MESSES. WIESTER & CO.—Gentlemen: The Road Road Scraper is a most useful invention. The more I use it the better I like it. In a word, I have come to regard it indispensable, and to go back now to the use of the shovel or the common scraper to make turnpikes or road grades of any kind would seem like returning to the sickle or cradle to harvest grain with.
Yours truly,
JOHN BIDWELL.

WANTED, A HOME.—An intelligent boy, 10 years of age, wants to find a home with some family in the country where he will have occasion to attend school. Is willing to make himself useful at the house during his leisure hours. For particulars, address, "BOY," Box 2361, P. O., San Francisco, Cal. jn20

DR. E. J. FRASER, Homoeopathic Physician and Surgeon, has removed his office and residence from 102 Stockton street to No 305 Kearny street, northwest corner of Bush. 6v7-3m

PACIFIC POTTERY,

Depot—No. 3 California St., San Francisco.

N. CLARK & CO.

Manufacturers of

EARTHEN AND STONEWARE,

WATER AND SEWERAGE PIPE.

Our Vitrified Iron Stone Pipe has been thoroughly tested on private estates and public works, and its merits are fully endorsed by the leading Architects of the State.

J. B. OWENS, Agent.
m9-bp-3m

TREADWELL & CO.

We certify that the partnership of Treadwell & Co., doing business in San Francisco, California, is composed of Leonard L. Treadwell and James F. Place, who both reside in the city and county of San Francisco, and William O. M. Berry, who resides in Oakland, Alameda county, California.

San Francisco, Cal., May 26th, 1874.

LEONARD L. TREADWELL,
JAS. F. PLACE,
WM. O. M. BERRY.

STATE OF CALIFORNIA,
CITY AND COUNTY OF SAN FRANCISCO.

On this May 27th, 1874, before me Henry C. Blake, a Notary Public, in and for said city and county, personally appeared Leonard L. Treadwell, James F. Place and William O. M. Berry, known to me to be the persons whose names are subscribed to the within instrument, and acknowledged to me that they executed the same.

In witness whereof, I have hereunto set my hand and affixed my official seal, the day and year in this certificate first above written.

HENRY C. BLAKE, Notary Public.

H. K. CUMMINGS,
1858.

H. S. BALSTON,
1873.

HENRY K. CUMMINGS & CO.,

Wholesale Fruit and Produce Commission House,

ESTABLISHED 1858.

No. 424 Battery street, southeast corner of Washington, San Francisco.

Our business being exclusively Commission, we have no interests that will conflict with those of the producer. 4v23-1v

PACIFIC OIL AND LEAD WORKS,

SAN FRANCISCO,

Manufacturers of

Linseed and Castor Oils,
OIL CAKES AND MEAL.

Highest price paid for Flax Seed and Castor Beans delivered at our works.
Office, 3 and 5 Front street.
Works, King street, bet. Second and Third. felf-cow

NOTICE.

TO THE SUBSCRIBERS TO THE CAPITAL STOCK

—OF THE—

GRANGERS' BANK OF CALIFORNIA.

Notice is hereby given, that at a meeting of the Directors of the Grangers' Bank of California, held this 23d day of May, A. D. 1874, the first instalment of ten per cent. on the capital stock was levied, payable in U. S. Gold Coin on or before the first day of July, 1874. Payable at the office of the President, 320 California street, San Francisco. By order of the Board.
m30-5t ALFRED F. WALCOTT, President.

MOUNT DIABLO VINEYARD—FOR SALE.

Consists of 40 acres; can make 11,000 gallons of wine this year. Climate mild. Situated at the northern base of Mount Diablo. Good Brandy Distillery; Wine Barrels; Wine Press; Large Concrete Wine Celler. Good Spring of living water handy. Good reasons given for selling. Age of Vines from eight to ten years. A choice variety of Vines. A large quantity of fine grape land can be bought adjoining the above. The whole to be sold at a great bargain. Apply to
B. F. CLAYTON, San Jose.
Or C. J. CLAYTON,
Clayton, Contra Costa Co., Cal.

10v7-6m

FEED-CUTTER ROLLERS

Covered and made new in the best manner at annual rates, at H. ROYER'S Belt Factory, 437 Brannan St.

19v7-3m

CO-OPERATIVE MARBLE WORKS.

JOHN DANIEL & CO.,

Manufacturers of and Dealers in

Monuments, Headstones, Tombs,
MANTEL PIECES, ETC.,

421 Pine street, between Montgomery and
Kearny, SAN FRANCISCO.
21v2-1v

SANTA BARBARA COLLEGE,

SANTA BARBARA, CAL.

A Boarding School for Boys and Girls, offering all the advantages of a thorough modern education. French, German, Spanish, Latin, Greek, Drawing, the Natural Sciences, Gymnastics and Dancing taught without extra charge. Vocal and Instrumental Music receive particular attention. Pupils furnish only a pair of heavy blankets. Next term opens January 6th, 1874.
Write for Catalogue to ELWOOD COOPER,
22v6-1v President Board of Directors.

H. H. H.

HORSE MEDICINE.

Is unsurpassed for its efficacy in curing all for which it is recommended. All Lameness, Spavins, Callous Lumps and Bleimishes of all kinds are speedily removed by it.
WILLIAMS & MOORE, Prop'rs.
3v7-3m Stockton, Cal.

Brittan, Holbrook & Co., Importers of
Stoves and Metals, Tinners' Goods, Tools and Machines,
111 & 113 California, 17 and 19 Davis streets, San Francisco, a. c. 178 J street, Sacramento.

Saul & Co., 579 Market Street, San Francisco. Manufacturers of Carriages, Wagons and Stage Work, of the most improved and practical styles

For the very best Photographs go to BRADLEY & RULOFSON'S GALLERY, with an "Elevato"
420 Montgomery street, San Francisco. 2v7-6m

LANDS & HOMES FOR SALE

RANCHOS FOR SALE ON A LONG TIME.

The "JURUPA RANCHO," situated on both sides of the Santa Ana River, between Anaheim (Los Angeles county) and the town of San Bernardino, containing 35,717 acres, of which a large proportion is level and adapted to grain, general agriculture, grapes, semi-tropical fruits, etc. The famous "Riverside Colony," founded by Judge North, embraces a portion of the east end of this Rancho.

Also, for sale, the Rancho "LA SIERRA SEPULVIDA," adjoining on the southeast, and containing 17,769 acres.

The Southern Overland Railroad will necessarily pass through or very near the Jurupa Rancho. Apply to

ALFRED ROBINSON, Trustee,
542 MARKET STREET,
N. E. Cor. Montgomery.

ap25-tf

RARE CHANCE.

*Fruit Garden and Homestead for Sale.

About 30 miles from Stockton, a fine Fruit Garden of 2 1/2 acres of land, with good house of six rooms. Garden contains about 200 Fruit Trees of choice kinds, such as Peach, Pear, Plum, Pomegranate, Blue and White Fig, Black Limes, Apples, Grapes and Orange, Almond and Black Walnut. A nice place and an abundant harvest of fruit. Good market. A rare chance to step into a good homestead and profitable business. Title perfect. Warranted deed. Price, \$1,800. For further particulars, inquire at this office. 22v7-5t

FARM FOR SALE.

165 Acres 1/2 mile from the town of Windsor; 1 mile from depot; 2 1/2 miles from the famous Russian river. The place is beautifully situated; land all level, divided into three fields well improved. Good house of nine rooms and closets; good barn and outhouses; good orchard of superior fruit; vineyard 12 years old. An abundance of soft water; land well adapted to grain and vegetables; about 2,500 cords of black oak timber; and wood brings \$5 per cord at depot. Three and one-half hours ride from San Francisco, on line of N. P. R. R. Title, United States patent. For particulars apply to JOSEPH DIMMICK P. O. Box 22, Windsor, Sonoma Co., or to Dewey & Co., San Francisco, Cal. Price, \$40 per acre. ap18-tf

FOR SALE.

A splendid HOP RANCH, in one of the best valleys in the State; good dry-house and machinery; about thirty acres of hops in good condition. Will be sold at a bargain; terms to suit.

P. H. SUMNER,

ap18-tf 329 Montgomery street, San Francisco.

FOR SALE.

100 Acres of Good Land,

ONE-FOURTH MILE FROM ST. HELENA.

A portion of the land suitable for Hops; the remainder good for grain or fruit. All fenced and in cultivation. Cheap and on reasonable terms.

14v7-tf

P. H. SUMNER.

DAIRY RANCH FOR SALE,

Near San Luis Obispo, well stocked and fenced, with fine improvements. Plenty of wood and water.

Apply to

T. H. HATCH & CO.,
320 Front street, San Francisco.

Or, **R. M. PRESTON,** Old Creek, San Luis Obispo.
20v7-3m

Buy Real Estate while at Low Rates.

NINE WATER-FRONT LOTS, CHEAP,

On Gift Map 4,

Forming about half of a block fronting on the broad ship channel of Islais Creek; will be sold so low as to make it an inducement to the buyer. Inquire for the owner, Room 18, No. 338 Montgomery st., S. F. bptf

FARMING LAND, TO LEASE ON SHARES. 1,000 ACRES,

Or any part of same, being levied and of similar character to that of SHERMAN ISLAND. Apply to

W. T. S. RYER,

No. 380 Pine street.....SAN FRANCISCO, CAL.

IMPROVE YOUR POULTRY.

It Costs No More to Keep Good Fowls than Poor Ones!



OAKLAND POULTRY YARDS,
COR. 16TH AND CASTRO STREETS, OAKLAND, CAL.

A few trills of imported Dark Brahmas, of the celebrated Black Prince strain, for sale at \$30 per trio. Also, one trio imported Golden Polish, at \$30.

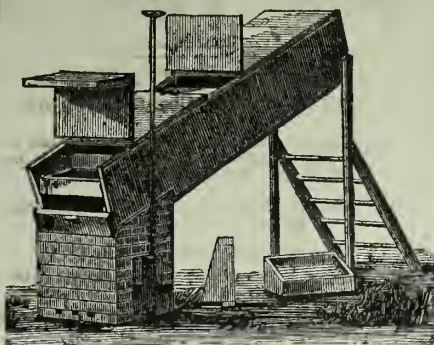
For further information send stamp for Illustrated Circular, containing a full description of all the best known and most profitable Fowls in the world, to

GEO. B. BAYLEY,

P. O. Box 659, San Francisco.

9v7tf

Ryder's American Fruit Drier.

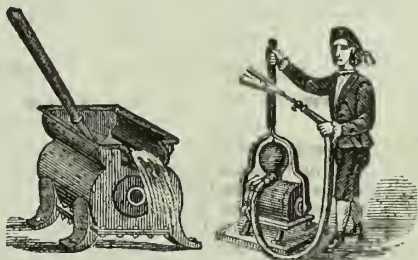


This DRIER is a perfect success in the East, and will be on this Coast when its merits are known. Its cheapness brings it within the means of every Fruit Grower. The uniformity and perfection of its work challenge comparison. The principle claimed for this Drier (and violated in all other Driers in use), is, that no moisture shall come in contact with the fruit after the cut surfaces are once sealed by the heat, to open the cells and allow the aroma and fine qualities of the fruit to escape, which makes it undeniably the most perfect, as it is the most simple mechanical method for curing Fruits, Vegetables, Meats and Grains ever invented. This Drier can make Raisins and the most beautiful crystallized fruit confection, equal to any imported. Can any other Drier do this? The fruit cured on this Drier last season, in this State, took the premium at the State Fair. Our Factory Drier will cure 60 bushels of peaches in a day. Send for Circulars. Farm, County and State Rights, and Driers with Heaters, sold by

J. M. KEELER, General Agent,
306 California street, San Francisco

THE CELEBRATED

SLUTHOUR PUMP,



Now manufactured in the East, in the most perfect manner. Guaranteed in every particular, surpassing any other in the market, for Farm, Ship, Irrigating and Mining purposes. Our large Force, properly mounted, makes a most effective Fire Engine.

KIPP'S UPRIGHT ENGINE, the cheapest and best we could find in the East.

CHASE PIPE CUTTING AND THREADING MACHINE, a most perfect hand or power machine. One boy against two men with any other in use. Has the highest testimonials. It cuts a thread and makes nipples for all sizes of pipes from 1/2 to 2 inches, and only \$150. Also, Metal Ornamental Goods, Fountains, Vases, Statuary, etc. Send for Circulars.

J. M. KEELER & CO.,

Commission and Forwarding Merchants.

Agents for Eastern Manufacturers, 306 California street, San Francisco.

GRANGERS,

TAKE NOTICE.

WE ARE SELLING

FRENCH CHINA, GLASSWARE,

PLATED WARE, ETC.,

CHEAPER THAN ANY OTHER HOUSE

ON THE PACIFIC COAST.

O. LAWTON & CO.,

MARKET STREET,

Under the Grand Hotel, SAN FRANCISCO.

14v7-cow-3m

San Francisco Employment Office,

NO. 606 CLAY STREET,

Crosett & Co., Proprietors.

(Successors to Wm. Vail & Co.)

COUNTRY ORDERS FOR MEN almost invariably filled with FIRST-CLASS HELP.

Farmers can always procure men in any number desirable by giving a little timely notice. Hotels can always get the BEST OF MALE OR FEMALE HELP on short notice. We have the BEST OF FACILITIES FOR PROCURING HELP. Have an Agent on the immigrant trains distributing circulars, upon the arrival of every train. Give us your orders and we will endeavor to give you the fullest satisfaction. ap18-tf

SEEDS!

CROP OF 1873.

I am now receiving a choice collection of

Vegetable,

Agricultural,

and Flower Seeds,

Containing all the BEST varieties, and selected with great care.

ALFALFA!

A choice quality of California growth.

Grass and Clover Seeds.

KENTUCKY BLUE GRASS,

ENGLISH RYE GRASS,

RED TOP,

ORCHARD GRASS,

TIMOTHY,

MESQUIT,

RED CLOVER,

WHITE CLOVER.

FOR SALE AT WHOLESALE OR RETAIL.

GEO. F. SILVESTER,

No. 317 Washington Street,

6v2-ly16p

SAN FRANCISCO.

ARE YOU GOING TO PAINT?

THEN USE THE BEST.

THE AVERILL CHEMICAL PAINT

WILL LAST THREE TIMES AS LONG as the best lead and oil, without CHALKING; is of any desired color. It is prepared for immediate application, requiring no Oil, Thinner or Drier, and does not spoil by standing any length of time. It is equally as good for inside as outside work; over old work as well as new; in fact, where any paint can be used the AVERILL CHEMICAL PAINT will be found superior to any other. Any one can apply it who can use a brush, which truly makes it the FARMER'S FRIEND.

IT IS JUST THE PAINT FOR THE AGE.

IT IS SOLD BY THE GALLON ONLY.

One gallon covers 20 square yards 2 coats.

For further information send for sample card and price list.

MANUFACTURED BY

The California Chemical Paint Company.

TYLER BEACH, Pres't.

M. C. JEWELL, Sec'y.

Office—Corner Fourth and Townsend streets, San Francisco.

16v7-cow-bp-3m

HEALD'S
BRYANT & STRATTON
BUSINESS COLLEGE
24 POST ST.
SAN FRANCISCO

EDUCATION GOOD INSTRUCTION

OPEN TO ALL SEND FOR CIRCULARS

It educates practically. Its graduates are qualified for business and enabled to fill lucrative situations at once. Its course of instruction is adapted to all classes and all professions—to the farmer, mechanic, lawyer and physician, as well as to the man of business. It is just the school for young men or ladies, who wish to learn how to earn their own living and succeed in life. Pupils can enter at any time, as each receives separate instruction. Sessions day and evening throughout the year. For full particulars call at the College, 24 Post street, or address for circulars

E. P. HEALD.

2v6-tf President Business College, San Francisco.

SEEDS.

PLANTS.

OF EVERY VARIETY.

Fresh and reliable, such as experience and care only can select.

GRASS AND CLOVER SEEDS, KENTUCKY BLUE GRASS, HUNGARIAN, ORCHARD, ITALIAN RYE, RED TOP, TIMOTHY, MESQUIT, SWEET VERNAL, CHOICE CALIFORNIA ALFALFA, WHITE CLOVER, RED CLOVER, Etc.

Also, RAMIE, JUTE AND TOBACCO SEEDS; together with a fine and complete collection of TREE SEEDS, AUSTRALIAN BLUE GUM, SEQUOIA GIGANTEA, PINIS INSIGNIS, Etc.

For Sale, wholesale or retail, by

B. F. WELLINGTON,

(Successor to E. E. Moore).

425 Washington St., San Francisco.

21v7-ly

Magnetic Spring House at Vine Hill,

EIGHT MILES FROM SANTA CRUZ, ON THE SAN JOSE ROAD.

The above house has been built for the benefit of Invalids, Hunters, Pleasure Seekers and those seeking recreation generally. Two spring water is heavily charged with magnetism, charging knives at times so as to pick up a needle. Water has affected wonderful cures in Neuralgia, Kidney Disease and affections of the optic nerve. A splendid view of Monterey Bay can be had from the house. Guest giving no call can rely upon it that no pains will be spared to make their stay an agreeable one. Board, \$2 a day or \$10 a week. Hot and cold baths, 25c each.

25v7-3m

C. G. FISK, Proprietor.

W. M. BRANDON.

JACOB W. ROGERS

BRANDON & ROGERS, California Land Agency,

535 CALIFORNIA STREET, SAN FRANCISCO.

Buy and sell unimproved lands, farms and city property throughout the State of California. Farms to exchange for city property and city property for farms. Eastern property to exchange for California property. Tracts favorably located, furnished for Colonies. A large list of property to select from. Money invested for other parties on advantageous terms. Long experience in the business and extensive acquaintance in California and the Eastern States, enable us to effect speedy and satisfactory sales and exchanges.

20v6-ly-16p

Shipping---Vessels Up.

FARMERS' LINE.

FOR LONDON DIRECT

THE MAGNIFICENT A 1 CLIPPER SHIP,

MONETA,

621 Tons,

W. SINCLAIR.....Master.

FOR LIVERPOOL DIRECT.

The magnificent A 1 Clipper Ship,

SEA WITCH,

1288 Tons,

BAKER.....Master

These fine vessels have nearly full cargoes engaged and will have very quick dispatch. Freight taken in lots to suit shippers.

Will be followed by the splendid A 1 Iron Ship

GLENGARRY,

1769 Tons,

Due here in May; or by other first-class vessels. Liberal advances made on shipments of produce consigned to our Liverpool house, Messrs. Robert Rodgers & Co.

RODGERS, MEYER & CO.

19v7-3m

IMPORTANT TO FARMERS!

X Line to Liverpool.

DIRECT.

The New A 1 Clipper Ship

FRIEDLANDER.....1,638 tons register

Is intended to sail with dispatch.

Freight taken in lots to suit shippers.

Apply to **E. E. MORGAN'S SONS,**

320 California Street,

San Francisco.

Eggs! Eggs! Eggs!

For hatching, from reliable breeding stock; one of the oldest and best yards of pure bred poultry in the United States.



M. F. FALLON

SEVENTH AND OAK STS., OAKLAND.

Offers for sale Eggs from the following varieties of fowls:

Light and Dark Brahmas,
Buff, Partridge and White Cochins,
Spangled, Golden and Silver Polish,
Spangled, Golden and Silver Hamburgs,
Pure White-faced Black Spanish,
Silkies, Game, Leghorns, White & Brown,
Silver Gray Dorkins and Houdans,
Aylesbury and Rouen Ducks,
Bronze Turkeys, the largest in California

Also, CHESTER COUNTY WHITE PIGS, CHINA PIGS.
7v6-tf 16p2



Self-Fastening
Bed-Spring.



Double-Spiral
Bed-Spring.

We manufacture all sizes of BED and FURNITURE SPRINGS, from No. 7 to the smallest Pillow Spring; also, the Double Spiral Spring, which is the most durable Bed Spring in use. It is adapted to upholstered or skeleton beds. We have the sole right in this State to make the celebrated Obermann Self-Fastening Bed Spring. Any man can make his own spring bed with them. They are particularly adapted to Farmers' and Miners' use. Send for Circulars and Price List to

WARNER & SILSBY,

14v28-cow-bn-3m

147 New Montgomery St., S. F

Anglo-Californian Bank.

LIMITED.

Successors to J. Seligman & Co.

London Office.....No. 3 Angel Court.

San Francisco Office.....No. 412 California street.

Authorized Capital Stock, \$6,000,000,

Subscribed, \$3,000,000. Paid in, \$1,500,000.

Remainder subject to call.

DIRECTORS IN LONDON—Hon. Hugh McCulloch, Reuben D. Sassoon, William F. Schofield, Isaac Seligman, Julius Sington.

MANAGERS:

F. F. LOW and IGNATZ STEINHART,

SAN FRANCISCO.

The Bank is now prepared to open accounts, receive deposits, make collections, buy and sell Exchange, and issue Letters of Credit available throughout the world, and to loan money on proper securities.

2v27-cowbp

THE ALDEN

Fruit Preserving Company

OF CALIFORNIA.

Is now prepared to sell rights and furnish the necessary machinery for using the "ALDEN PROCESS," acknowledged to be the best method known for preserving Fruits, Vegetables, Meats, etc.

For full particulars call at the company's

Office—Room 5, 402 Montgomery St., S. F.

G. W. DEITZLER, President.

W. M. HERRY, Vice President.

FRANK FYLE, Sec'y and Supt.

BANK OF CALIFORNIA, Treasurer.

11v7-6m

PURCHASERS please say advertised in Rural Press.

AGRICULTURAL NOTES.

AMADOR.

The *Ledger* of June 20th says that haying in that part of the country is nearly completed, and no complaints as to shortness of crops. Our farmers are well satisfied with the results of their labor. The fruit crop is rapidly maturing, and will be very abundant. The grape product will be much larger than at any former year. From present appearances the fruit and grape yield will be so abundant, that it will be difficult to find a market for them. In Ione valley the prospect is excellent also.

BUTTE.

From the *Record* of the 20th we learn that the north wind which prevailed for the last ten days will have a tendency to prevent late sown grain from maturing. Also that harvesting and threshing have commenced.

COLUSA.

The *Sun* complains of the heavily laden wheat heads shelling out so much as to involve a loss in some instances of 10 bushels per acre. The farmers all agree that the club variety suffers the least from this cause.

CONTRA COSTA.

The *Gazette* reports the outlook excellent, with the grain beginning to ripen in places. A disease resembling "staggers" is killing considerable stock about Antioch.

FRESNO.

The *Expositor* says: The snows in the mountains are melting rapidly, and the San Joaquin is a sweeping flood. For three days a herd of 3,000 cattle tried to cross to get to Sacramento, but finally gave it up after losing several head. The sheep-range in the mountains is very poor, and will be greatly overstocked.

INYO.

From the *Independent* we learn that army worms have appeared on Bishop creek, in Inyo county. Crops about average. Water abundant.

MARIN.

The *Marin Journal* says the potato crop in Tennessee and Rodeo valleys, near Sausalito, has been very large and shows no signs of decrease. Large shipments are now being made to San Francisco.

MENDOCINO.

The *Dispatch* is informed that much damage is being done in some localities by army worms, particularly on the coast. Also that some are to be seen in the valleys; but not to a serious extent. Also that a heavy wool crop is being shipped from thence just now.

MERCED.

The *Tribune* reports harvesting rapidly progressing; working men wanted, and a greater yield per acre than ever.

NEVADA.

The *Tidings* says that strawberries are ripe there, and reports an acre yielding \$2,500 as the gross receipts therefrom.

SACRAMENTO.

The *Folsom Telegraph* says a violent north wind has prevailed for a day or two, doing, it is feared, considerable damage to the fruit crop.

SAN JOAQUIN.

Harvesting busily progressing, says the *Valley Argus*, and the yield simply enormous.

SAN LUIS OBISPO.

Grain prospects good, according to the *Tribune*; but the grasshoppers are eating the corn, potatoes, beans, turnips, etc., and doing much damage in some places.

SANTA CLARA.

The *Gilroy Advocate* reports haying completed, but is dissatisfied with the result, and urges the farmers of that section to give more attention to fruit, etc.

SAN BENITO.

Harvesting has commenced with very flattering prospects, says the *Hollister Enterprise*, which also predicts a prosperous future to this young county.

STANISLAUS.

The *News* says that nine mowing machines were lately kept running for 18 days and nights on the Threlfall ranch, and gleefully inquires: How is that for "going to grass?"

SONOMA.

Both the *Democrat* and *Argus* report the outlook as very flattering for Sonoma this season. The fruit crop is especially excellent.

SUTTER.

The *Sutter Banner* is overjoyed at the abundant harvest now assured to that locality, which is better than ever. The average of the entire crop it places at 25 bushels per acre.

TEHAMA.

The *Independent* reports harvesting to be progressing finely in that locality. Threshing will soon begin.

TULARE.

The *Visalia Delta* instances grain growing on Mussel Slough that will tie over a horses hack; together with hay that will go four tons to the acre, and many fields of wheat that will average 50 bushels per acre. It says Tulare will take its place among the other grain growing districts, when this year's statistics are given.

YOLO.

This section has been affected, says the *Mail*, with a hot wind, which will injure the crops considerably by premature ripening.

HEAVY LOSS OF GRAIN.—The Antioch *Ledger* says: The recent giving way of the levees in Swamp Land District No. 118, located near Point of Timber, in this county, has been destructive of a vast amount of property, greatly retarded the labors of reclamation and tillage, and altogether a sad, disastrous occurrence. It is estimated that in this district there were five thousand acres sown to wheat. The soil is of the very finest, most productive character, and the grain was so rank, well filled and free from weeds or cheat, that good judges estimated that the entire tract would have yielded sixty bushels per acre. All of this grain has been destroyed. Not a vestige of it remains for the sickle. Nor is this all; thousands of acres in this district would have been burned during the present season preparatory to putting in the whole area next season. It is now quite improbable whether this can be done, and hence a check will be placed upon the intentions of the owners for the next year. T. O. Carter, who was largely interested in the grain destroyed, estimates the loss by the overflow to Contra Costa county, as high as four hundred thousand dollars, to say nothing of the still larger amount which will result from the disaster during the next season. The overflow was occasioned, not because the levee was not sufficiently high, as it stood some two feet above water at the highest mark, but because there was not sufficient precaution in keeping the levee in repair. In all new levees there will be large cavities caused by the drying sods which crack in a manner similar to adobe. Through these cavities or apertures the high water forces itself, constantly widening the break, until sections of the levee give way before the pressure of the rising flood. We are told that a few hours' labor properly directed in repairing those weak places in the levee would have saved this great loss of property. There was evident neglect, if not gross carelessness on the part of those who should have been at the post of duty during the rising flood. By close attention to those points, the Webb Landers farmers have succeeded in protecting their land from the effects of high water. Sherman Island is also as yet safe, and the grain gives promise of a larger harvest than has yet been grown on this famous spot. Time and experience will enable the farmer to guard against these annual overflows, notwithstanding the occasional misfortunes which now occur.

AN EXODUS.—The ranchers in this vicinity, who are in the stock-raising and dairy business, nearly all left with their herds for the mountains during the past week. As fortunately situated as this class of our population is, they ought to be prosperous. In the winter and spring, while they put in and gather heavy crops of hay, grain and vegetables, on their ranches, their stock live off the wild grass of the adjacent hills. In the summer, when the sun is hot and the hills are dry and barren, all they have to do is to pull up stakes, and in the course of three or four days their herds are reveling in the green pastures of the Sierras, where they "wax fat" and multiply, and are otherwise profitable to their owners in their rich products of butter and cheese. Thus the foothill rancher and stock-raiser enjoys the advantages of both the nomad and farmer, and in doing so necessarily takes that course which favors him with the health-giving climate of perpetual spring. —*Folsom Telegraph*.

GREEN FLY.—If, by oversight, any plants have green fly, give them a good fumigating with tobacco, two or three nights in succession, before removing them outside. We mention this, for sometimes it is inconvenient to fumigate when required—such as when a number of plants are in flower in the house, the smoke would spoil the flowers—but all plants should be free from insects before planting outside, or the plants will be much checked by their ravages before they can make a free start. —*Horticulturist*.

ANOTHER GOOD YIELD.—Lewis Alfred, Odell, Livingston Co., Ill., sends the *Rural New Yorker* the following statement of the yield of milk from a Short-horn cow, for five days: May 5th, 50½ lbs. of milk; May 6th, 50½ lbs.; May 7th, 49 6-16 lbs.; May 8th, 45½ lbs.; May 9th, 45½ lbs.; making a total of 241 lbs. 14 oz. in 5 days. The cow ran in pasture, and was fed 4 quarts of corn in the ear, once a day, the grass being short. The cow weighs 1,225 lbs. —*Live Stock Journal*.

MILK ESTABLISHMENT IN SWITZERLAND.—The *Utica Herald* states that an American company is establishing a milk-condensing factory near Lake Zug, in Switzerland. The machinery has already arrived there, and the necessary buildings will be completed during the present season.

CHARITABLE FUNDS.—The Louisiana relief fund now amounts to \$40,273.11; the Young Men's Christian Association Building fund to \$131,000; the Agassiz Museum fund to \$154,000; the Mill river relief fund to \$14,473; the Summer Memorial fund to \$15,000, and more is wanted all round.

POUNDS OF MILK FOR ONE OF BUTTER.—The South Cauton Butter Factory, St. Lawrence Co., N. Y., reports a pound of butter from 22.07 pounds of milk, for the season of 1873.

FAIRS.—The Southern district fair will commence October 26th, at Los Angeles, and continue six days. Alameda talks of getting up a county fair.

PATENTS & INVENTIONS.

A Weekly List of U. S. Patents Issued to Pacific Coast Inventors.

[FROM OFFICIAL REPORTS FOR THE MINING AND SCIENTIFIC PRESS, DEWEY & CO., PUBLISHERS AND U. S. AND FOREIGN PATENT AGENTS.]

By Special Dispatch, Dated Washington, D. C., June 23d, 1874.

FOR WEEK ENDING JUNE 9, 1874.

FURNACE FOR REDUCING LEAD ORES.—Ebenzer Bassett, Hamilton, Nevada.

ELECTRIC SIGNAL APPARATUS FOR FIRE HOSE.—Joseph Buchtel, Portland, Oregon.

HARVESTER.—Melzar W. Coou, Plainfield, Cal.

NECK YOKE.—George C. McMullen, Suisun, Cal.

PROCESS FOR THE PRODUCTION OF LEAD PAINTS.—Charles C. Rueger, S. F., Cal.

MACHINE FOR PULLING COTTON STALKS.—James Sampson, S. F., Cal.

OIL-CAN FAUCET.—Frank Spinning, Steilacoom, Washington Territory.

CAR WHEEL.—James Pearson, Sacramento, Cal.

APPARATUS FOR PRESERVING FOOD.—John P. Schmitz, S. F., Cal.

TRADE-MARK.

MEDICINE.—John M. Connell, S. F., Cal.

—The patents are not ready for delivery by the Patent Office until some 14 days after the date of issue. Note.—Copies of U. S. and Foreign Patents furnished by DEWEY & CO., in the shortest time possible (by telegraph or otherwise) at the lowest rates. All patent business for Pacific coast inventors transacted with perfect security and in the shortest time possible.

The Pacific Rural Press,

NOW IN ITS FOURTH YEAR.

ITS ISSUES CONTAIN

Sixteen well filled pages.
Original and Choice Engravings.
Editorials on Home Industries.
On various kinds of Stock-rearing.
On Horticulture and Gardening.
Correspondence from Farming Districts.
Answers and hints to Correspondents about Local Farming.

Good Health and Useful Information.
Reports from Grauges and Farming Clubs.
Mechanical and Scientific progress.
Agricultural Notes from all quarters.
Domestic Produce Markets.
Home Circle.
Domestic Economy.
Mechanical Hints and Domestic Receipts.
Home and Farm Matters.
Affording, in all, more of real instructive and profitable matter for general readers than any other weekly on this side of the Continent.

DEWEY & CO.,

Publishers, No. 338 Montgomery street, S. F.

Our Agents.

OUR FRIENDS can do much in aid of our paper and the cause of practical knowledge and science, by assisting Agents in their labors of canvassing, by lending their influence and encouraging favors. We intend to send none but worthy men.

L. P. MCCARTY—General Agent.
A. C. ENOX, City Soliciting and Collecting Agent.
W. H. RATTENBERRY—California.
CHAS. W. OTIS—Solano County.
C. M. DALY—Colusa County.
CHAS. F. BELL—Alameda, Santa Clara and Santa Cruz Counties.
J. D. CAREY—Sonoma County.
J. W. ANDERSON—Orange and Santa Ana, in Los Angeles County, Cal.
HOOD ALSTON—San Luis Obispo, San Bernardino and San Diego Counties.

Designing
and
Engraving
at
This Office.

We are prepared to do fine Wood Engraving for illustrating Landscape Scenery, Buildings, Machinery, Works of Art, Manufactured Articles, Trade Marks, Seals, Etc. We have a first-class

Machine for Engraving

A portion of the work, which can be finished thereby more perfectly than by the eye and hand alone. Our patrons can depend upon first-class work always, and at reasonable prices. Samples can be seen at our office.

DEWEY & CO.

A Good Binder for \$1.50.

Subscribers for this journal can obtain our Patent Elastic Newspaper File Holder and Binder for \$1.50—containing gilt title of the paper on the cover. It preserves the papers completely and in such shape that they may be quickly fastened and retained in book form at the end of the volume, and the binder (which is very durable) used continuously for subsequent volumes. Post paid, 25 cts. extra. It can be used for Harper's Weekly and other papers of similar size. If not untired, pleased, purchasers may return them within 30 days. Just the thing for libraries and reading rooms, and all who wish to file the Press. 1 ambp

DEWEY & CO.,

American & Foreign Patent Agents,

OFFICE, 338 MONTGOMERY STREET, S. F.

The best, speediest, and surest method for you to obtain patents, file caveats, or transact any other important business with the Patent Office at Washington, or with foreign countries, is through the agency of DEWEY & CO., PUBLISHERS OF THE MINING AND SCIENTIFIC PRESS, SAN FRANCISCO, an able, responsible, and long-established firm, and the principal agents on this side of the continent. They refer to the thousands of inventors who have patronized them, and to all prominent business men of the Pacific Coast, who are more or less familiar with their reputation as straightforward journalists and patent solicitors and counsellors. We not only more readily apprehend the points and secure much more fully and quickly the patents for our home inventors, but with the influence of our carefully read and extensively circulated journals, we are enabled to illustrate the intrinsic merits of good patents, and secure a due reward to the inventor, besides serving the public who are more ready to give a fair trial, and adopt a good thing, upon the recommendation of honest and intelligent publishers.

To Obtain a Patent,

A well-constructed model is generally first needed, if the invention can well be thus illustrated. It must not exceed 12 inches in length or height. When practicable, a smaller model is even more desirable. Paint or engrave the name of the article, and the name of the inventor, and his address upon it.

Send the model (by express or other reliable conveyance), plainly addressed, to "DEWEY & CO., MINING AND SCIENTIFIC PRESS OFFICE, SAN FRANCISCO." At the same time, send a full description, embodying all the ideas and claims of the inventor respecting the improvement describing the various parts and their operations.

Also send \$15 currency, amount of first fee of the Government. The case will be placed on our regular file, the drawings executed, and the documents made up, and soon sent to the inventor for signing.

As soon as signed and returned to us with the fees then due us, it will be sent straightway to the Patent Office at Washington.

For designs no models are necessary. Duplicate drawings are required, and the specifications and other papers should be made up with care and accuracy. In some instances for design patents two photographs, with the negative, answer well instead of drawings.

For further information, send a stamp for our illustrated circular, containing a digest of PATENT LAWS, 112 illustrated mechanical movements, and HINTS AND INSTRUCTIONS regarding the RIGHTS AND PRIVILEGES of inventors and patentees, which will be furnished post paid. Also a copy of NEW PATENT LAW of 1870.

Address DEWEY & CO.,

PUBLISHERS, PATENT AGENTS AND ENGRAVERS,

No. 338 Montgomery street, S. F.

A COMPLIMENT.

PLAINSBURG, MERCED CO., CAL., June 22, 1874.
DEWEY & CO.—Gentlemen: I herewith tender my grateful acknowledgments for the energy, promptness and efficiency which you have displayed in procuring my patent.

Although you were entire strangers to me when I first communicated with you, I soon felt satisfied you were gentlemen of integrity, and shall always be happy to represent you as such. Very truly yours,

H. W. RUCKER, M. D.

SAN JOSE INSTITUTE

— AND —

Business College.

The Twenty-Fifth Session commences July 20th, 1874.

A day and Boarding School for both sexes; the only Institute on the Pacific Coast where a thorough Academic and business education can be obtained.

The Business College Department

Is under the supervision of James Vinsonhaller, who for many years was at the head of Business Colleges of San Francisco.

For circulars address

267-7-3m JAMES VINSONHALLER.

TIPTON & BURTT'S

MEDICINAL

SHEEP PREPARATION,

WARRANTED FREE FROM ALL POISON.

A sure and positive cure for Scab, Ticks and Lice, and a sure promotor of the growth of the wool. It has been used in Tehama County for the past two years, with most gratifying results, and we have the pleasure of referring to the following gentlemen as to its merits, viz.: H. A. Rawson, Jas. Gooch & Bro., J. W. Montgomery, J. Eby, Curtiss & Brown, H. Bosanka, Jos. Cone, J. W. Gate & Sons.

It is a liquid and put up ready for use in 2½ gallon tins, four tins in a case.

WHITTIER, FULLER & CO., Sole Ag'ts,

21 Front street,.....SAN FRANCISCO.

28 K street,.....SACRAMENTO.

267-7-1f

PURCHASERS please say advertised in Rural Press.

S. F. MARKET REPORT.

At Wholesale when not Otherwise Indicated.

Weekly Market Review.

[By our own Reporter.]

DOMESTIC PRODUCE.

SAN FRANCISCO, Wednesday, June 24, 1874.

The new crops of the Cereals are beginning to arrive more freely. Of course there have been lots received in this market for some time, but the trade in them has been comparatively slight. The first large amount of new Wheat changed hands on the 11th inst., and about 1,000 tons of Wheat and Barley together have been marketed. There will be a steadily increasing trade in Grain, as the season advances, and though as yet it is impossible to predict prices, it is certain that the Grain movement will be a large one. As to prices, so far there seems to be no reason for anticipating a high market; while, on the other hand, the doleful auguries made earlier in the season about prospective bad-rock quotations will probably have to be amended.

Barley.

The new crop Barley is selling very much below old crop; not much has yet been received, however. Old Brewing has declined, and is weak at present rates.

Dairy Produce.

There is little Butter in the market which will go under 25c. Sometimes a lot comes in which it is almost impossible to sell, and then we may look for almost anything, but the quality is more uniform now. Best California, unless very extreme, fancy samples, is sold at 32½c. Pickled Roll is more in request and big-r. California Cheese is very slow of sale. The range in quality is large, and for the best only 15c can now be obtained. According to the figures of the Secretary of the Chamber of Commerce of New York city, the total production of Cheese in the United States in 1873 was 200,000,000 pounds, and of Butter 650,000,000 pounds. Of the Cheese, the State of New York produced 90,000,000 pounds, or 45 per cent., leaving for other States a production of 110,000,000 pounds. The foreign exports last year were 90,000,000 pounds of Cheese. Of the 650,000,000 pounds of Butter produced in the entire country, the State of New York produced to the extent of 180,000,000.

Feed.

Hay is plenty at \$10@15, but other kinds of Feed are strong, Corn Meal particularly.

Flour.

There is no change as yet in the Flour market. Some Oregon Flour has been received and some small shipments have been made. One large cargo is now nearly loaded for Liverpool.

Fresh Meat.

Meats are still lower. Mutton has fallen to 4@4½c and other Meats nearly as much. Packing is active.

Hops.

The local market continues depressed. During the week a slight upward movement was felt in Eastern cities, but here trade is almost at a standstill. The State crop is reported as doing well, and throughout the entire country the yield is expected to be large, so that high prices are not looked for.

Onions.

Onions are arriving freely, and the price has been reduced to 9c@12½c.

Potatoes.

Old may be bought to-day at 50c, and are not called for at that. New Potatoes are held at the same rates as last week.

Provisions.

Eastern Bacon is ½c. bigger. California Hams are stiffer. We add two new brands of Hams to the list. Lard is selling at 13@14c. for both California and Eastern.

Seeds.

No changes in the Seed market. Business is slack.

Wheat.

New crop Wheat sells at from \$1.60 to \$1.70 per cental. Arrivals are more frequent, but not yet very large. There is not much being done in old Wheat, and it would be difficult to obtain the extreme quotations, even by choice samples. A Beerbohm London Trade List, of May 23d, says that the crops no longer promised to be earlier, and there had been some unfavorable weather for the week ending the date given. From the same source, of six days' later date, we learn that up to that date the grain crops in England continued to make satisfactory progress. Though the English crop promises to be abundant, the List says no very large quantities can be expected to be brought to market before October. Since these dates the Liverpool market has improved, it being allowed that certain estimates were too high. The Mark Lane Express, of June 1st, reports as a deficiency, as compared with last year, of 14,000 quarters. A shortness in the southern part of France has also been reported. But, notwithstanding these statements, the world's Wheat crop for 1874, it is thought, will not be a poor one.

Wool.

The Wool trade of this city is in a healthy state, and growers are doing well, even though there is no particular excitement in the market. A New York telegram to a daily contemporary says that the Wool market in that city has been quite active during the week, and considerable quantities of new Spring California have been disposed of. Manufacturers appear more willing to pay prices asked by holders, and in consequence rates have continued quite steady. Sales for the week in New York were, 600 bales new Spring California, at 30@36½ cents; 250 do. Fall, at 25@25½ cents; 65,000 lbs Australian, at 52½@55 cents; 10,000 lbs scoured do., at 70 cents; 200 bales greasy Cape, at about 33 cents; and several lots of new Texas at 30@35 cents for Eastern, and 20@23 cents for Western. From Boston it is reported that Wool transactions for the week have been

the largest for some time, comprising upward of 2,600,000 lbs, Foreign and Domestic. Sales of Domestic are almost exclusively confined to California and snapper and extra pulled.

DOMESTIC PRODUCE.

WEDNESDAY M., June 24, 1874.

BEANS.			
Beans, sm'l wh. d.	5 1/2 @ 5 3/4	Hickory do.	9 @ 10
do, butter.	6 @ 7	Brazil do.	15 @ 16
do, large, do.	6 @ 7	Cocanuts, 100.	7 @ 10
do, pink.	2 1/2 @ 2 3/4	Alm. d. shell	10 @ 12
do, pea.	5 1/2 @ 5 3/4	do, soft.	22 @ 24
do, Lima.	6 @ 7	Filberts.	13 @ 14
Per ton, sm'l wh. d.	20 @ 22		
Butter, Cal. choice	30 @ 32 1/2		
do, good.	27 1/2 @ 30		
do, inferior.	25 @ 27 1/2		
do, firkin.	25 @ 27 1/2		
do, pickled.	30 @ 32 1/2		
Cheddar, Cal. new	10 @ 15		
do, Eastern.	11 @ 17		

EGGS.			
Eggs, Cal. fresh	27 1/2 @ 30		
do, Oregon.	22 @ 24		
do, Eastern.	19 @ 21		
do, Ducks.	19 @ 21		
FEED.			
Barley, per 100.	16 @ 17		
Middlings.	26 @ 27 1/2		
Hay.	10 @ 15		
Straw.	8 @ 10		
do, oale.	95 @ 100		
Old corn meal.	42 @ 43 1/2		
Corn Meal.	42 @ 43 1/2		

FLOUR.			
Alviso Mills, bbl 25	65 @ 75		
California.	4 @ 25		
Golden Gate.	4 @ 25		
Golden Age.	4 @ 25		
National Mills.	4 @ 25		
Santa Clara Mills.	4 @ 25		
Genesee Mills.	4 @ 25		
Oregon.	4 @ 25		
Vallejo Star.	4 @ 25		
Venus, Oakland.	4 @ 25		
Stockton City.	4 @ 25		
Lambert.	4 @ 25		

FRESH MEAT.			
Beef, fr quality.	7 @ 8		
do, second do.	5 @ 7		
do, third do.	4 @ 5		
Veal.	4 1/2 @ 6		
Mutton.	5 @ 6		
Lamb.	5 @ 6		
Pork, dressed.	6 @ 6 1/2		
do, dressed.	9 @ 9 1/2		

GRAIN, ETC.			
Wheat, Cal. ch. 10	75 @ 75		
do, new.	50 @ 70		
do, shipping.	72 1/2 @ 74 1/2		
do, milling.	75 @ 80		
Barley, Feed.	17 1/2 @ 20		
do, new.	15 @ 16		
do, Breeding.	15 @ 16		
Oats, good	15 @ 16		
do, common.	14 1/2 @ 15		
Corn, White.	12 @ 13		
do, Yellow.	12 @ 13		
Buckwheat.	3 @ 5		
Rye.	10 @ 12		

HOPS.			
California, 1873.	30 @ 35		
East'n, 73, ch. 1/2	37 1/2 @ 42 1/2		
do, New York.	40 @ 45		
do, Extra.	45 @ 50		
Beeswax, per lb.	25 @ 27 1/2		
Honey, choice	22 1/2 @ 27 1/2		
Northern.	22 1/2 @ 27 1/2		
do, Dark.	8 @ 10		
do, Strained.	8 @ 12 1/2		
Puls.	90 @ 125		
Onions.	90 @ 125		

NUTS-JOBING.			
Cal. Walnuts.	14 @ 15		
Peanuts, per lb.	6 @ 7		
Chile Walnuts.	12 @ 12 1/2		
Pecan nuts.	16 @ 17		

SEEDS.			
Alfalfa.	13 @ 15		
Clay.	5 @ 6		
Flaxseed.	5 @ 6		
Ky. Blue Grass.	40 @ 50		
Millet.	12 @ 15		
Mustard, white.	2 @ 4		
do, Brown.	2 @ 4		
Timothy.	13 @ 15		
Sweet V Grass.	60 @ 75		
Orchard do.	30 @ 35		
Red Top do.	30 @ 35		
Hungarian do.	10 @ 13		
Lawn do.	50 @ 60		
Clover Red.	20 @ 25		
do, White.	60 @ 75		
Alsike.	20 @ 25		
Packets.	20 @ 25		

WOOL, ETC.			
Spring, short.	22 1/2 @ 25		
do, choice North.	24 @ 25		
Polish, grades.	18 @ 22		
Fall clip.	14 @ 18		
Burly.	14 @ 18		
Slides, dry.	16 @ 18		
do, wet salted.	8 @ 9		
Tallow, Crude.	7 @ 7 1/2		
do, Refined.	8 1/2 @ 9 1/2		

FRUIT MARKET.			
Tabati, Or. M 35	35 @ 40		
Lorita, do.	30 @ 35		
Cal. do.	30 @ 35		
Limes, M.	15 @ 20		
Cal. Lemons, M.	10 @ 15		
Austr. do.	50 @ 100		
do, per box.	7 @ 9		
Bananas, bunch 35	50 @ 60		
Cocanuts, 100.	10 @ 10		
Pineapples, doz 7	10 @ 10		
Apples.	8 @ 12 1/2		
Quinces.	10 @ 18		
do, choice.	10 @ 18		
Blackberries.	18 @ 20		
do, wild.	10 @ 12 1/2		
Strawberries.	10 @ 12 1/2		
Gooseberries.	2 @ 8		
Raspberries.	2 @ 8		
Currants.	5 @ 6		
Apricots.	15 @ 25		
Plums.	20 @ 25		
Peaches, doz.	15 @ 18		
Pears, Eating.	15 @ 17 1/2		
do, Cooking.	15 @ 17 1/2		
do, Bartlett.	15 @ 17 1/2		
Crab Apples.	15 @ 17 1/2		
Nectarines.	15 @ 17 1/2		
Walnuts, 100.	10 @ 10		
Cantelo, 100.	10 @ 10		
Pomegranates, doz	10 @ 10		
Figs.	10 @ 10		
Grapes, Bk Hg	10 @ 10		
do, Muscat.	10 @ 10		
do, Malaga.	10 @ 10		
do, Sweet W.	10 @ 10		
do, Mission.	10 @ 10		
do, Rose of Peru.	10 @ 10		
do, Tokay.	10 @ 10		
do, Morocco.	10 @ 10		

VEGETABLES.			
Asparagus.	8 @ 10		
Beets.	10 @ 12		
Cabbage, 100 lbs.	10 @ 12		
Carrots, 100 lbs.	10 @ 12		
Celery, doz.	50 @ 60		
Garlic, doz.	12 @ 15		
Green Corn, doz.	12 @ 15		
Sum's Squash.	4 @ 5		
Mario's Squash.	4 @ 5		
Artichokes, doz.	15 @ 25		
String Beans, doz.	10 @ 15		
Lima Beans.	10 @ 15		
Peas, doz.	12 @ 15		
Shell Beans, Windsor 3	4 @ 5		
Peppers, doz.	25 @ 40		
Okra, doz.	25 @ 40		
Cucumbers, doz.	20 @ 25		
Tomatoes.	3 @ 5		
Egg Plant, doz.	2 @ 3		
Rhubarb.	2 @ 3		
Lettuce.	12 @ 20		

FRUITS, ETC., PRESERVED BY THE ALDEN PROCESS.			
Apples, pared (ring) lb.	12 1/2 @ 13		
do, unpared (ring) lb.	12 @ 13		
Peaches, do, lb.	12 1/2 @ 13		
do, pared, doz.	40 @ 50		
do, do, doz.	30 @ 40		
Bartlett Pears, pared, lb.	12 @ 13		
Pears, pared (ring) lb.	12 @ 13		
do, do (ring) lb.	12 @ 13		
Pears, lb. boxes, family use, extra.	22 1/2 @ 25		
Seckel Pears, unpared, lb.	12 @ 13		
Currants, stemmed, lb.	32 @ 35		
do, unstemmed, lb.	32 @ 35		
Royal Ann Cherries, pitted, lb.	25 @ 30		
Kentish Cherries, pitted, lb.	25 @ 30		

GENERAL MERCHANDISE.

WEDNESDAY M., June 24, 1874.

Bags and bickings are more active. Sales have been made at prices above our quotations but, to-day they about hold. The oil market continues dull. No change in sugar.

BAGS.			
Eng. stand, Wh't 13	@ 14		
Cal. Machine.	@ 2		
Gilroy E.	12 @ 13 1/2		
do, 2x36, do W	12 1/2 @ 14		
do, 2x40.	14 1/2 @ 15		
do, 2x40.	15 @ 16		
Flour Sacks 1/2.	11 1/2 @ 13 1/2		
Stand. Gunns.	15 @ 16		
Wool Sacks.	6 @ 6 1/2		
Barley do.	@ 15		
Hessian 15 in gds	10 @ 11		
do.	@ 15		
Burlaps, yard.	@ 10 1/2		

PAINTS.			
Atlas, W. Lead.	7 1/2 @ 12 1/2		
Whiting.	@ 2		
Putty.	4 1/2 @ 5		
Obsk.	@ 2 1/2		
Paris White.	2 1/2 @ 3		
Ocher.	3 1/2 @ 5		
Venetian Red.	3 1/2 @ 5		
Red Lead.	7 @ 11		
Libbage.	10 @ 11		
Eng. Vermillion.	1 00 @ 25		
China No. 1, 1/2 lb	5 1/2 @ 6 1/2		
do, 2, do.	5 1/2 @ 6 1/2		
Japan.	5 1/2 @ 6 1/2		
Siam Cleaned.	7 @ 8		
Palma.	@ 6 1/2		
Hawian.	@ 7 1/2		
Carolina.	10 @ 10 1/2		

SALES.			
Cal. Bay, per ton	10 @ 11 1/2		
do, Common.	6 00 @ 7 00		
Carmen Island.	11 @ 13 00		
do, 2x40.	12 @ 13 00		
Liverpool fine.	23 00 @ 25 00		
do, coarse.	20 00 @ 22 00		

COFFEE.			
Sandwich Island.	@ 22		
Costa Rica per lb	23 1/2 @ 24		
Guatemala.	23 @ 24		
Java.	23 @ 24		
Manilla.	22 @ 23		
Ground in cas.	@ 30		
Chicoory.	10 @ 11		

TEA.			
Pao, Dry Cod new.	5 @ 6		
cases.	6 @ 7		
do, noneless.	11 @ 12		
Eastern Cod.	5 @ 6		
Salmon in bbls.	5 @ 6		
do, 2x40 cans.	3 @ 4		
do, 2x40 cans.	3 @ 4		
do, 1 lb cans.	2 @ 3		
Do Cal. R. 1/2 lb.	@ 25		
Pick. do.	15 @ 17 1/2		
do, 1 lb.	15 @ 17 1/2		
Sm. K'd Her.	40 @ 50		
Mack's No. 1, 1/2 lb.	@ 12		
Extra.	@ 12 1/2		
in kits.	27 1/2 @ 30		
Ex mess.	3 @ 4		
Sm. K'd Her.	40 @ 50		

MacK, No. 1, 1/2 bbl.	30 @ 12	50	ses. Canton, 19	25
" Extra.....	1 @ 12 50	10	do Canton, 19	25
" in kits.....	2 75 @ 30	60	do Amoy.....	23 @ 50
" Fx mess. 3.50	60 @ 40	00	do Formosa	40 @ 80
" Fx mess. 3.50	60 @ 15	00	Imperial Canton	25 @ 40
Sm'k Herrg, bx.	50 @ 55	00	do Peking	45 @ 80
Associated sizes, b. 5 1/2 @ 7 1/2			do Moynne.....	80 @ 100
RAILS.			Gumpo Canton	50 @ 92
OILS.			do Peking	50 @ 91
Pacific Blue Co.	10 @ 11		do Moynne.....	65 @ 25
Neat F't No. 1.	— @ 100		Ying Hy., Canton	25 @ 40

Stock Notices.



Pure Blooded French Merino Rams and Ewes,

For sale by ROBERT BLACOW, of Centerville, Alameda County, Cal., near Niles Station, on the Western and Southern Pacific Railroad.

These Sheep are guaranteed of pure descent, from the French Imperial Flock at Rambouillet.

Also a few well-bred young Bulls of the Durham blood. 12v5-3m

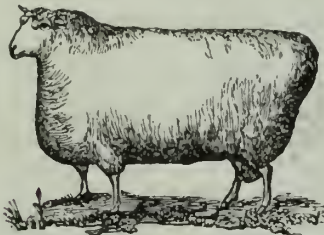


A. G. STONESIFER, BREEDER OF

Pure Blooded French Merino Sheep,

Has for sale a choice lot of Rams and Ewes, on the Oristimba Ranch, six miles west of Hill's Ferry, Stanislaus County, Cal. 22v7-3m

U. W. OWENS, San Francisco, [E. MOORE, Stockton, Cal.



OWENS & MOORE,

COMMISSION MERCHANTS,

DEALERS IN

WOOL, HIDES, PELTS AND GRAIN.

Office—405 Front street, S. F. 14v7-3m

N. GILMORE,

Importer and Breeder of

Angora or Cashmere GOATS

—OF—

PURE BLOOD

—AND—

ALL GRADES.

For sale in lots to suit purchasers. Location, four miles from Railroad Station, connecting with all parts of the State. For particulars, address

N. GILMORE,
El Dorado, El Dorado county,
California.

11v6-eow

Kentucky Sales of Short-Horn Cattle for 1874.

	No. Head.
Hughes & Richardson, Lexington, July 22.....	50
Wm. Warfield & Co., Lexington, July 28.....	140
B. F. & A. Vanmeter, Winchester, July 24.....	80
J. V. Grigsby, Winchester, July 25.....	50
I. O. Robinson & Co., Winchester, July 27.....	40
Warnock & Meglison, Cynthiana, July 28.....	80
F. J. Barbee, Paris, July 29.....	60
C. M. Clay Jr., Paris, July 30.....	90
J. Scott & Co., Paris, July 31.....	70
J. Sudduth, Newtown, Aug. 1.....	40

The above sales comprise all of the most popular families of Short-Horn Cattle in America, and many imported animals.

Apply to the above addresses for their Catalogues. m30-6v

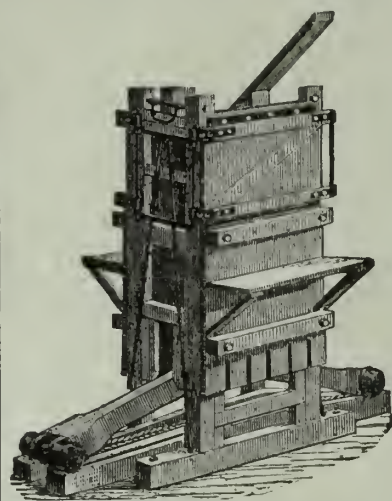
FOR SALE.

25 full blooded Spanish Merino Bucks, one and two years old, from stock imported from Addison county, Vermont, in 1872. Call and see, or address, B. F. WATKINS, Santa Clara, Cal. 9v9-2m

"THE EAGLE HAY PRESS."

THE KIMBALL MANUFACTURING COMPANY,

OWNERS OF THE PATENT AND SOLE MANUFACTURERS ON THE PACIFIC COAST,
COR. FOURTH AND BRYANT STS., SAN FRANCISCO, CAL.



Several years were devoted to the perfection of this powerful press. Its unprecedented sale at the East induced the Kimball Manufacturing Company to introduce them in California and the Pacific States.

During the past season a number of important improvements have been made, in order to gain all the power desired in condensing the weight and size of the bales. The wood and iron of the frame have been increased and strengthened, and it is now the most perfect and powerful press in use.

It Possesses Other Advantages:

Being cheap, simple to manage, with no intricate machinery to get out of gear, thus losing time waiting for a new piece.

All who have used these presses pronounce them superior to anything used heretofore.

The power applied by means of two levers increases in ratio to the resistance; and as the levers approach a perpendicular position, the power can be scarcely estimated.

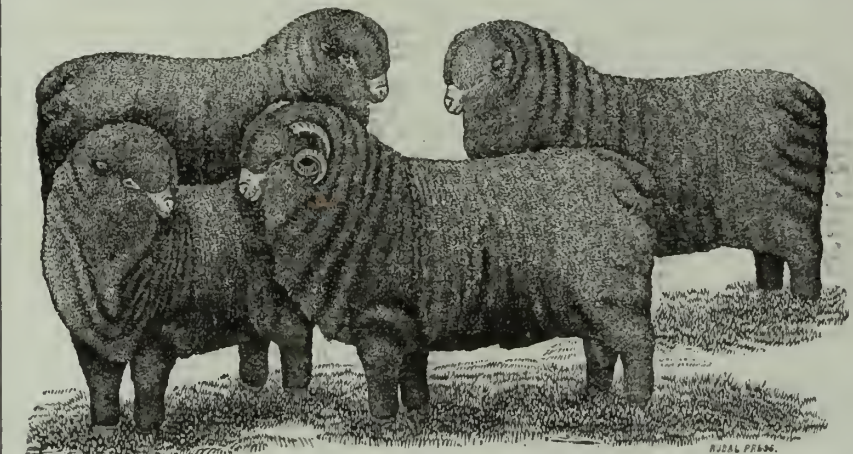
Three men, with one horse, can bale from ten to fifteen tons per day; each bale weighing from 300 to 350 lbs., using less rope than any other press.

When a bale is pressed and fastened, the follower runs down of its own weight and the bales can be taken out on either side.

On account of its great power, it is well adapted to pressing hides, rags, cotton or moss.

The particular attention of wool growers is called to our improved Wool Press, constructed on the same principle, which was tested at the State Agricultural Hall, Sacramento, April 18th, 1871, and stood the test of a bale of wool weighing 550 pounds. Reference, Major Robert Beck.

These presses are manufactured in San Francisco by the Kimball Car and Carriage Manufacturing Co., who have a stock constantly on hand. Prices \$250.00 for Hay Presses; \$350.00 for Wool Presses. Weight of Hay Press, 2,500 lbs.; Wool Press, 3,500 lbs. Can be shipped in pieces or set up. 13v7-2am-3m



L. U. SHIPPEE, Importer and Breeder of Thoroughbred Spanish Merino Sheep and Short-Horned Durham Stock, Stockton, Cal.

I wish to call your attention to my flock of Spanish Merino Sheep, both Ewes and Bucks, imported during the last two years, and selected from the best flocks in Vermont. Unequaled on the Pacific Coast for quality and size, many of them having taken first premiums both in Vermont and California. Should you or any of your friends require sheep of this quality, you will do well to call and examine this flock before purchasing elsewhere, as I intend to sell them at greatly reduced prices from what they have formerly been sold.

My Flock Consists of 1,500 Sheep, 1,200 Imported and 300 of my own Breeding.

P. S.—This flock is not only the finest but the largest flock of imported Spanish Merino Sheep on the Pacific Coast. They have been selected from the flocks of the best breeders in Vermont, such as Rockwell, Sanford, Rich, Hammond, Saxton, Dean, Ellsworth, Remley, Stickney, and others who are acknowledged to be among the best breeders of Spanish Merinos in America. 24v7-eow-4m



The attention of Wool Growers is continually invited to the Thoroughbred Stock Bred and Kept upon the MERINO RANCH

Situated at Niles, Alameda County, Cal., only five minutes walk from the station, junction of San Jose and C. P. R. Parties desiring to visit our ranch can leave San Francisco at 3 o'clock P. M., and have an hour at the ranch, returning on Overland train at 6 P. M. Or coming out in morning, can return to city at 11 o'clock A. M. The proprietors make the



THOROUGHbred SPANISH MERINO SHEEP A SPECIALTY,

Believing them to be the BEST SHEEP IN THE WORLD, and are constantly receiving fresh importations from Addison County, Vermont.

Our flock are all Imported Sheep, and have no superiors in the United States. We always have on hand choice young RAMS and EWES, of all ages, for sale at Reasonable Prices, giving time, if required, to responsible parties. City Office—315 California Street, San Francisco.

10v7-eow

SEVERANCE & PEET,

Importers and Breeders of Spanish Merino Sheep.

Cotswold Bucks For Sale.

About three hundred Bucks, half and three-quarter bred Cotswold, and a few Thoroughbreds, for sale at Low Prices.

REFERENCES:

MOODY & FARISH, San Francisco.
SHIPPEE, McKEE & CO., Stockton.

Orders left with the latter firm will receive prompt attention.



22v7-4t

A. VROMAN,
Jenny Lind, Calaveras Co., Cal.

U. S. LIVE STOCK EXCHANGE,

COR. FIFTH & BRYANT STS.

Cattle, Sheep, Milch Cows, Hogs and Horses sold on commission or bought on farm for cash. Our accommodations for Live Stock are the most convenient, complete and extensive in the city or State. Thoroughbred Durham Cows wanted. Address, LAWSON & BANCROFT, 449 5th St., S. F. Special rates to members of the Grange. m9

Short-Horned Cattle & Berkshire Pigs.

FOR SALE

A few fine young Bulls, one and two years old, got by Grand Turk, of Oak House. Number of Bull in herd-book, 8,258. Also, pure Berkshire Pigs, Work Horses and Mules, to be sold on reasonable terms.

WILLIAM L. OVERHISER,
Oak Home Ranch, Waterloo Road, three miles from Stockton. 8v7-3m

SOUTH DOWN RAMS FOR SALE.

The subscriber offers for sale in this city Six FULL BLOODED SOUTH DOWN RAMS, lambed in February and March last. Weight of oldest not less than 150 lbs. Will be sold at a bargain, and may be seen at the corner of Howard and Twentieth streets, directly opposite my residence.

RUFUS ROWE.

San Francisco, June 2d, 1874. jn6

Thoroughbred Jersey Bull Calves for Sale.

I have now on hand twelve Thoroughbred Jersey Bull Calves, bred by me from my last importation to California, and will sell them cheaper than they could be brought from the East.

A. MAILLIARD,

17v7-3m

San Rafael, Marin Co., Cal.

JERSEY CATTLE.

A few head of very choice Jersey Cows—Helfers and Bull Calves—for sale. Apply to 15v7-3m R. G. SNEATH, Menlo Park.

EGGS FOR HATCHING,

FROM PURE IMPORTED FOWLS.

White-Faced Black Spanish, Light and Dark Brahmas and Buff Cochins, \$4.00 per doz.; Houdan, \$5.00 per doz.; Crevecoeur, \$6.00 per doz.; Games, \$9.00 per doz. Eggs carefully packed and warranted fresh. Chickens for sale. No Eggs sent C. O. D. P. J. PHILIPS, 11v7-1m 608 Clay street, S. F.

AGRICULTURAL ARTICLES.

FOR THE HARVEST OF 1874.



THE ORIGINAL AND RELIABLE DOUBLE MOTION MOWING & REAPING MACHINES MADE FOR TREADWELL & CO. SAN FRANCISCO Sole Proprietors for the Pacific Coast

Hoadley Engines, Russell End-Shake Threshers, Pitts' Powers, Treadwell's Single-Gear Headers, Whitewater Wagons, etc., etc. Send for our Illustrated Price List, to TREADWELL & CO., San Francisco.

MATTESON & WILLIAMSON'S



Took the Premium over all at the great Plowing Match in Stockton, in 1870.

This Plow is thoroughly made by practical men who have been long in the business and know what is required in the construction of Gang Plows. It is quickly adjusted. Sufficient play is given so that the tongue will pass over cradle knolls without changing the working position of the shares. It is so constructed that the wheels themselves govern the action of the Plow correctly. It has various points of superiority, and can be relied upon as the Best and Most Desirable Gang Plow in the world. Send for circular to

14v2-3m

MATTESON & WILLIAMSON,
Stockton, Cal.

THE CELEBRATED MITCHELL WAGON



SOLD BY
MILLS & EVANS
508 MARKET ST.
15v7-3m

WATERHOUSE & LESTER,

IMPORTERS OF

WAGON AND CARRIAGE MATERIAL,

BODIES, CARRIAGE PARTS,

Wheels, Axles, Springs & Carriage Hardware.

SOLE AGENTS FOR THE PACIFIC COAST FOR

Clarke's Adjustable Phaeton Sunshades.

Send for price list.

ALSO AGENTS FOR

Woolsey's Patent Wheels,

The best and handsomest Wheel made, having great strength and a fine finish. There is no other wheel that has the metallic-shouldered band; and it can be repaired as easily as the common wood wheel. Send for illustrated circular. Address

WATERHOUSE & LESTER,

122 and 124 Market street, and 19 and 21 California street, SAN FRANCISCO. 17, 19 and 21 Seventh street, SACRAMENTO. 21v7-3m

BYRON JACKSON,

MANUFACTURER OF

Patent Self-Feeder & Elevator Attachment

For Separators, at the Yolo Planing Mill and Machine Shop, Woodland, Yolo County, Cal.

This improvement was patented in 1867 and in 1870. For the past two years I have been introducing it to the public with great success. It is pronounced by all that have tried it to be the greatest labor saving invention of the age. No Thresher will be without it after witnessing its operation. It saves all the hard work of feeding and injury to health, and one-half the labor required to supply the grain from the stacks. It will pay for itself in less than thirty days, besides doing better work. For particulars send for circular; it gives all necessary information, besides the best plan for using the Horse Forks ever adopted. Entire satisfaction guaranteed if properly used. 21v7-3m

C. OREGO.

S. G. BOWLEY

CREGO & BOWLEY,

Importers and Manufacturers

-OF-

CARRIAGES and WAGONS,

No. 9 Merchant's Exchange.

OALIFORNIA STREET.....SAN FRANCISCO

Keep constantly on hand top and open Buggies, top and open Rockaways, Jump-seat Buggies, Track and Road Sulkies, Skeleton Wagons, Basket Phaetons of the very latest styles and finest workmanship.

We would call particular attention to our fine stock of light Road and Trotting Wagons, made to order by the following celebrated makers:

Charles S. Coffrey, Camden, New Jersey;
Helfield & Jackson, Rahway, New Jersey,
Gregg & Bow, Wilmington, Delaware;
And other first-class makers, which we are prepared to sell on the most reasonable terms.

Also, a large assortment of single and double Harnesses, of the most celebrated makers:
C. Graham, New York; J. R. Hill, Concord; Pittkin & Thomas, Philadelphia.

Also, a full assortment of Dress and Light Blankets, Fur and Lap Robes, Whips, Halters, Surcingles, etc., at wholesale and retail.

CREGO & BOWLEY,

No. 9 Merchants' Exchange, California street,
24v5-3m San Francisco.**H. C. SHAW,**

STOCKTON, CAL.

Agricultural Implements,

201 and 203 El Dorado St., Sign of "Webster Bros." General Agent for the San Joaquin Valley for the Vibrator Threshers, Studebaker Farm Wagons and Improved Single Geared Headers.

The Baxter & Webster Single Gear Headers are built only at my establishment. Address, H. C. SHAW
14v7-3m Box 95, Stockton, Cal.

WM. ZARTMAN & CO.,**CARRIAGE AND WAGON MAKERS,**

COR. ENGLISH & HOWARD STS., PETALUMA. Are prepared to fill all orders for Buggies, Family Carriages, Side and End-spring Ranch Wagons, etc. Ranch Wagons, from \$100 to \$250; Spring Wagons, from \$150 to \$250. Having the advantage of a large brick drying room for seasoning lumber, they will warrant their work to stand the test of California Climate.

SPECIAL RATES TO GRANGERS.

12v7-3m

STANDARD SOAP CO.'S**CARBOLIC SOAP**

FOR

SHEEP WASH!

COMPOSITION—OLEIC ACID, NICOTINE, SULPHUR, CARBOLIC ACID & ALKALI.

It destroys and removes Scab, Ticks, Fleas, Mange, Scratches, Insects on Plants and Trees, Foot-Rot, etc., etc. Being strongly impregnated with CARBOLIC ACID, it is one of the best disinfectants known. Its healing, cleansing and disinfecting qualities are unsurpassed.

The STANDARD SOAP COMPANY also manufactures Laundry Soap, Family Soap, Hard Soap, Soft Soap, Marine Soap, Kane's Condensed Soap, Washing Powder, Washing Fluid, Liquid Laundry Blueing, Harness Soap, Thomas' Cool Water, Bleaching Soap, Thomas' Patent Glycerine Soap, Mottled and White Castile Soap, Silicated Saponia, Day Run, Florida Water, Hair Oils, Extracts, Perfumes, Cologne, Cosmetics, etc., etc.

204, 206 and 208 Sacramento Street,
16v7-3m SAN FRANCISCO, CAL.

POISON! POISON!**WAKELEE'S PATENTED****Granulated Squirrel Exterminator.**

A NEW AND MOST DESTRUCTIVE POISON FOR THE WORST PEST OF CALIFORNIA.

For years the farmers of the Pacific Coast have been spending money in experimenting to find a safe, cheap and efficient way of ridding their grain-fields of their worst enemy, THE SQUIRRELS, which destroy Millions of Dollars' worth of grain every year; and unless a strong and combined effort is made to kill them off, they will become more numerous every year.

Wakelee's Granulated Squirrel Exterminator is just the thing the farmers of California have been looking for. It is sure DEATH. One or two grains of it will kill a Squirrel so quick that if it is five feet from his hole it dies before it gets there. The Poison is put up in day and in granular form, and easily handled; in one pound tins, at \$1 per pound. It goes a great way, as 10 to 15 grains of it are sufficient to place at each hole. Also successfully used for killing Gophers and Rats. It has been thoroughly tested in different parts of the country, and gave universal satisfaction. It is kept and sold by druggists and dealers generally through the country. The following are some of my testimonials, viz.:

H. P. WAKELEE, Esq.:—Your Squirrel Exterminator was used according to your directions, on my Quito Farm with excellent success, and in my estimation is just the thing the farmers want to kill their Squirrels.

J. R. ARGUELLO.

SAN LEANDRO, Cal., April 3d, 1874.

H. P. WAKELEE, Esq.:—Dear Sir: I have given your Squirrel Exterminator a fair trial and find it to be an economical and very destructive preparation, and I can safely recommend it to our farmers. Yours,

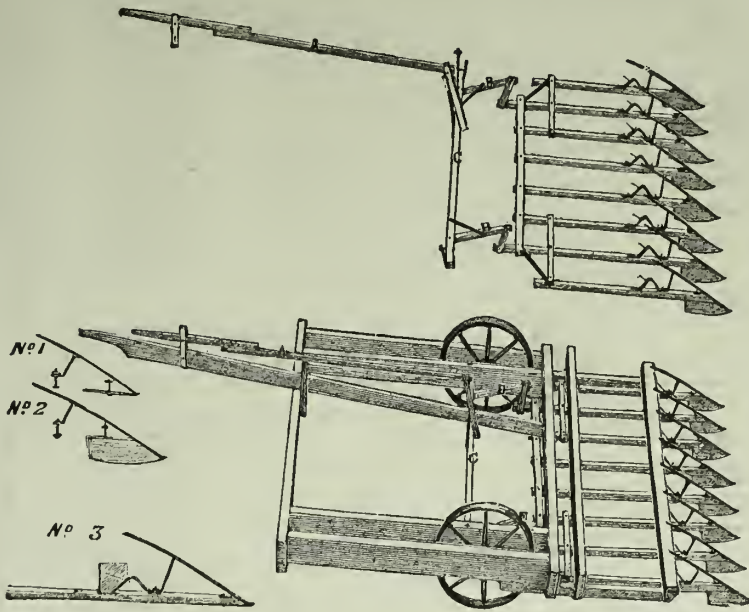
J. M. ESTUDILLO.

DOUGHERTY STATION, Alameda Co., Cal.

MR. H. P. WAKELEE, San Francisco: I have used your Squirrel Poison and found it to be just what you claim for it. It is sure death. Yours,

C. M. DOUGHERTY.

FARMERS write for your paper.

W. M. JACKSON'S PATENT GRAIN LIFTER.

This is the only Lifter that has enabled the Header to cut all kinds of lodged grain. It has been in use several years and gives entire satisfaction, not only in cutting lodged grain, but in saving crinkled or straw fallen grain. The Lifter can be had by addressing W. M. JACKSON, Woodland. The price will be SIXTY DOLLARS for ten-foot headers; SEVENTY DOLLARS for twelve-foot headers. I will sell them to dealers when ordered the same as heretofore; also to the Grange Agent as a dealer.

25v7-4t

W. M. JACKSON,

Woodland, Cal.

HIGHEST HONORS AWARDED TO THE WEED SEWING MACHINE!

AT THE

Vienna Exposition, '73.

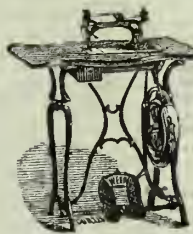
Grand Medal of Progress!

Grand Medal of Merit!

AND TO OAP THE CLIMAX,

Grand Medal of Honor.

Mr. GEO. A. FAIRFIELD, the Inventor and Superintendent of the Company's works, as co-operator for VALUABLE IMPROVEMENTS.

**Sewing Machine**

FOR ALL KINDS OF

WORK

THAT WAS EVER PUT BEFORE THE

PUBLIC.

Send for Descriptive Circulars and samples of work.

A. MEAD & CO., GENERAL AGENTS FOR THE PACIFIC COAST,

152 New Montgomery Street, SAN FRANCISCO.

2v7-6m

GEO. H. TAY & CO.,

614, 616 and 618 Battery St., S. F.,

OFFER FOR SALE

IRON PIPE,

BLACK and GALVANIZED.

PUMPS—LIFT AND FORCE.

RUBBER HOSE, ETC.

STOVES and RANGES,

THE RICHMOND RANGE,

THE HENRY CLAY,

THE EMPIRE CITY,

THE ALVARADO.

THE MONITOR, wrought iron body, cast iron top and hearth, will cook for 50 to 500 men; an excellent stove for large ranches during harvesting season.

AND A GREAT VARIETY OF

COOKING STOVES AND RANGES, FARMERS' BOILERS AND CALDRON KETTLES.

Ralph's Patent Oneida Cheese Vats.

DAIRYMEN'S GOODS,

MILK PAILS, PANS, CHEESE HOOPS, ETC.

BABBIT METAL.

Wire for Fencing and Baling.

ALSO, METALS, HOUSE FURNISHING HARDWARE, JAPANNED GOODS, ETC., ETC.

22v7-3m

WHALE OIL SOAP,

-FOR-

Destruction of Bugs on Plants, Etc.

PHOENIX OIL WORKS.

517 Front Street.....SAN FRANCISCO.

20v7-1m

DAIRY PRODUCE

DEPARTMENT

OF THE

CALIFORNIA STATE GRANGE,

P. OF H.,

414 & 416 Sansome St., Cor. Commercial,

SAN FRANCISCO, CALIFORNIA.

J. H. HEGLER, Manager.

We are now prepared to handle and dispose of all Dairy Produce, Eggs and Poultry.

This house is under the immediate control of the California State Grange; the Business Manager a thoroughly practical farmer and dairyman, Master of Bodega Grange and General Deputy for California for the organization of Granges in any part of California. Special rates to members of the Order; though any one may sell through our house and avail himself of our mode of doing business.

In shipments give plainly the name and P. O. address. Any persons wishing legitimate information concerning our business should write to the house, and are cautioned against accepting for facts many rumors now current. All sales guaranteed. ja31-tf

THE CELEBRATED NEW DRAW-FEED**WHEELER & WILSON****SEWING MACHINES**

Are without exception the most desirable for family use. They are the LIGHTEST RUNNING Machine in the market, and sew from the thinnest to the thickest material with equal facility.

These machines have, since their invention, stood at the head of the list in public favor, and the recent improvements to them have increased their superiority still more. Buy no Sewing Machine until you have tried these.

WHEELER & WILSON MANF'G CO.

E. W. HARRAL, Agent,

20v7-4m-15p

427 Montgomery street, S. F.

PEPPER'S NURSERIES,

PETALUMA, CAL.

Having increased our facilities for growing Trees and Plants, and permanently located our Greenhouses and Tree Depot corner Washington and Liberty streets, we are prepared to furnish Fruit and Shade Trees, Small Fruits, Evergreen Trees and Shrubs, Flowering Shrubs, Greenhouse and Bedding Plants, etc. Send for Descriptive Catalogue and list of prices.

Address,

21v6-1y

W. H. & G. B. PEPPER,

Petaluma, Sonoma Co., Cal.

FARMERS WANTING TO HIRE AN Engine and Engineer for the season, for threshing, can hear of one by calling at, or addressing,

23v7-tf

J. W. RILEY,

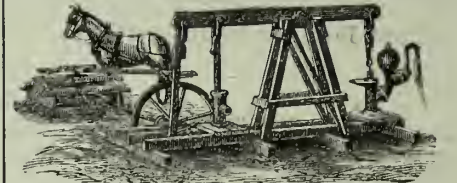
No. 64 Third street, San Francisco

VINE AND FRUIT GROWERS,

TO RAISE LARGE CROPS

YOU MUST IRRIGATE. To irrigate successfully, you must have the power that does not give out when the wind fails.

Laufkotter Bros. & Churchman's Horse-Power,



[PATENTED FEBRUARY 13TH, 1872.]

Never fails to supply more water than four or five Windmills, even supposing you had all the wind you want. It is also suitable for running light machinery, such as Bailey Crackers, Corn Shellers, Fanning Mills, Grain Separators, or for Sawing Wood. They are never failing, cannot get out of order, easily worked, substantial, and always give satisfaction wherever they have been used. One horse can easily work two 6-inch pumps, with a continuous flow of water. Force Pumps, from 3,000 to 10,000 gallons per hour. WINDMILLS of all kinds manufactured to order. Wells Bored, Windmills and Horse-Powers set in any part of the State, and repairing of all kinds done.

Manufactured and for sale by

LAUFKOTTER BROS.,

Cor. J and 10th Sts., Sacramento.

20v7-2m-3m

J. WAGNER,

MANUFACTURER OF

FRENCH BURR MILL STONES AND PORTABLE MILLS.

General Mill Furnishing. Portable Mills specially adapted for Farmers' use. 113 and 115 Mission street, San Francisco. 13v7-3m-2am

The Sewing Machine

-FOR THE-

GRANGERS.

NO COMBINATION!

NO MONOPOLY!

The New Improved FLORENCE,**Side Feed and Back Feed.**

Agency established on the Pacific Coast in 1863. The lightest running, most simple, and most easily operated Sewing Machine in the Market. Always in order and ready for work. If there is a Florence Sewing Machine within one thousand miles of San Francisco not working well I will fix it without any expense to the owner. Samuel Hill, Agent, 19 New Montgomery Street, Grand Hotel Building, San Francisco.

Mr. I. G. Gardner, State Agent for the California Granges, is authorized to make liberal terms to all Grangers who purchase the FLORENCE. No combination against favoring the Grangers has ever been joined by Florence Agents.

SAMUEL HILL, General Agent.

18v7-3m

**The New Wilson SEWING MACHINE**

Has points of superiority over all others. A reliable warranty is given with each machine for

FIVE YEARS.

It is unequalled for light and heavy work. Examine and compare it with the highest priced machine in the market

G. A. NORTON, Gen. Ag't

for the Pacific Coast.

337 Kearny St., S. F.

ap25-tf

NOTICE.

To Farmers and Grangers.**LAIRD'S PATENT SEAMLESS BAG.**

WM. LAIRD & CO., Manufacturers.

ELLIS READ, Agent.

10v7-3m

304 California Street.

CHINESE EMPLOYMENT COMPANY.

We are prepared to furnish at short notice, Domestic Servants, Hotel Cooks, Laundrymen, Waiters, Common Laborers, Farm Hands, Gardeners, Mechanics, Factory Hands, Wood Choppers, etc. Special attention given to furnishing Domestic Servants.

PIERCE & CO., 627 Sacramento St.,

bet. Montgomery and Kearny Sts., S. F.

14v7-3m

From January to July, 1874.

[illegible]



